

Final



**ENVIRONMENTAL ASSESSMENT FOR
COMBAT ARMS TRAINING MAINTENANCE
(CATM) RANGE
AT
LANGLEY AIR FORCE BASE, VIRGINIA**

**United States Air Force
1st Fighter Wing
September 2005**

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14. ABSTRACT This EA describes the potential environmental consequences resulting from a proposal for demolition of the existing, dilapidated CATM range and the construction of a new, indoor CATM at the same site. Nine resource categories received a thorough evaluation to identify potential impacts. An increase to safety risks during demo and construction would be mitigated by employing OSHA and Fire Protection codes. Any noise associated with work on the CATM would be temporary in nature and limited to daytime hours. Air Quality would not be significantly affected, and no ozone-related emissions would result from this action. The action would have the potential to disturb portions of various ERP sites; a waiver from ACC would be necessary, which would identify appropriate control measures. The placement of the CATM at the proposed site would be consistent with the base General Plan, and any transportation impacts resulting from increased truck traffic would be minor. This action would have no significant effects on the Cultural, Biological, Water, and Socioeconomic resources. No long term environmental consequences are anticipated.					
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ACRONYMS AND ABBREVIATIONS

1 CES/CEVR	1 Civil Engineering Squadron, Environmental Restoration Branch	MGD	Million Gallons per Day
1 FW	1st Fighter Wing	mpm	Meters per Minute
ACC	Air Combat Command	MSL	Mean Sea Level
ACHP	Advisory Council on Historic Preservation	NAAQS	National Ambient Air Quality Standards
ACM	Asbestos-Containing Materials	NASA	National Aeronautics and Space Administration
ADP	Area Development Plan	NEPA	National Environmental Policy Act
AFB	Air Force Base	NHPA	National Historic Preservation Act
AFI	Air Force Instruction	NPS	National Park Service
AFOSH	Air Force Occupational Safety and Health	NRHP	National Register of Historic Places
Air Force	United States Air Force	OSHA	Occupational Safety and Health Administration
AOC	Area of Concern	P.L.	Public Law
AQCR	Air Quality Control Region	PEL	Permissible Exposure Limit
CAA	Clean Air Act	Q-D	Quantity-Distance
CATM	Combat Arms Training Maintenance	RCRA	Resource Conservation and Recovery Act
CEQ	Council on Environmental Quality	RI	Remedial Investigation
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	ROI	Region of Influence
CFR	Code of Federal Regulations	RUL	Remaining Useful Life
CWA	Clean Water Act	SAFO	Secretary of the Air Force Order
CZMA	Coastal Zone Management Act	SDZ	Surface Danger Zone
dB	Decibel	SHPO	State Historic Preservation Office
dba	Decibel Average Over Time	SIP	State Implementation Plan
DCR	Department of Conservation and Recreation	SR	State Route
DNL	Day-Night Average Sound Level	U.S.	United States
DoD	Department of Defense	USACE	United States Army Corps of Engineers
EA	Environmental Assessment	USC	United States Code
EIAP	Environmental Impact Analysis Process	USEPA	United States Environmental Protection Agency
EO	Executive Order	USFWS	United States Fish and Wildlife Service
EPCRA	Emergency Planning and Community Right-to-Know Act	UPH	Unaccompanied Personnel Housing
ERP	Environmental Restoration Program	UST	Underground Storage Tank
ESA	Endangered Species Act	VDEQ	Virginia Department of Environmental Quality
ETL	Engineering Technical Letter	VDHR	Virginia Department of Historic Resources
FONSI	Finding of No Significant Impact	VDZ	Vertical Danger Zone
FS	Feasibility Study	VOC	Volatile Organic Compound
HRSD	Hampton Roads Sanitation District	VPDES	Virginia Pollutant Discharge Elimination System
HTA	Heavier Than Air	VMRC	Virginia Marine Resources Commission
HVAC	Heating Ventilation and Cooling	WTP	Water Treatment Plant
LTA	Lighter Than Air		
mcg/m ³	Micrograms per Cubic Meter		
MFH	Military Family Housing		

**FINDING OF NO SIGNIFICANT IMPACT/
FINDING OF NO PRACTICABLE ALTERNATIVE**

NAME OF THE PROPOSED ACTION

Construction and demolition at the Combat Arms Training Maintenance (CATM) Range at Langley Air Force Base (AFB), Virginia.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

The 1st Fighter Wing at Langley AFB proposes construction of a new 42-Firing Point Firing Range and demolition of two existing small arms ranges and associated facilities at the existing Combat Arms Training Maintenance (CATM) Range at Langley AFB. This action would include installation of a "Snail" wet bullet trap system that captures lead bullets and shot, a new ventilation system to eliminate airborne lead contamination resulting from firing, various safety improvements designed to resolve existing safety deficiencies, and demolition of the existing range. This Environmental Assessment (EA) analyzes the impacts associated with the proposed action and the no-action alternative.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES

Proposed Action: This EA provides an analysis of the potential environmental consequences associated with the proposed action and the no-action alternative. Nine resource categories received thorough evaluation to identify potential environmental consequences. As indicated in Chapter 4.0, none of the alternatives would result in significant impacts to any resource area.

Land Use, Transportation, and Visual Resources: Demolition and construction of the CATM range at Langley AFB would be consistent with base plans and with the goals of the Coastal Zone Management Act to the maximum extent practicable. Construction of the CATM range would be on lands previously disturbed and would be in a compatible industrial land use area in a relatively isolated area of the base. Standard construction and demolition practices would be included to reduce the potential for soil erosion into the Chesapeake Bay watershed. With the construction and demolition of these facilities in accordance with base architectural and landscaping standards, the visual character of the base would be improved. No significant conflicts with existing on-base land uses would result from the proposed construction or demolition. Under the proposed action, no on-base roads would be closed during construction and/or demolition. Construction-related truck traffic may lead to degradation of base road surfaces and occasional congestion at the base's gates. These adverse effects would be short-term and not significant.

Cultural Resources: Development activities are not expected to impact cultural resources at the proposed action location. This area has been partially surveyed for archaeological resources and no resources have been identified. If resources were inadvertently discovered as a result of the proposed action, construction activities would be halted and the State Historic Preservation Office (SHPO) would be notified and procedures outlined in the National Historic Preservation Act would be followed. Of the four structures planned for demolition under the proposed action, only the Storage Shed, Building 1003, is within the boundary of the National Register of

Historic Places (NRHP) eligible Langley Field Historic District. Although it is within the district, it was identified as a noncontributing element, and significant alterations to this structure have made it ineligible for listing on the National Register. The remaining three structures, Buildings 1013, 1015, and 1020, are outside the boundary of the NRHP-eligible historic district and were not evaluated as NRHP-eligible. Additionally, ongoing survey work to identify architectural/engineering resources related to the Cold War Era has not identified any of the four structures as NRHP-eligible.

Biological Resources: Development activities would have no significant effects to individual species or native plants or animals at either location because the only plant or animal species likely to be displaced from this marginal habitat are individuals of common and locally abundant species. No areas containing waters or wetlands regulated by state and/or federal laws and regulations would be disturbed as a result of the proposed action. No threatened, endangered, or special species/communities would be significantly affected by the proposed action. The area to be disturbed is of low ecological value and bald eagles do not use Langley AFB for nesting or other critical life cycle functions. Incidentally occurring listed, proposed, or candidate species are not likely to be significantly affected because no critical habitat exists on Langley AFB.

Water Resources: Development activities at the proposed action site would not be expected to significantly affect the water quality of the Back River and Chesapeake Bay. While the majority of Langley AFB, including the proposed action site, is located within the 100-year floodplain, there is no practicable alternative that would not involve construction and demolition in the floodplain. No significant environmental consequences are anticipated from the construction and demolition with the proposed action.

Hazardous Materials and Waste Management: Development of the CATM would have the potential to disturb portions of an Environmental Restoration Program (ERP) site. The Langley AFB ERP Manager would coordinate a waiver from ACC policy concerning demolition and construction disturbances on ERP sites. Waivers would identify the appropriate control measures that would be necessary for the activities at the ERP site, and no long-term significant environmental consequences are anticipated. Existing management practices would continue to be used to comply with Virginia regulations. Existing lead contained in the berm would be removed and sent to a qualified recycler and soil placed back on the construction area. Removal contractors or reclaimers will apply standard Best Management Practices for small arms range lead removal to separate the lead from soil. The soil, if placed back on the range, is exempt from RCRA. However, if the soil were to be removed off-site, then it would require testing to determine if it was an RCRA hazardous waste. Demolition activities would generate approximately 3,250 cubic yards of construction debris. If not recycled, these materials would be disposed of at landfills that have adequate capacity without having a significant effect on the overall capacity. Construction debris from both the existing administrative building and the existing range structure will be tested by the contractor prior to disposal to determine appropriate disposal requirements. No appreciable hazardous waste generation is expected with the operation of the CATM. All lead from firing would be recycled.

Safety: Development of the CATM under the proposed action would increase safety risks during the construction and demolition phases; however, these risks would be reduced with implementation of standard construction and demolition safety practices. No significant environmental consequences are anticipated.

Noise: Development activities associated with the CATM at the proposed action site would generate temporary localized noise during the construction and demolition phases. These localized noise increases may disrupt base personnel in nearby structures, but the noise disruptions would be temporary and would be limited to daytime hours; therefore, impacts are considered insignificant.

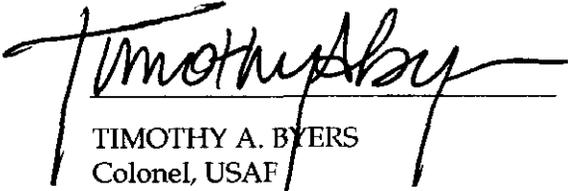
Air Quality: Development-related air emissions would be generated both on base and within the region due to the hauling of construction debris and other earth-moving activities. These emissions would be less than 1 percent of emissions in the Hampton Air Quality Control Region. Langley AFB is located in a maintenance area for ozone; however, the proposed action would not contribute ozone-related emissions above United States Environmental Protection Agency established *de minimis* levels for ozone. Therefore, a formal air quality conformity determination is not required. Use of the Snail wet bullet trap system and installation of an integrated Heating, Ventilation and Cooling (HVAC) and filtration system would assure indoor air quality would meet the requirements contained in ETL 02-11 and control exposure to lead in accordance with 29 CFR 1910.1025, *Lead Exposure*. The Occupational Safety and Health Administration (OSHA) has established a standard for lead that covers shooting range employees. This regulation sets a "Permissible Exposure Limit" (PEL) for airborne lead of 50 micrograms per cubic meter (mcg/m³), averaged over an 8-hour day.

Socioeconomics. Employment and earnings associated with the proposed action are not expected to have any significant environmental consequences.

No-Action Alternative: Under the no-action alternative, demolition and construction of the CATM range would not occur. Abandoned and aging structures are considered a safety hazard to personnel conducting operations in the CATM range and continuing the use of these 40- to 60-year-old facilities could increase the potential risk to CATM range personnel. The CATM range provides small arms training critical to personnel involved in Operation Iraqi Freedom and various Air Force missions, including physical security, by ensuring they are familiar with, and have confidence in their ability to use their weapons.

CONCLUSION

Based on the analysis described in the Environmental Assessment, which is hereby incorporated by reference, I find no significant impact is anticipated from implementation of either the proposed action or the no-action alternative. Therefore, issuance of a Finding of No Significant Impact (FONSI) is warranted, and an environmental impact statement is not required. Pursuant to Executive Order (EO) 11988, the authority delegated in Secretary of the Air Force Order (SAFO) 791.1, and taking the above information into account, I find that there is no practicable alternative to this action and that the proposed action includes all practicable measures to minimize harm to the environment.



TIMOTHY A. BYERS
Colonel, USAF
Director of Installations & Mission Support (A7)

27 SEP 05

Date

Final

**ENVIRONMENTAL ASSESSMENT FOR
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EXECUTIVE SUMMARY

This Environmental Assessment (EA) describes the potential environmental consequences resulting from a proposal for construction and demolition at the existing Combat Arms Training Maintenance Range (CATM) at Langley Air Force Base (AFB), Virginia.

ENVIRONMENTAL IMPACT ANALYSIS PROCESS

This EA has been prepared by the United States Air Force (Air Force) 1st Fighter Wing (FW) in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations implementing NEPA, and 32 Code of Federal Regulations [CFR] Part 989, et seq., *The Environmental Impact Analysis Process (EIAP)*.

PURPOSE AND NEED FOR ACTION

The purpose of this action is to support essential combat arms training of Air Force personnel in the use of small arms with the proposed construction, and demolition of the existing CATM at Langley AFB, Virginia.

The existing CATM Range is in a state of disrepair. The sidewalls are deteriorating at an alarming rate and are in constant need of repair. Continual degradation of the impact berm and repair and maintenance requires extended periods of range closure, impacting the training cycle. Additionally, the current surface danger zone is 300 meters, well short of the required 1800 meters. The range tower also is not elevated to the required 5 feet. The combat readiness posture of Air Force personnel will be degraded if they fail to meet 30 percent of the Unit Task Code training requirements.

PROPOSED ACTION AND ALTERNATIVES

The 1st Fighter Wing at Langley AFB proposes demolition of current facilities and construction of the new indoor CATM range, which would include construction of one new building and demolition of the existing CATM facility structures and those structures associated with the Junior Eagles Firing Range. This EA analyzes the potential impacts from the demolition and construction associated with the proposed action and the no-action alternative.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES

This EA provides an analysis of the potential environmental consequences during the demolition and construction associated with the proposed action. Nine resource categories received a thorough evaluation to identify potential environmental consequences. As indicated in Chapter 4.0, construction and demolition would not result in significant impacts to any resource area.

Land Use, Transportation, and Visual Resources. Development of the CATM range at Langley AFB, Virginia, would be consistent with the base General Plan and to the maximum extent practicable with the goals of the Virginia Coastal Zone Management Program. Construction of the CATM range would be on lands previously disturbed and would be in a compatible industrial land use area in a relatively isolated area of the base. No conflicts with existing

on-base land uses would result from the construction. On-base road surfaces may experience some degradation and congestion at the base's gates. This may increase as a result of construction-related truck traffic. However, no significant impacts to transportation resources are anticipated. With the construction and demolition of these facilities in accordance with base architectural and landscaping standards, the visual character of the base would be improved.

Cultural Resources. Development activities are not expected to impact cultural resources at the proposed action location. Portions of the development areas have been inventoried for archaeological resources and no significant resources have been identified. If resources are inadvertently discovered, construction activities would be halted and the State Historic Preservation Office (SHPO) would be notified and procedures outlined in the National Historic Preservation Act would be followed. Consultation with the SHPO will be initiated as the project moves toward a construction start date. Of the four structures planned for demolition under the proposed action, only the Storage Shed, Building 1003, is within the boundary of the National Register of Historic Places (NRHP) eligible Langley Field Historic District. Although it is within the district, it was identified as a noncontributing element, and significant alterations to this structure have made it ineligible for listing on the National Register.

Biological Resources. Development activities would have no significant effects to individual species or native plants or animals since the only plant or animal species likely to be displaced from this marginal habitat are individuals of common and locally abundant species. Development activities have the potential to affect jurisdictional wetlands, but appropriate mitigation measures would be taken to assure no net loss of jurisdictional wetlands occurred. No threatened, endangered, or special species/communities would be significantly affected by the proposed action. Bald eagles do not use Langley AFB for nesting or other critical life cycle functions. Incidentally occurring listed, proposed, or candidate species are not likely to be significantly affected because no critical habitat exists on Langley AFB.

Water Resources. Development activities associated with the CATM would not be expected to significantly affect the water quality of the Back River and Chesapeake Bay. An existing point source as defined by the Virginia Pollutant Discharge Elimination System Permit issued to the base will be removed as part of the demolition of the existing CATM range. Because the majority of Langley AFB is located within the 100-year floodplain, there is no practicable alternative that would not involve construction in the floodplain. No wetlands would be disturbed during construction. Stormwater runoff and surface drainage would be designed in accordance with section 9.2.15 of Air Force Engineering Technical Letter 02-11 to preclude erosion and sedimentation of impact areas as well as contact with spent lead shot. No contaminated groundwater, surface water, or stormwater resulting from this project will be discharged to the existing stormwater outfall. No significant environmental consequences are anticipated and the project would be in conformance with the goals of the Virginia Coastal Zone Management Program. The Snail wet bullet trap system utilizes small amounts of water as lubrication to minimize lead dust. This water is continually recycled through the entire system and does not need replacement. Some new water will be added to the system to account for evaporation.

Hazardous Materials and Waste Management. Development associated with the CATM would have the potential to disturb portions of various Environmental Restoration Program (ERP) sites (OT-38C, LF-17, OT-64, and Munitions Response Site SR148). The Langley AFB ERP Manager would coordinate a waiver from ACC policy concerning demolition and construction disturbances on ERP sites. Waivers would identify the appropriate control measures that would be necessary for the activities at the ERP sites and no long-term significant environmental consequences are anticipated. Existing management practices would continue to be used to comply with Virginia regulations. Demolition activities would generate approximately 3,250 cubic yards of construction debris. All soils at the current range site disturbed during construction activities would be sifted for lead and placed back on-site. The recovered lead would be recycled. Construction debris, if not recycled, would be disposed of at landfills that have adequate capacity without having a significant effect on the overall capacity. Removal contractors or reclaimers will apply standard Best Management Practices for small arms range lead removal to separate the lead from soil. The soil, if placed back on the range, is exempt from RCRA. However, if the soil were to be removed off-site, then it would require testing to determine if it was an RCRA hazardous waste. Construction debris from the demolition of both the existing administrative building and the existing CATM structures will be tested prior to disposal by the contractor to determine appropriate disposal requirements. No significant impacts are anticipated to these resources.

Safety. Implementation of the Proposed Action would increase safety risks during demolition and construction phases, but these risks would be reduced by employing standard construction safety practices, including Occupational Safety and Health Administration (OSHA) and National Fire Protection Association codes. Range safety would be substantially improved by construction and operation of the new facility.

Noise. Development associated with the construction of the CATM range would generate temporary localized noise during construction and demolition phases. These localized noise increases may disrupt base personnel in nearby structures, but noise disruptions would be temporary and would be limited to daytime hours. Noise from small arms fire at the new indoor CATM range would be lower than that currently experienced at the existing outdoor CATM range facility.

Air Quality. Development-related air emissions would be generated both on base and within the region with the hauling of fill material to the base, site clearing, demolition, and other earth-moving activities both on base and within the region. These emissions would be less than 1 percent of emissions in the Hampton Air Quality Control Region (AQCR). Langley AFB is located in a maintenance area for ozone; however, the proposed action would not contribute ozone-related emissions above United States Environmental Protection Agency (USEPA) established *de minimis* levels for ozone. Therefore, a formal air quality conformity determination is not required, and the project would be in conformance with the goals of the Virginia Coastal Zone Management Program.

Socioeconomics. No significant socioeconomic consequences would be expected with construction activity, employment, and earnings associated with the proposed action.

No-Action Alternative. If this alternative were chosen, the construction and demolitions would not occur. Current facilities are between 40-60 years old and are not sufficient and able to safely support the CATM range training mission at Langley AFB.

1.0 PURPOSE AND NEED FOR ACTION

1.1 INTRODUCTION

The United States Air Force (Air Force), 1st Fighter Wing (1 FW), proposes demolition of the existing Combat Arms Training Maintenance (CATM) Range, and former Junior Eagles firing range and construction of a new indoor combat small arms training range at Langley Air Force Base (AFB). The proposed improvements consist of demolition of four existing facilities and construction of one new facility. This Environmental Assessment (EA) has been prepared to analyze the potential environmental consequences associated with the proposed action and no-action alternative in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969. This document was prepared in accordance with the following.

- Requirements of NEPA (42 United States Code [USC] 4321-4347)
- Regulations established by the Council on Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR] 1500-1508)
- 32 CFR Part 989, et seq., *Environmental Impact Analysis Process*

Section 1.2 provides background information that briefly describes Langley AFB. The purpose and need for the proposed action and the no-action alternative are described in Section 1.3.

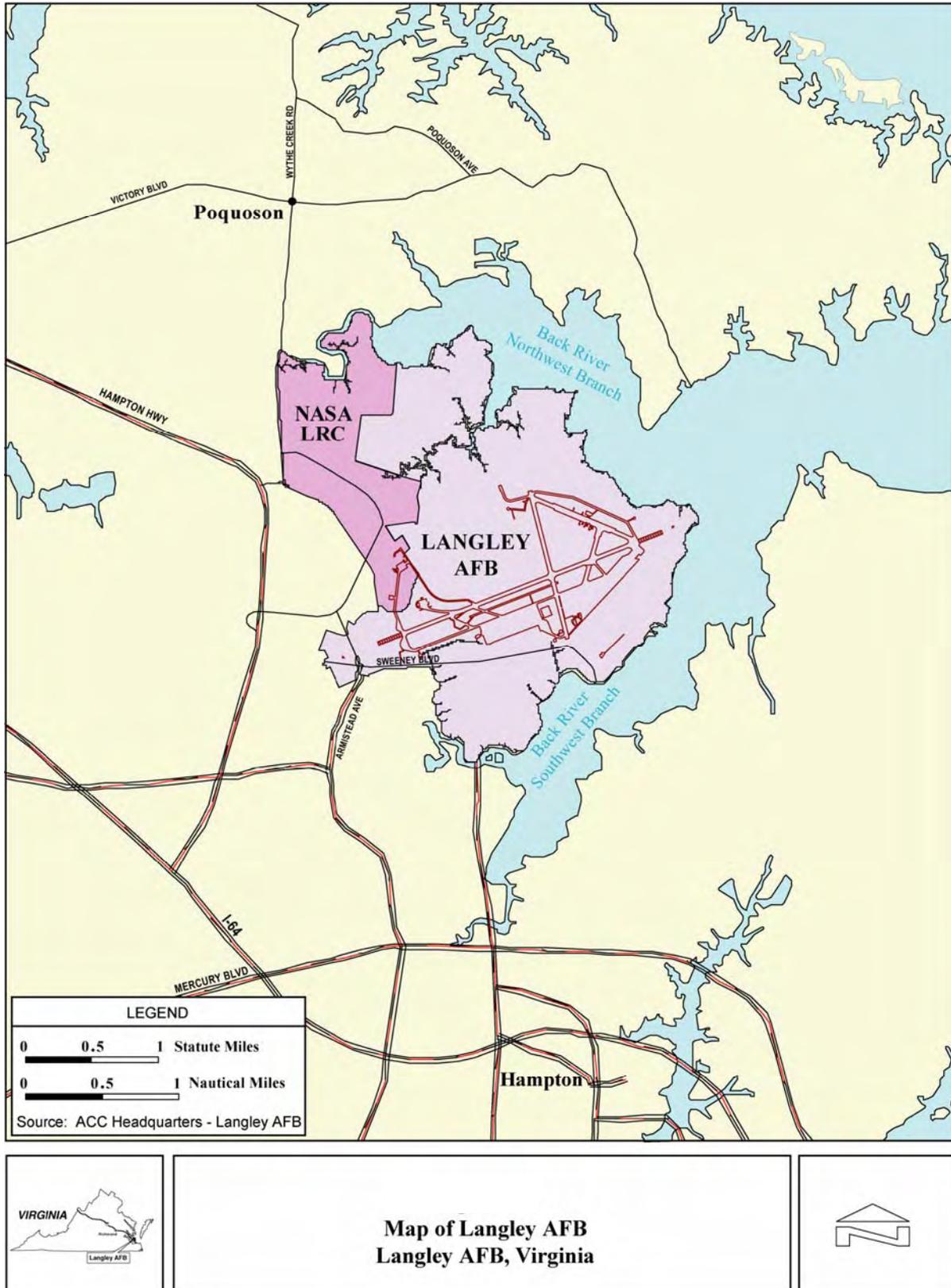
A detailed description of the proposed action and no-action alternative is provided in Chapter 2.0. Chapter 3.0 describes the existing conditions of various environmental resources that could be affected if the proposal were implemented. Chapter 4.0 describes how those resources would be affected by implementation of the proposed action or the no-action alternative. Chapter 5.0 addresses the cumulative effects of the proposed action or the no-action alternative, as well as other recent past, current, and future actions that may be implemented in the region of influence (ROI) for the proposed action or the no-action alternative.

1.2 BACKGROUND

Langley AFB is located approximately 175 miles south of Washington, D.C., near the south end of the lower Virginia Peninsula on the Back River, a tributary of Chesapeake Bay. Langley AFB is located in Hampton, Virginia, in a large metropolitan area made up of independent cities and counties in the southeast corner of Virginia. The entire area, which is known as Hampton Roads, is divided by the James River into two geographic regions. The northern portion is called the Virginia Peninsula and the southern portion is called South Hampton Roads. The cities located near Langley AFB include Hampton and Poquoson. As shown in Figure 1-1, the main base occupies 2,883 acres between the Northwest and Southwest Branches of the Back River.

Langley AFB is headquarters for Air Combat Command (ACC) and home of the 1 FW. ACC is one of eight major commands in the Air Force and is responsible for organizing, equipping, training, and maintaining combat-ready forces at the highest level of preparedness. The primary mission of Langley AFB is to provide air operational support to a broad spectrum of

Figure 1-1. Map of Langley AFB, Virginia



aircraft in both peacetime and combat environments. General goals of the base are to sustain the resources and relationships deemed appropriate to pursue national interests and provide for the command, control, and communications necessary to execute the missions of the Air Force, ACC, and the 1 FW.

1.3 PURPOSE AND NEED

PURPOSE

The purpose of this action is to support combat arms training of Air Force and other DoD personnel by development at the existing CATM range at Langley AFB. The new Combat Arms Training Maintenance facility will provide Air Force personnel with a facility that will meet all Air Force design and safety criteria for training of Air Force personnel in the use of combat small arms, thereby increasing the readiness posture of Air Force personnel. This action would include demolition of the existing CATM facilities, the Junior Eagles small arms range and construction of a new indoor firing range facility required to support combat arms training of Air Force personnel (Figure 1-2).

NEED

The existing Combat Arms Training Maintenance Range is in a state of disrepair. The sidewalls are deteriorating at an alarming rate and are in constant need of repair. Continual degradation of the impact berm and repair and maintenance requires extended periods of range closure, impacting the training cycle (Figure 1-3). Additionally, the current surface danger zone is 300 meters, well short of the required 1800 meters. The range tower also is not elevated to the required 5 feet. The combat readiness posture of Air Force personnel will be degraded if they fail to meet 30 percent of the Unit Task Code training requirements. As the number of personnel that require firearms training grows, an increased number of man-hours and funds will be necessary to transport instructors, students, and equipment to alternate sites (if available).

The existing range is inadequate for its required use and does not meet the existing Small Arms Range Design Criteria contained in Engineering Technical Letter 02-11 for Small Arms Range Design. The number of personnel that require training has increased by 3,347 since CY 2000, and this increase continues. The project is required to fully support the mission readiness of 7,674 active duty, civilian, reserve, and National Guard personnel at Langley AFB. There is currently a 30 percent shortfall in the current maximum training capacity of 5,372 students annually. Untrained personnel will not be available for deployment.

Figure 1-2. Site Map

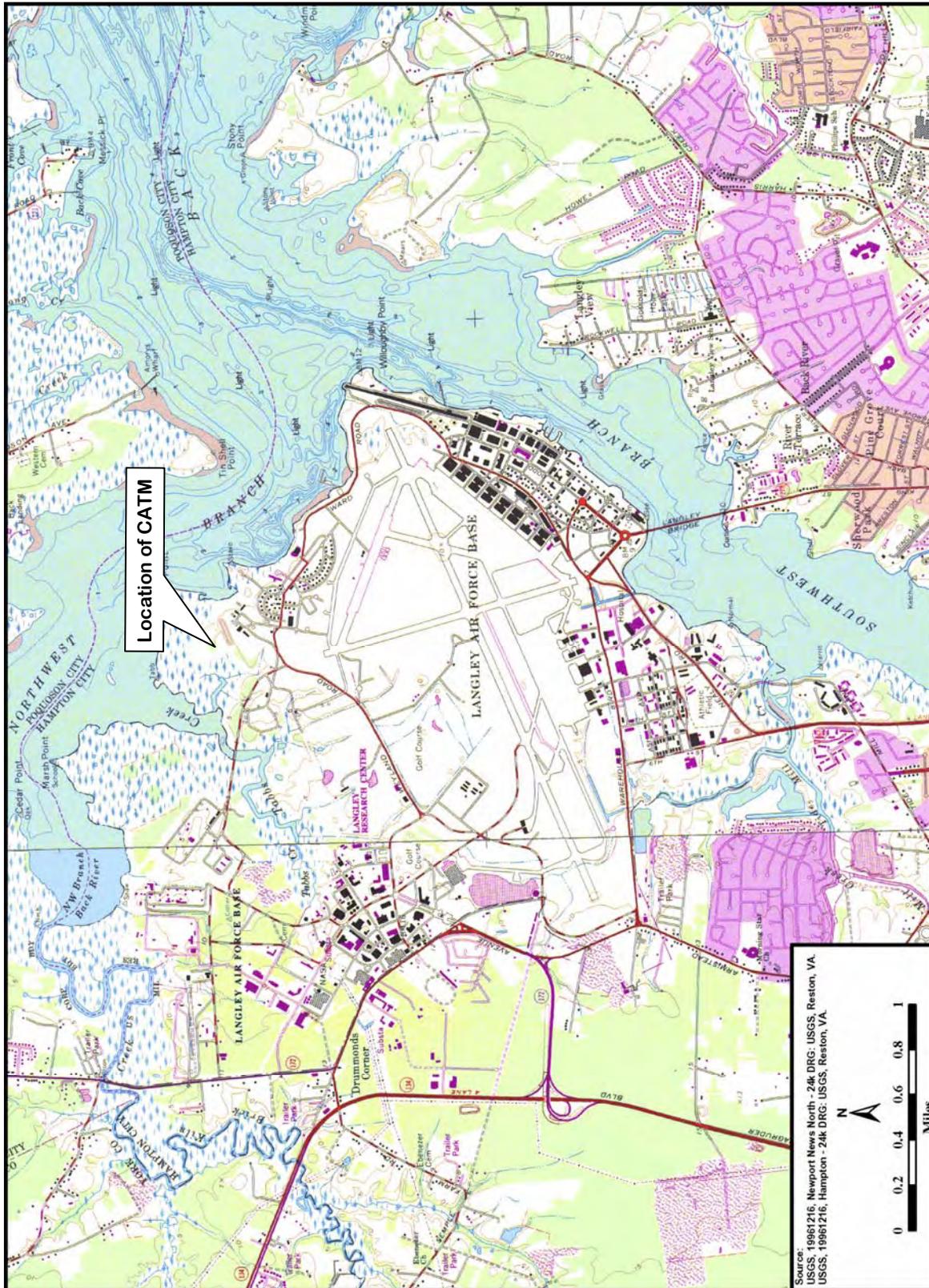


Figure 1-3. Existing CATM Range



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2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

This section describes the proposed action for demolition of the existing CATM range and construction of a new range as shown in Figure 2-1. This section also describes the no-action alternative, implementation of which would not fully support the combat arms training of Air Force Personnel.

2.1 PROPOSED ACTION AND ALTERNATIVES

2.1.1 Proposed Action

DEMOLITION

All utilities would be capped or disconnected. Demolition debris from the 14,440 square feet of structures proposed for demolition would be recycled to the greatest extent practicable.

The demolition contractor would dispose of the remaining materials in an approved landfill in accordance with state and local regulations and utilizing an established haul route for equipment delivery and debris removal. The demolition would involve minimal ground disturbance and any landscaped areas that may be disturbed by the demolition would be restored to prevent any long-term soil erosion. Soils would be stockpiled on site and reused during construction. Frequent spraying of water on exposed soil during ground disturbance and demolition activities, proper soil stockpiling methods, and prompt replacement of ground cover or pavement are standard construction procedures that could be used to minimize the amount of dust generated during demolition.

Spent lead contained in the berms and construction debris containing lead will be managed in accordance with applicable federal and state requirements for lead and lead containing materials.

Removal contractors or reclaimers (as a preconstruction submittal) will be required to submit a work plan illustrating their proposed standard best management practices applicable to small arms ranges to separate the lead from soil. Some methods available to remove lead from the impact berm include soil washing (gravity separation, pneumatic separation, wet screening), dry screening, and vacuuming. The soil, if then placed back on the range, is exempt from RCRA. However, if the soil were to be removed off-site, then it would require testing to determine if it is an RCRA hazardous waste. Construction debris from the site will be tested by the contractor to determine appropriate disposal requirements

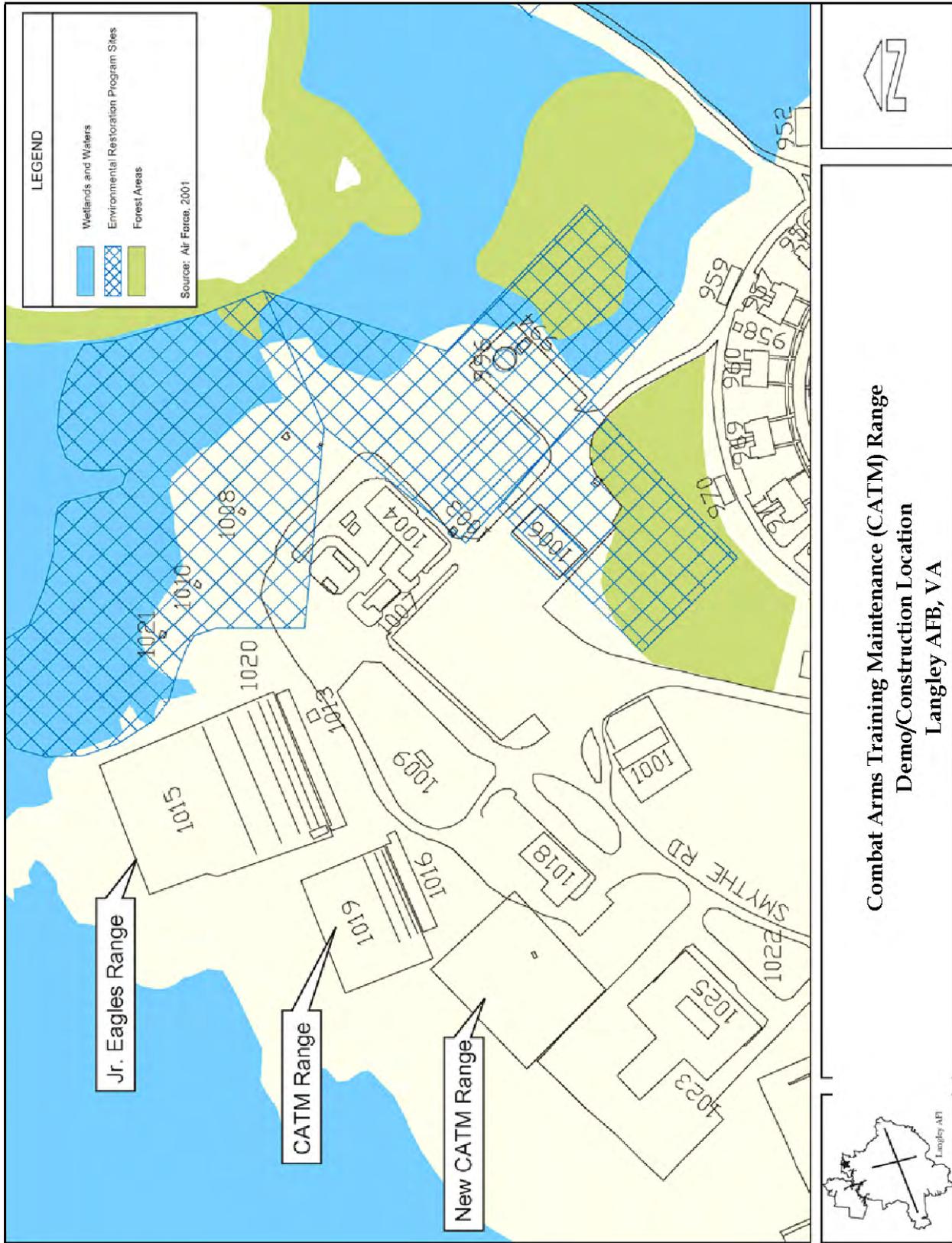
CONSTRUCTION

The new 30,000-square foot facility would have 12 firing lanes and include the installation of a “Snail” wet bullet trap system and a ventilation system to eliminate airborne lead. With the start of building construction, the building site would be graded and sediment and erosion controls would be installed. These standard construction practices would include the installation of a silt fence, storm drain inlet protection, temporary sediment traps, and diversion dikes within project limits prior to commencement of any on-site work. The proposed action

2.0 Description of Proposed Action and Alternatives

would include demolition of the existing facilities and construction of a new indoor CATM facility (Figure 2-1). The existing CATM facility will remain operational during construction. All demolition and construction activities would be performed in accordance with current security and force protection requirements.

Figure 2-1. Demolition and Construction Sites for CATM Range



OPERATIONS

Operation of this facility will be in accordance with all applicable Air Force and DoD requirements for the operations and maintenance of small arms training facilities. Additionally, the ventilation system will control exposure to airborne lead particulate matter as required by 29 CFR 1910.1025, *Lead Exposure*, and below the permissible exposure limit (PEL) for airborne lead dust of 50 micrograms per cubic meter per hour average for an 8-hour day (total daily exposure may not exceed 400 micrograms).

2.1.2 Manpower Requirements

Operation of the new facilities will not result in an increase of personnel assigned to the facility. Transient student population may increase over existing annual student levels of 3,763 (30 percent shortfall) to the required capacity of 5,376.

2.2 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD

Identification of alternatives for the CATM Range centered on three major areas: safety issues, mission training requirements, and compatible land use. Alternatives considered but not selected included:

1. Renovation of the existing range
2. Construction of a new indoor facility on the footprint of the existing outdoor range
3. Construct a new facility at another location on base
4. Perform no small arms training on base; send all students to another facility in the area.

These alternatives were not carried forward for the following reasons. The existing range does not comply with the standards and requirements contained in the USAF design criteria for combat arms ranges (ETL 02-11). Additionally, the existing impact berm, insufficient surface danger zone, lack of an adequate range tower for surveillance of students, and continual degradation of the side walls and impact berm make the rehabilitation and reuse of the existing range impractical. The existing range cannot meet mission tasking training requirements and the projected increase in student throughput due to the inadequacy of the current facility. The proposed indoor facility is a more cost-effective alternative, will contain noise and lead contamination, will not be shut down for prolonged periods due to maintenance, and is not subject to weather-related closures. Alternative training locations within the area are problematic due to the training needs of other DoD and private organizations and will increase travel and temporary assigned duty and manpower costs.

There is also a desire to locate the new facility in the same location as the existing classroom and administrative facility, thus avoiding the need to construct new support facilities. Due to the uniqueness of small arms ranges, the safety buffer zones already in place, and the difficulty of placing the CATM range in another area of the base, no other alternative locations were considered reasonable.

The criteria and their applicability to the four alternatives not carried forward are shown in Table 2-1 below.

Table 2-1. Site Selection Criteria

	<i>Complies With ETL Requirements</i>	<i>Meets Safety Standards</i>	<i>Allows for Continued Training During Construction of New Range</i>	<i>Compatible Land Use</i>
Renovation of Existing Range				X
Construction of New Indoor Range With Existing Footprint	X	X		X
Construct On Site Somewhere Else On Base	X	X	X	
No On-Base Training, Train Elsewhere *	*	*	*	*
Proposed Action	X	X	X	X
*Note: No Other DOD or Commercial/Other Governmental Ranges Have Adequate Facilities or Availability to Support the CATM Mission.				

2.3 ENVIRONMENTAL IMPACT ANALYSIS PROCESS

The EIAP includes the review of all information pertinent to the proposed action and no-action alternative and provides a full and fair discussion of potential consequences to the natural and human environment. The process includes involvement with the public and various government and private agencies to identify possible consequences of an action, as well as the focusing of analysis on environmental resources potentially affected by the proposed action and the no-action alternative.

2.3.1 Public and Agency Involvement

Through the scoping process, the Air Force obtained information regarding pertinent environmental issues the agencies felt should be addressed in the environmental impact analysis. Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, requires intergovernmental notifications prior to making any detailed statement of environmental impacts. Through the process of Interagency and Intergovernmental Coordination for Environmental Planning (IICEP), the proponent must notify concerned federal, state, and local agencies and allow them sufficient time to evaluate potential environmental impacts of a proposed action. Agency consultations were undertaken with regard to biological and cultural resources, primarily for compliance with the Endangered Species Act (ESA) and with the National Historic Preservation Act (NHPA). Appendix A identifies agencies contacted as part of the IICEP process and includes agency responses.

The Air Force published a newspaper advertisement on May 15, 2005, in *The Daily Press* and on June 10, 17, and 24, 2005, in the Langley AFB newspaper, *The Flyer*, announcing the availability

of the Draft EA for public review at the Langley AFB library, in libraries in the cities of Hampton and Poquoson, and in the York County library. Langley AFB, through its Public Affairs office, provided the media with a press release on May 16, 2005, identifying the availability of the Draft EA. Copies of the newspaper advertisements and the press release with its distribution list are included in Appendix B. No comments were received from the public during the 30-day review period.

Copies of the Draft EA were provided to the VDEQ Single Point of Contact to allow for review by appropriate state and local agencies. No comments were received that required additional analysis that would have resulted in changes to the impacts identified in the Draft EA. This Final EA would support the signing of a finding of no significant impact (FONSI)/finding of no practicable alternative.

2.3.2 Regulatory Compliance

This EA has been prepared to satisfy the requirements of NEPA of 1969 (42 United States Code [USC] 4321-4347), Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA. The intent of NEPA is to protect, restore, and enhance the environment through well-informed federal decisions. In addition, this document was prepared in accordance with 32 CFR Part 989, et seq., *Environmental Impact Analysis Process (formerly known as Air Force Instruction [AFI] 32-7061)*, which implements Section 102 (2) of NEPA and regulations established by the CEQ (40 CFR 1500-1508; 32 CFR Part 989).

Implementation of the proposed action or the no-action alternative would require concurrence from several regulatory agencies. Compliance with the ESA involves communication with the Department of the Interior (delegated to the U.S. Fish and Wildlife Service [USFWS]) in cases where a federal action could affect the listed threatened or endangered species, species proposed for listing, or species that could be candidates for listing. A letter was sent to the appropriate USFWS offices, as well as their state counterparts, informing them of the proposed action and requesting data regarding applicable protected species.

2.3.3 Permit Requirements

This EA has been prepared in compliance with NEPA; other federal statutes, such as the Clean Air Act (CAA) and the Clean Water Act (CWA); EOs, and applicable state statutes and regulations. Table 2-2 summarizes applicable federal, state, and local regulatory review and the potential for change to permits due to the proposed action and no-action alternative. In addition to this EA being prepared for the decision maker and the interested public, it is also a tool for Air Force personnel to ensure compliance with all regulatory requirements from proposal through project implementation.

Table 2-2. Environmental Related Regulatory Requirements

<i>Type of Permit or Regulatory Requirement</i>	<i>Requirement</i>	<i>Agency</i>
Endangered Species Act (ESA)	Required to consult on impacts of project implementation on federally listed or proposed threatened and endangered species	U.S. Fish and Wildlife Service (USFWS) Virginia Department of Game and Inland Fisheries
Clean Water Act (CWA)	Virginia Stormwater Management Permit for Construction Activities	Commonwealth of Virginia Department of Conservation and Recreation (DCR)
National Historic Preservation Act (NHPA) Section 106	Consultation with State Historic Preservation Office (SHPO) and Notification to Advisory Council on Historic Preservation (ACHP)	Commonwealth of Virginia Department of Historic Resources (VDHR)
Coastal Consistency Determination	Determine consistency with the Commonwealth’s Coastal Zone Management Program	Commonwealth of Virginia Department of Environmental Quality (VADEQ)

2.4 COMPARISON OF ALTERNATIVES

Table 2-3 summarizes the potential environmental impacts of the proposed action and alternatives, based on the impact analyses presented in Chapter 4.0. In no resource category would the environmental consequences be significant with the implementation of the proposed action.

Table 2-3. Summary of Potential Environmental Impacts of the Proposed Action and the No-Action Alternative

<i>Resource</i>	<i>Proposed Action</i>	<i>No-Action Alternative</i>
Land Use	0	0
Transportation	-	0
Visual Resources	+	0
Cultural Resources	0	0
Biological Resources	0	0
Water Resources	+	0
Hazardous Materials and Waste Management	-	0
Safety	+	-
Noise	+	0
Air Quality	-	0
Socioeconomics	0	0
- = Adverse, but no significant impact + = Positive/beneficial impact 0 = No change		

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3.0 AFFECTED ENVIRONMENT

This chapter describes relevant existing environmental conditions at Langley AFB for resources potentially affected by the proposed action and the no-action alternative described in Chapter 2.0. In compliance with guidelines contained in the NEPA and CEQ regulations, the description of the existing environment focuses on those environmental resources potentially subject to impacts. These resources and conditions are land use, including transportation and visual; cultural resources; biological resources; water resources; hazardous materials and waste management; safety; noise; air quality; and socioeconomics and environmental justice. The expected geographic scope of potential impacts, known as the region of influence (ROI), is defined for each resource analyzed.

RESOURCES ELIMINATED FROM DETAILED CONSIDERATION

One resource was not evaluated in this EA – airspace – because it was determined that the proposed action and the no-action alternative do not involve aircraft or airspace modifications.

3.1 LAND USE, TRANSPORTATION, AND VISUAL RESOURCES

3.1.1 Definition of the Resource

The attributes of land use addressed in this analysis include land use, transportation, and visual resources. Land use focuses on general land use patterns, as well as management plans, policies, ordinances, and regulations. These provisions determine the types of uses that are allowable and identify appropriate design and demolition and construction standards to address specially designated or environmentally sensitive areas. Transportation addresses roads and vehicle circulation. Visual resources are identified as the natural and manufactured features that constitute the aesthetic qualities of an area. The ROI for land use resources consists of Langley AFB.

3.1.2 Existing Conditions

LAND USE

Land uses on Langley AFB are grouped by function in distinct geographic areas. For example, aircraft operations and maintenance facilities are located in the southern portion of the base. The residential areas on base are located along the Back River in the southeastern and northeastern portions of the base.

Adopted plans and programs guide land use planning on Langley AFB. Base plans and studies present factors affecting both on- and off-base land use and include recommendations to assist on-base officials and local community leaders in ensuring compatible development. The *Langley General Plan* (Air Force 2003a) provides an overall perspective concerning development opportunities and constraints. Area Development Plans (ADPs), part of the General Plan, provide focused information on the future organization and circulation of personnel, buildings, and equipment within portions of the base. The Combat Arms Training Maintenance (CATM) range is currently designated industrial lands, while the surrounding area, while previously cleared and disturbed, is designated as open space and is in an area that is relatively isolated

from the rest of the base. The existing CATM range and the Junior Eagles Range are also located in areas that would be potential sites for further industrial development.

The base's *Integrated Natural Resource Management Plan* (Air Force 1998a) is used to coordinate natural resource management. Langley's *Urban Forest Inventory Review and Management Plan* (Davey Resource Group 1997) is an important component of this plan. Trees are an integral component of the base's urban environment with their shade and beauty contributing to the quality of life and moderating the hard appearance of concrete structures and streets. Trees also help stabilize the soil by controlling wind and water erosion, reducing noise levels, and cleansing pollutants from the air. Trees also provide significant economic benefits. Several studies have shown that properly placed trees provide shade and act as windbreaks, helping to decrease energy consumption. Trees return overall benefits and value far in excess of the time and money invested in them for planting, pruning, care, and removal. Langley AFB officials have recognized these benefits and realize the need to protect their investment with a comprehensive, urban forest management program.

The Coastal Zone Management Act (CZMA) was enacted to develop a national coastal management program that comprehensively manages and balances competing uses of land impacts to any coastal use or resource. The CZMA federal consistency requirement (CZMA section 307) mandates that federal agency activities be consistent to the maximum extent practicable with the enforceable policies of a state management program. The federal consistency requirement applies when any federal activity, regardless of location, affects any land or water use or natural resource of the coastal zone. The question of whether a specific federal agency activity may affect any natural resource, land use, or water use in the coastal zone is determined by the federal agency.

The Virginia Department of Environmental Quality (VDEQ) oversees activities in the coastal zone of the Commonwealth through a number of enforceable programs. In reviewing the proposed action and no-action alternative, VDEQ may require agencies to coordinate with its specific divisions or other agencies for consultation or to obtain permits; it also may comment on environmental impacts and mitigation. VDEQ enforceable programs and policies pertain to fisheries management, subaqueous lands management, wetlands management, dunes management, non-point source pollution control, point source pollution control, shoreline sanitation, air pollution control, and coastal lands management. The Chesapeake Bay Local Assistance Department regulates activities in the Chesapeake Bay Resource Management Areas and Resource Protection Areas.

TRANSPORTATION

Access to Langley AFB is provided from Interstate 64 (I-64) via Armistead Avenue to the west of the base, and from Mercury Boulevard (United States [U.S.] Route 258/Virginia State Route [SR] 32), via LaSalle Avenue (SR 167) or King Street (SR 278). Langley AFB has a network of streets that provide access to all base facilities. Nealy Avenue begins at the Main Gate and continues northeast through the installation. Sweeney Boulevard is the primary east-west corridor linking directly to the West Gate at Armistead Avenue and has three lanes (center lane reversible) from the gate to the intersection with Nealy Avenue/Hammond Avenue. Parking in

some on-base areas is limited. The combination of Ward Road, Clarke Avenue, Weyland Road, and Lee Road comprise the “base perimeter road.”

Langley personnel and visitors approaching the CATM range use the two-lane base perimeter road and Worley Road. Worley Road extends from its intersection with the perimeter road (Weyland Road) across a 1,000-foot causeway to Smythe Road, which leads to the CATM range.

VISUAL RESOURCES

Langley AFB is located in the city of Hampton near the southern end of the lower Virginia Peninsula, between the Northwest and Southwest Branches of the Back River, a branch of the Chesapeake Bay. The base is in the Coastal Plain physiographic province on Hampton Flat, a nearly flat plain that gently slopes toward the east, with elevations between 5 and 11 feet above mean sea level (MSL).

The main base occupies 2,883 acres of the total site. The largest structures on base are the aircraft operations and maintenance facilities located in the southern portion of the base. The National Aeronautics and Space Administration (NASA) operates a facility complex in the northwestern, southern, and southeastern portion of the base. The large wind tunnels and aeronautical test equipment that comprise the NASA facility resemble a large industrial area. A number of older buildings on base, such as the Albert Kahn-designed hangars, give the base a character reflecting its history as an important air base from the beginning of the aviation era.

The CATM range is bordered on the north and the east by wetlands associated with the Northwest Branch of the Back River; it is bordered on the south by Worley Road and a forested area, and is bordered on the west by a forested area and the NASA facilities.

Much of the vegetation on base was planted at the time of the base’s original construction (circa 1916). Towering oak trees are the dominant species of trees in the Langley Field Historic District. They have been used mainly as street plantings and as decorative plantings around many buildings. Significant trees are a part of the historic character of the base; therefore, standard landscaping practices would be used to alleviate harming the trees as much as possible. Vegetation in the area surrounding the CATM range is more recent and consists of weeds and grasses.

3.2 CULTURAL RESOURCES

3.2.1 Definition of the Resource

Cultural resources are defined as any prehistoric or historic district, site, building, structure, or object considered important to a culture, subculture, or community for scientific, traditional, or religious reasons. Cultural resources can be divided into three categories: archaeological, architectural/engineering, and traditional. Archaeological resources are locations where prehistoric or historic activity measurably altered the earth or produced deposits of physical remains. Architectural/engineering resources include standing buildings, dams, canals, bridges, and other structures of historic significance. Architectural/engineering resources generally must be more than 50 years old to be considered for inclusion in the NRHP.

However, more recent structures, such as Cold War era resources, may warrant protection if they manifest “exceptional significance” or the potential to gain significance in the future.

Traditional resources are resources associated with cultural practices and beliefs of a living

community that are rooted in its history and are important in maintaining the continuing cultural identity of the community.

The ROI for cultural resources is the area within which the proposed action and the no-action alternative have the potential to affect existing or potentially occurring archaeological, architectural, or traditional resources. For the proposed action or the no-action alternative, the ROI is defined as Langley AFB.

3.2.2 Existing Conditions

Archaeological surveys at Langley AFB have examined 821 acres (28 percent) of the base, locating a total of 18 archaeological sites (USACE 2004, Air Force 2004a). The NRHP-eligible Langley Field Historic District encompasses the eastern part of the base including the Lighter than Air (LTA) and Heavier than Air (HTA) areas (HQ TAC 1992). It includes nearly 250 contributing and non-contributing historic properties. The project area for the proposed action is located on the northeast boundary of the NRHP-eligible historic district, with one of the four structures proposed for demolition (Building 1003) within the boundary of the district (HQ TAC 1992). Table 3-1 lists the facilities associated with the proposed action.

Table 3-1. Facilities Proposed for Demolition or Construction

<i>Facility #</i>	<i>Facility Name, Construction, and Size</i>	<i>Construction Date</i>	<i>Proposed Action</i>	<i>National Register Status</i>
1003	Storage building, brick, 68 square feet	1940	Demolition	Non-contributing structure within NRHP eligible historic district
1013	Target Storage Building, cinder block, 192 square feet	1957	Demolition	NRHP-ineligible, outside NRHP eligible historic district
1015	CATM Range, various materials, 600x100 feet	1952	Demolition	NRHP-ineligible, outside NRHP eligible historic district
1020	Junior Eagles Range, wood, 237x14 feet	1966	Demolition	NRHP-ineligible, outside NRHP eligible historic district
	New CATM Range Facility		Construction	Not applicable

A portion of the proposed construction site has been surveyed for archeological resources. No traditional resources or Native American issues have been identified at this project location on Langley AFB (USACE 2004). No federally recognized Indian tribes or lands are located in Virginia.

3.3 BIOLOGICAL RESOURCES

3.3.1 Definition of the Resource

For purposes of the impact analysis, biological resources are divided into three major categories: (1) terrestrial communities, (2) wetland and freshwater aquatic communities, and (3) threatened, endangered, and special status species/communities. The ROI for biological resources includes Langley AFB and the specific areas associated with the proposed action and the no-action alternative.

3.3.2 Existing Conditions

TERRESTRIAL COMMUNITIES

Only a relatively small portion of Langley AFB is forested or remains in its natural state. Plant communities include approximately 250 acres of mixed oak-hickory hardwood forests, 60 acres of 60-year-old planted loblolly pine forests, 450 acres of tidal salt marshes, and an undetermined amount of old-field successional areas. The remaining portions of the base consist of managed lawns and developed areas of buildings, structures, and pavement. The area surrounding the existing cleared CATM range consists of forested areas in the northwest, southeast, and southwest sections of the site.

Wildlife on the base are widespread species that are habitat generalists or tolerant of disturbance. This includes a wide variety of game and fur bearing species, small mammals, waterfowl, songbirds, raptors, amphibians, reptiles, and fish. The proximity of the base to estuarine and marine habitats of Chesapeake Bay provides habitat for a variety of neotropical migrants and waterfowl.

WETLAND AND FRESHWATER AQUATIC COMMUNITIES

Wetlands at Langley AFB encompass approximately 652 acres, 462 acres of which are non-freshwater estuarine wetlands. Freshwater wetlands on base include palustrine forested, emergent, and scrub-shrub wetlands. Forest and scrub-shrub wetlands occur in low-lying upland areas with nutrient-poor sandy soils and are dominated by bottomland hardwood trees and shrubs. Emergent wetlands primarily occur as small remnant patches, along drainage ditches, and as tidal marsh (Hobson 1996, Air Force 1998a). A wetlands delineation of the entire base was conducted in late 2000. The wetlands identified during this effort are under jurisdictional determination review by the Norfolk U.S. Army Corps of Engineers.

Salt and freshwater marshes of the Northwest and Southwest Branches of the Back River, New Market Creek, Brick Kiln Creek, Tabbs Creek, and Tides Mill Creek surround the base on three sides. Tidal flow from the Chesapeake Bay is substantial along these margins; however, most inland freshwater wetlands have been filled, drained to ditches, or converted into golf course features (Air Force 1998a). Currently, Langley AFB is in the process of restoring and stabilizing sections of Chesapeake shoreline through the establishment of smooth and saltmeadow cordgrass fringe marsh to produce a more erosion-resistant shoreline, improve water quality, and promote the Chesapeake Bay's unique estuarine ecosystem.

Wetlands are located outside the cleared area surrounding the CATM range on the north, northeast, and east sides. Across Worley Road, south and southeast of the CATM range, are

forested wetlands as is the case between the NASA and the northwest edge of the CATM range (Figure 2-1).

THREATENED, ENDANGERED, AND SPECIAL STATUS SPECIES/COMMUNITIES

Sixteen special status species occur, or have the potential to occur, on Langley AFB and are presented in Table 3-2. Eleven have special state status and five have additional federal status. No critical habitat occurs on base. Langley AFB provides habitat for one federally listed threatened species: the bald eagle. Surveys conducted in 1993 and 1994 indicated that foraging by bald eagles occurs to a limited extent within creeks and marshes of the base. Habitat suitable for nesting or roosting occurs among the loblolly pines on the northern side of the base, but no nesting or long-term roosting has ever been observed. Uniform age/size structure of loblolly pine stands may limit use of the base as nesting or roosting habitat (Barrera 1995). The second federally listed threatened species, the northeastern beach tiger beetle, has no record of occurrence on base; it typically inhabits broad sandy beaches and has become a species of concern within the Chesapeake Bay ecosystem. The third federally listed threatened species, the piping plover, is associated with sandy beaches, which are not found on Langley AFB. The Virginia least trillium, found in forested wetlands, is a federal species of concern.

Virginia special status species include the barking tree frog, canebrake rattlesnake, Foster’s tern, glossy ibis, great egret, Harper’s fimbriatilis, least tern, Mabee’s salamander, night-heron yellow-crowned, and the peregrine falcon. The canebrake rattlesnake has been found along the shore of the Southwest Branch of the Back River.

The USFWS, Virginia Field Office, was notified of the proposed action and the no-action alternative (see Appendix A), and the Virginia Department of Conservation and Recreation’s National Heritage website for rare, threatened, and endangered plants and animals (Virginia Department of Conservation and Recreation [DCR] 2003) was reviewed for species that may potentially occur within a 50-mile radius of Langley AFB to complete Table 3-2.

Table 3-2. Threatened, Endangered, and Special-Status Species/Communities that Potentially Occur on Langley AFB

Species	Status	Areas of Occurrence
REPTILES		
Canebrake rattlesnake <i>Crotalus horridus atricaudatus</i>	SE	Meadows, canebrake, or “green sea” wetlands. At risk because of wetland loss. Swampy areas, canebrake thickets, and floodplains
Kemp’s ridley sea turtle <i>Lepidochelys kempii</i>	FE/SE	Atlantic Coast and throughout the Chesapeake Bay, shallow near-shore grass beds
Leatherback sea turtle <i>Dermochelys coriacea</i>	FE/SE	Atlantic Coast and mouth of Chesapeake Bay and estuarine rivers
Loggerhead sea turtle <i>Caretta caretta</i>	FT/ST	Atlantic Coast and mouth of Chesapeake Bay and estuarine rivers and marshes

Table 3-2. Threatened, Endangered, and Special-Status Species/Communities that Potentially Occur on Langley AFB Cont'd

Green sea turtle <i>Chelonia mydas</i>	FT/ST	Shallow waters of lower Chesapeake Bay, sea grass flats
Northern diamond-backed terrapin <i>Malaclemys terrapin terrapin</i>	FS	Prefers the brackish water of estuaries, tidal marshes, and the tidal portions of rivers. It is sometimes seen in the Atlantic Ocean. Nesting occurs on sandy beaches or dunes
BIRDS		
Bald eagle <i>Haliaeetus leucocephalus</i>	FT/SE	Forages occasionally on base. Nests within 3 miles of the base.
Black rail <i>Laterallus jamaicensis</i>	FS	Prefers dry fields but shares salt marsh meadows with waterfowl; also found along inland tidal creeks and marshes
Cerulean warbler <i>Dendroica cerulean</i>	FS	Breeds in swamps and bottomlands, prefers open stands of tall trees along riverbanks or dense deciduous forests with little undergrowth
Peregrine falcon <i>Falco peregrinus</i>	SE	Observed foraging over salt marshes on base. Open wetlands near cliffs.
Piping plover <i>Charadrius melodius</i>	FT/ST	Prefers areas with expansive sand or mudflats (for foraging) in close proximity to a sand beach (for roosting). Fifty-two designated critical habitat units from North Carolina south to northern Florida along mainland beaches and barrier islands.
Loggerhead shrike <i>Lanius ludovicianus</i>	ST	Prefers open short-leaved grasslands with an abundance of perching sites such as fences, woody vegetation, or hedgerows. Usually nests in eastern red cedar or hawthorne.
Migrant loggerhead shrike <i>Lanius ludovicianus migrans</i>	FS/ST	Prefers open short-leaved grasslands with an abundance of perching sites such as fences, woody vegetation, or hedgerows. Usually nests in eastern red cedar or hawthorne.
Upland sandpiper <i>Bartramia longicauda</i>	ST	Breeds in open pastures or grassy fields, often hayfields, alfalfa, or clover, occasionally in open forests. Needs extensive grass areas with grasses being 1 to 3 feet high.
FISH		
Atlantic sturgeon <i>Acipenser oxyrhynchus</i>	FS/SS	Juvenile Atlantic sturgeon may spend several years in fresh water of some large rivers, while others may move downstream to brackish waters when temperatures drop in the fall. Breeds in near-shore waters with solid substrates with depths of less than 20 meters.
PLANTS		
Harper's fimbriatylis <i>Fimbristylis perpusill</i>	SE	Coastal seasonal ponds.
Virginia least trillium <i>Trillium pusillum var. virginianum</i>	FS	Forested wetlands and mesic woods including the "green sea" wetlands. Recorded from the city of Hampton.

GROUNDWATER

In the Langley AFB area, groundwater occurs in a shallow water table aquifer, an upper artesian aquifer system, and the principal artesian aquifer system. All three aquifers in this area contain water of moderate to poor quality due to high salinity and total dissolved solids; they have little or no potential to provide a conventional water supply.

FLOODPLAINS

Due to its proximity to the Back River and the Chesapeake Bay, much of Langley AFB lies within the 100-year floodplain. Langley AFB is susceptible to high tide surges during storms and spring tides, and flooding is sometimes severe on the base. Figure 3-1 illustrates the extent of the floodplains on Langley AFB. All of the CATM range is located in the 100-year floodplain. An examination of Figure 3-1 indicates that areas above the 100-year floodplain are located within the clear zone on the western end of the runway, and at a few small locations on the north side of the base within the golf course, away from existing infrastructure.

3.5 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

3.5.1 Definition of the Resource

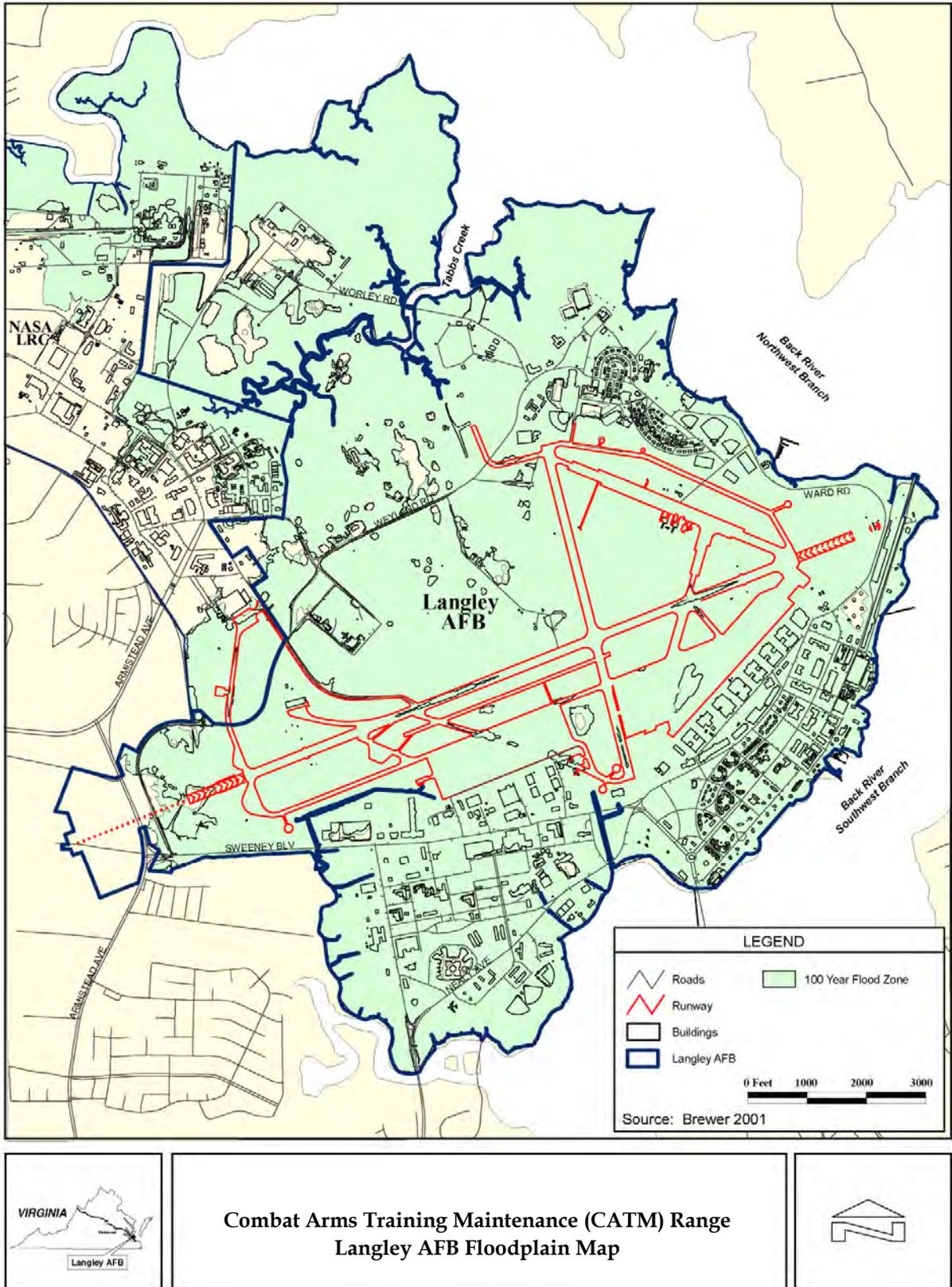
Hazardous materials are identified and regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the Occupational Safety and Health Administration (OSHA); and the Emergency Planning and Community Right-to-Know Act (EPCRA). Hazardous materials have been defined in AFI 32-7086, *Hazardous Materials Management*, to include any substance with special characteristics that could harm people, plants, or animals. Hazardous waste is defined in the Resource Conservation and Recovery Act (RCRA) as any solid, liquid, contained gaseous or semisolid waste, or any combination of wastes that could or do pose a substantial hazard to human health or the environment. Waste may be classified as hazardous because of its toxicity, reactivity, ignitibility, or corrosivity. In addition, certain types of waste are “listed” or identified as hazardous in 40 CFR 263. The ROI for this resource is defined as Langley AFB.

3.5.2 Existing Conditions

HAZARDOUS MATERIALS

The majority of hazardous materials used by Air Force and contractor personnel at Langley AFB are controlled through an Air Force pollution prevention process called HAZMART. This process provides centralized management of the procurement, handling, storage, and issuing of hazardous materials and turn-in, recovery, reuse, or recycling of hazardous materials. The HAZMART process includes review and approval by Air Force personnel to ensure users are aware of exposure and safety risks.

Figure 3-1. Langley AFB Floodplain Map



HAZARDOUS WASTE

Langley AFB is a large-quantity hazardous waste generator. Hazardous wastes generated during base operations and maintenance activities include solvents, metal-contaminated spent acids, and sludge from wash racks. Langley AFB recycles all lubricating fluids, batteries, oil filters, and shop rags. Hazardous wastes generated within the CATM range are managed in accordance with the *Langley AFB Hazardous Waste Management Plan*, dated May 15, 2005, at the location identified in Table 3-3.

Table 3-3. Initial Accumulation Points at the CATM Range Site

<i>Building #</i>	<i>Hazardous Wastes Description</i>
1018	Lead Patch
Source: personal communication, Hailey, 2004	

Langley AFB has a Spill Prevention and Facility Response Plan (certified August 15, 2004). The plan meets Federal Spill Prevention Control and Countermeasures requirements, Virginia Oil Discharge Contingency Plan requirements, and Coast Guard requirements. In accordance with the Munitions Rule (62 FR 6621), munitions used for their intended purpose are not subject to hazardous waste requirements.

STORAGE TANKS

There are no underground storage tanks within the project area.

ENVIRONMENTAL RESTORATION PROGRAM

The Department of Defense (DoD) developed the ERP to identify, investigate, and remediate potentially hazardous material disposal sites that existed on DoD property prior to 1984. Forty-eight ERP sites, including one at Bethel Manor Housing, have been identified since the ERP began at Langley AFB. In addition, eight areas of concern (AOCs) have also been identified. Of the forty-eight sites, thirty-seven sites have been closed or require no further action, seven ERP sites are in the cleanup phase, and four sites are under study. The *Langley AFB Management Action Plan* (Air Force 2003) summarizes the current status of the base environmental programs and presents a comprehensive strategy for implementing actions necessary to protect human health and the environment. This strategy integrates activities under the ERP and the associated environmental compliance programs that support full restoration of the base.

ACC policy requires that any proposed project on or near a Langley AFB ERP site be coordinated through the Langley ERP Manager. The existing CATM range is located near several ERP sites (LF-17, OT-38C, OT-64, and SR-148/40 mm Range).

ERP Site LF-17 is an abandoned landfill and trash-burning pit (OT-38C) covering approximately 4.8 acres adjacent to the Back River near ERP site OT-25 in the north-central portion of the Base. The landfill was used from 1917 to 1945, probably for municipal-type refuse. During the 1980s and 1990s, the area was used as a skeet range; therefore, lead shot and clay target fragments are

located on the surface. The Draft Feasibility Study (FS) was submitted in June 2002 and is currently being reviewed. The Draft FS determined additional testing of soil washing and Bioassay Testing would reduce uncertainties in remedial action costs. Bioassay Testing was completed and soil washing testing is planned.

ERP Site OT-64 is an operable unit that addresses base-wide ground water contamination from 23 ERP sites and an additional 6 areas of concern. In general, the contaminants of concern in the groundwater are volatile organic carbons, semi-volatile organic carbons, pesticides, herbicides, and some metals (personal communication, Patterson 2004) depending on the individual site of contamination. A groundwater monitoring program is underway for all associated sites. A data gap summary was finalized in July 2001. An Engineering Evaluation has been drafted for 3 of the 23 ERP sites and an FS is in progress.

Munitions Response Site SR 148 is a 40-mm range covering 152 acres adjacent to the western limit of the Langley Small Arms Range. The range was used for training purposes. Range residue from practice rounds was scattered over the area, and current administrative facilities have been built in the southern regions of the buffer zone that would have been associated with the range. No site-specific groundwater, surface water, or sediment data are available.

SOLID WASTE MANAGEMENT

Solid waste generated on Langley AFB is removed by contract services to either the city of Hampton's Bethel Sanitary Landfill or to the Hampton Waste-to-Energy facility for incineration. In FY 2003, the base generated 3,685 tons of solid waste and diverted 1,928 tons through recycling and composting activities. The base also generated 4,131 tons of construction and demolition debris and was able to recycle 2,890 tons of the debris. Big Bethel is a sanitary landfill, but also accepts construction and demolition waste. In 2003, this facility received 574,386 tons of waste of all types. With a total capacity of about 27,953,000 tons, it has a remaining useful life of about 49 years (VDEQ 2004). In addition, there are four dedicated construction/demolition waste disposal landfills in the Hampton Roads area (Table 3-4). Their combined capacity is 1,970,686 tons. These facilities together received 284,162 tons of construction and demolition waste in 2003, and have a collective remaining useful life of about 6.1 years.

Removal contractors or reclaimers will apply standard Best Management Practices for small arms range lead removal to separate the lead from soil. The soil, if placed back on the range, is exempt from RCRA. However, if the soil were to be removed off-site, then it would require testing to determine if it was an RCRA hazardous waste. Construction debris from both the existing administrative building and the existing range structure will be tested by the contractor prior to disposal to determine appropriate disposal requirements.

Table 3-4. Capacity, Disposal Rates, and Remaining Useful Life (RUL) for Construction-Demolition Waste Disposal Facilities in Hampton Roads

<i>Name</i>	<i>Permit</i>	<i>Location</i>	<i>Capacity (tons)</i>	<i>2003 Disposal (tons)</i>	<i>RUL</i>
Craney Island Landfill	041	Portsmouth	1,279,970	75,267	17.0
Higgerson-Buchanan Inc.	493	Chesapeake	593,516	133,640	4.4
Waltrip Landfill	322	James City	7,200	3,929	1.8
Wolftrap Operations Inc. Debris Landfill	436	York County	90,000	71,326	1.3
Total for Hampton Roads			1,970,686	284,162	6.1 ¹
Total for Virginia			18,054,541	2,455,035	7.4

Note: ¹ This is the combined (average) RUL for the four facilities, not the sum of their individual RULs.
Source: Commonwealth of Virginia Department of Environmental Quality, June 2004

ASBESTOS WASTE/LEAD-BASED PAINT

An asbestos management plan provides guidance for the identification of asbestos-containing materials (ACMs) and the management of asbestos. The 1 FW *Asbestos Management and Operations Plan* provides guidance on the management of asbestos. An asbestos facility register is maintained by Civil Engineering. Persons inspecting, designing, or conducting asbestos response actions in public or commercial buildings must be properly trained and accredited through an applicable asbestos training program. The design of building alteration projects and requests for self-help projects are reviewed to determine if asbestos contaminated materials are present in the proposed work area and, if so, are disposed of in an off-base permitted landfill.

The 1 FW *Lead-Based Paint Management and Operations Plan* contains policies and procedures associated with the management of lead-based paint. Given the age of Building 1020, lead-based paint may be present.

3.6 SAFETY

3.6.1 Definition of the Resource

This section addresses ground and explosive safety issues associated with activities conducted by units stationed at, or operating from, Langley AFB. Ground safety considers issues associated with operations and maintenance activities that support base and flight operations, including fire and crash response. Explosive safety discusses the management and use of ordnance or munitions associated with airbase operations and training activities conducted in various elements of training airspace. Range safety includes Surface Danger Zones (SDZ) required for small arms facilities by Air Force Engineering Technical Letter 02-11 for safe range design. The ROI for safety includes Langley AFB and the immediate vicinity.

3.6.2 Existing Conditions

GROUND SAFETY

Day-to-day operations and maintenance activities conducted on Langley AFB are performed in accordance with applicable Air Force safety regulations, published Air Force Technical Orders, and standards prescribed by Air Force Occupational Safety and Health (AFOSH) requirements. Safety issues related to the proposed action focus on factors affecting demolition. All contractors performing demolition on Langley AFB are responsible for following safety regulations and worker compensation programs, and are required to conduct construction or demolition activities in a manner that does not pose a risk to their workers or Langley AFB personnel. In addition, Langley AFB has established an industrial hygiene program that addresses exposure to hazardous materials, use of personal protective equipment, and the availability of Material Safety Data Sheets. Contractor personnel are required to follow this program.

RANGE SAFETY

Air Force Engineering Technical Letter (ETL) 02-11 for Small Arms Range Design and Construction establishes criteria for Surface Danger Zones (SDZ) and Vertical Danger Zones (VDZ) for Air Force Small Arms Ranges based upon the type of ammunition used and the type of range to be constructed. The Existing CATM range is “partially contained range.” This type of range has a covered firing line side, side containment, overhead baffles, and a bullet trap. A partially contained range requires a safety fan (SDZ) equal to 50 percent of the maximum range of the most powerful round to be used on the range (Table 3-5).

Table 3-5. Required Surface Danger Zone for Small Arms Ammunition

Ammunition	Maximum Range In Meters	Required SDZ
7.62MM	4,800	2,400
9MM	1,740	870
5.56MM	3,100	1,550
12- GAUGE 00 Buckshot	600	300

Source: MIL-HDBK 1027/3B 30 June 1995

Since the 7.62 MM round has the highest maximum range of 4,800 meters, an SDZ of 2,400 meters is required for the CATM Range. The SDZ includes the area between the firing line and the target line, an impact area, a ricochet trajectory area, and a secondary danger area. This may also include a weapon backblast area. The existing surface danger zone is 300 meters, well short of the required 2,400 meters, and the existing range tower is not elevated to allow for monitoring of all firing points.

3.7 NOISE

3.7.1 Definition of the Resource

Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise annoying. Human response to noise varies

according to the type and characteristics of the noise source, distance between source and receptor, receptor sensitivity, and time of day. The ROI for noise includes the area surrounding the project location.

Sound is measured with instruments that record instantaneous sound levels in decibels (dB). A-weighted sound level measurements (often denoted dBA) are used to characterize sound levels that are heard especially well by the human ear. All sound levels analyzed in this EA are A-weighted; thus, the term dB implies dBA unless otherwise noted.

3.7.2 Existing Conditions

At Langley AFB, noise contributions from aircraft operations and ground engine run-ups at the airfield have been calculated using the NOISEMAP model, the standard noise estimation methodology used for military airfields. NOISEMAP uses the following data to develop noise contours: aircraft types, runway utilization patterns, engine power settings, airspeeds, altitude profiles, flight track locations, number of operations per flight track, engine run-ups, and time of day. The Air Installation Compatible Use Zone indicates that the alignment taken with the proposed action and no-action alternative would be primarily in the 60-65 Day-Night Average Sound Level (DNL) noise contours (Air Force 1997).

The new CATM facility will be an indoor type firing range and any noise from weapons firing will be contained within the vicinity of the range.

Based upon the above, it is expected that noise from the existing CATM range will not impact the surrounding community.

3.8 AIR QUALITY

3.8.1 Definition of the Resource

Air quality is described by the atmospheric concentration of six pollutants: ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter equal to or less than 10 micrometers in diameter (PM₁₀), and lead (Pb).

3.8.2 Existing Conditions

Langley AFB is located within the Hampton Roads Intrastate Air Quality Control Region (AQCR) #223. The Hampton Roads AQCR includes four counties (York, James City, Isle of Wright, and Southampton), as well as nine independent cities (Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg). This area includes substantial industry, several military and commercial airfields, and a large population that generates air quality emissions. Table 3-6 summarizes the baseline emissions (stationary and mobile) of criteria pollutants and precursor emissions for this AQCR. Baseline Langley AFB emissions are incorporated into the totals for the AQCR. For each criteria pollutant, Langley AFB contributes less than 1 percent of the regional emissions. The base has been issued a Synthetic Minor operating permit from the VDEQ program.

Table 3-6. Baseline Emissions for Langley AFB Affected Environment

Emissions	Pollutants (tons per year)				
	CO	VOCs	NO _x	SO ₂	PM ₁₀
Hampton Roads AQCR ¹	257,325	79,750	83,560	110,220	49,860
Langley AFB	768.09	115.18	283.38	6.47	10.29
---Stationary Sources ²	7.19	10.68	42.18	0.87	2.09
---Mobile Sources ³	760.9	104.5	241.2	5.6	8.2
<i>Sources:</i> ¹ Federal Register (629123) June 26, 1997; ² Air Force 2003; ³ Air Force 2000					

Air quality in Hampton Roads AQCR is currently designated as attainment for all criteria pollutants. For ozone and its precursor pollutants (volatile organic compounds [VOCs] and nitrogen oxides [NO_x]), the affected area is considered in “transitional attainment” or “maintenance.” On April 15, 2004, the USEPA designated the City of Hampton as marginal nonattainment for the newly established 8-hour O₃ standard effective as of June 15, 2004 (USEPA 2004a). The USEPA will revoke the 1-hour O₃ standard in June 2005 (USEPA 2004b). Also, monitoring data are being collected for determining compliance with the newly developed standard for particulates less than 2.5 micrometer in diameter (PM_{2.5}). The Commonwealth of Virginia has recommended that, based on the most recent 3 years of monitoring that the entire state be designated as attainment for the PM_{2.5} standard. The official designation has not been promulgated as of the date of this publication.

REGULATORY SETTING

The CAA Section 176(c), General Conformity, establishes certain statutory requirements for federal agencies with proposed federal activities to demonstrate conformity of the proposed activities with each state’s State Implementation Plan (SIP) for attainment of national ambient air quality standards (NAAQS). In 1993, USEPA issued the final rules for determining air quality conformity. Federal activities must not (1) cause or contribute to any new violation; (2) increase the frequency or severity of any existing violation; or (3) delay timely attainment of any standard, interim emission reductions, or milestones in conformity to a SIP’s purpose of eliminating or reducing the severity and number of NAAQS violations or achieving attainment of NAAQS. General conformity applies only to non-attainment and maintenance areas. If the emissions from a federal action proposed in a non-attainment area exceed annual emission thresholds identified in the rule (*de minimis* levels) or are regionally significant (identified as equal to, or more than, 10 percent of the emissions inventory for the region), a conformity determination is required of that action. The thresholds become more restrictive as the severity of the non-attainment status of the region increases. For the newly adopted 8-hour O₃ and the PM_{2.5} standards, according to USEPA Guidance (March 2000), conformity and other planning requirements would be triggered on the effective date of the final USEPA designation.

3.9 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

3.9.1 Definition of the Resource

The socioeconomic resources of the potentially affected region, represented as the ROI, are characterized in terms of population and housing, economic activity, community services, and infrastructure. Because these resources would be interrelated in their response to the proposed action at Langley AFB, their current condition is assessed in order to provide a basis for analyzing potential socioeconomic impacts. A change in employment, for example, may lead to population movements into or out of a region and, in turn, lead to changes in demand for housing and public services. The significance of these estimated impacts is then evaluated by comparing their characteristics to the baseline conditions described in this section.

Virginia is unique in that cities that have reached a certain size become independent governmental jurisdictions from the counties in which they are geographically located. The Virginia Peninsula is made up of the counties of James City, Gloucester, Matthews, and York and the independent cities of Williamsburg, Newport News, Poquoson, and Hampton. South Hampton Roads includes Isle of Wight County and the independent cities of Norfolk, Suffolk, Portsmouth, Chesapeake, and Virginia Beach. The center of the area, in which Langley AFB is situated, is highly urbanized, while the outer regions tend to be more rural.

3.9.2 Existing Conditions

The ROI for this analysis includes York County and the independent cities of Hampton, Newport News, and Poquoson, which are the areas surrounding Langley AFB. It is expected that potential socioeconomic impacts of the proposed action would be concentrated in this region. The proposed action would be contained within the confines of Langley AFB.

POPULATION AND HOUSING

The 2000 Census established the ROI population as 394,450 persons, an increase of 10.4 percent from the 1990 population of 357,265 (see Table 3-7). By 2003, population in the ROI had grown to 401,317 persons, a 1.7 percent increase since 2000. The current population in the ROI accounts for 5.6 percent of the Virginia population of 7.4 million persons.

Table 3-7. Regional Demographics

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
2003 Population	146,878	181,647	11,844	60,948	401,317
2000 Population	146,437	180,150	11,566	56,297	394,450
1990 Population	133,793	170,045	11,005	42,422	357,265
Population density per square mile	2828.0	2637.9	745.4	532.9	1630.0
2010 Projection	149,600	184,100	12,000	68,800	414,500
2020 Projection	152,600	187,100	12,300	80,000	432,000
2030 Projection	155,600	190,100	12,600	91,000	449,300
<i>Sources: U.S. Bureau of Census 2000, 2004; VEC 2003</i>					

Population density in the ROI is 1,630 persons per square mile, ranging from 533 persons per square mile in York County to over 2,800 persons per square mile in the city of Hampton. Overall, the state has a population density of 179 persons per square mile. The combined regional population is projected to increase at an average annual rate of 0.5 percent, reaching 414,500 persons by the year 2010. By the years 2020 and 2030, the population of the region is expected to grow to 432,000 and 449,300 persons, respectively.

Based on Langley AFB population figures for FY 2002, the base-related population amounts to approximately 26,845 individuals (see Table 3-8). Of this total, 18,539 persons are military and family members, and the remaining 8,306 persons are civilian employees and family members. The total Langley AFB population represents 6.7 percent of the ROI population.

Table 3-8. Langley AFB Population

	September 2002
Military assigned	8,470
Living on-base	1,373
Living off-base	7,097
Military family members	10,069
Living on-base	6,244
Living off-base	3,825
Civilians	8,306
Appropriated fund civilians	2,074
Other civilians ¹	1,037
Civilian family members ²	5,195
<i>Notes:</i> ¹ This figure represents non-appropriated fund contract civilians and private business. ² This figure calculated based on Census average household size for the ROI. <i>Source:</i> Air Force 2002a.	

According to the 2000 Census, there were 156,429 housing units in the ROI, of which 147,739 were occupied (see Table 3-9). An estimated 83,916 of the occupied units (57 percent) were owner-occupied, while the remaining 63,823 (43 percent) were renter-occupied. The vacancy rate in the ROI is 5.56 percent compared to 7.06 percent in the state. Approximately one-quarter of the 8,690 vacant homes are recreation homes, seasonal homes, and other housing classifications. Over one-third of the housing in the ROI is located in Hampton (37 percent), with Newport News accounting for almost half (47 percent). The median value of housing units in 2000 ranged from a low of \$91,100 in Hampton to a high of \$153,400 in Poquoson, compared to the state median home value of \$125,400.

There are approximately 3,000 on-base housing units at Langley AFB, including both military family housing (MFH) units and unaccompanied personnel housing (UPH) units. The UPH inventory includes permanent party dormitory space, visiting officer quarters, and visiting airmen quarters.

Table 3-9. Housing Characteristics

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
Total Housing Units	57,311	74,117	4,300	20,701	156,429
Occupied Units	53,887	69,686	4,166	20,000	147,739
Vacancy Rate	5.97%	5.98%	3.12%	3.39%	5.56%
Ownership Rate	58.6%	52.4%	84.1%	75.8%	58.6%
Average Household	2.49	2.50	2.75	2.78	2.67
Median Value	91,100	96,400	153,400	152,700	--
<i>Source: Census 2000</i>					

ECONOMIC ACTIVITY

The regional economy has been expanding since the last recession in 1991 but began to slow in 2001 and 2002. Employment in the region has been growing at 2.3 percent annually over the past 20 years, slightly higher than the national rate (HRPDC 2003). The military and defense contractors, including those on and associated with Langley AFB, provide a significant portion of Hampton and Newport News employment. The Hampton Roads region, which includes the ROI, has one of the most highly concentrated military populations in the United States, with military employment comprising 11.5 percent of total regional employment.

Langley AFB is a major consumer in the local economy, not only due to the purchase of goods and services to support its day-to-day operations, but also because of the household spending of its military and civilian personnel and their families. Besides purchases and wages, Langley AFB is responsible for other economic activity in the ROI. Federal impact funds are provided to defray some of the community educational costs for military dependents receiving education in the civilian community. In addition, many military and DoD civilian retirees and their families live in the region, with their retirement pay contributing to the local economy.

EMPLOYMENT

The most recent labor market information indicates that the civilian labor force in the ROI stands at 200,138 (see Table 3-10). The civilian labor force grew 11.9 percent during the 1990s, and has grown an additional 6.0 percent since the year 2000. The current regional unemployment rate is 4.5 percent, compared to the state unemployment rate of 3.6 percent. In 1990, the regional unemployment rate was 5.0 percent, and declined over the decade to a low of 2.5 percent in 2000.

Employment in the region amounted to 173,364 jobs in 2002 (see Table 3-10). The services industry is by far the largest employment sector, accounting for 36.0 percent of regional employment. Government and government enterprises contribute 21.3 percent of all jobs in the ROI. Of total government employment, approximately 40 percent are military, 20 percent are federal civilians, and 40 percent are state and local government employees. Manufacturing is the third largest sector in the region, accounting for 15.8 percent of total employment.

Table 3-10. Labor Market Information

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
Labor Force 2004	74,038	88,997	6,436	30,667	200,138
2000	70,593	84,242	6,128	27,880	188,843
1990	63,667	79,447	--	25,672 ¹	168,789
Unemployment 2004	4.7%	5.1%	2.8%	2.6%	4.5%
2000	2.7%	2.8%	1.7%	1.6%	2.5%
1990	5.3%	5.3%	--	3.4% ¹	5.0%
<i>Notes:</i> ¹ 1990 Data for York County includes data for the City of Poquoson.					
<i>Source:</i> VEC 2004.					

Personnel associated with Langley AFB totaled 11,581 employees in FY 2002 (Air Force 2002a). Military personnel account for 8,470 jobs and appropriated fund civilians account for 2,074 jobs. Other civilians, including non-appropriated fund civilians, BX/commissary employees, branch bank/credit union employees, and other concessionaires account for the remaining 1,037 jobs (Table 3-11). Additional private contracted personnel may contribute to total base employment. Economic activity generated by Langley AFB supports an estimated 6,195 indirect jobs in the region, with an average annual earnings impact of \$185 million.

INCOME AND EXPENDITURES

Earnings in the ROI totaled approximately \$7 billion in 2002 (BEA 2004). The distribution of earnings across industries is essentially the same as the distribution of employment, with services and government representing the largest income producers. Earnings per job ranged from \$24,345 in York County to \$36,991 in Newport News, with average earnings per job in the ROI of \$35,328 (see Table 3-12). Median family income in the ROI in 2000 ranged from \$36,597 in Newport News to \$60,920 in Poquoson (Census 2000). Per capita income was \$19,738, almost 20 percent lower than the state per capita income of \$23,975.

Table 3-11. Employment by Industry (2002)

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
Natural Resources and Mining	0	1	*	28	29
Construction	2,487	3,707	172	2,076	8,442
Trade	9,517	11,891	351	2,642	24,401
Transportation and Utilities	576	2,385	*	215	3,176
Manufacturing	4,407	22,277	14	680	27,378
Information	2,171	2,200	0	101	4,472
Financial	1,805	3,608	77	632	6,122
Services	22,707	32,112	601	6,978	62,398
Government	15,278	17,373	505	3,763	36,919
Total Employment	58,948	95,555	1,745	17,116	173,364
<i>Notes: * Denotes non-disclosed data.</i>					
<i>Source: VEDP 2004.</i>					

Table 3-12. Earnings and Income

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
Median Family Income	\$39,532	36,597	60,920	57,956	--
Per Capita Income	19,774	17,843	25,336	24,560	19,738
Earnings per Job	36,991	36,915	-- ¹	24,345	35,328
Poverty Rate	11.3	13.8	4.5	3.5	11.1
<i>Note: ¹ Job earnings data for city of Poquoson included in York County's data.</i>					
<i>Source: Census 2000, BEA 2004.</i>					

In FY 2002, total payrolls associated with the 11,581 military and federal civilian personnel amounted to \$600 million (see Table 3-13). Other expenditures during FY 2002 included \$128 million in construction costs, \$134 million for service contracts, \$7 million in impact aid and tuition assistance, and \$9 million in health-related expenditures. Total Langley AFB expenditures in FY 2002 amounted to \$1.1 billion.

Table 3-13. Langley AFB Payroll and Expenditures (FY 2002)

	<i>Annual Payroll and Expenditures (in millions)</i>	
	SUBTOTAL	TOTAL
Annual Payroll		\$ 599.5
Military	\$ 447.9	
AF Civilians	\$ 136.1	
NAF and other Civilians	\$ 15.5	
Expenditures		\$ 538.1
Construction	\$ 127.6	
Services	\$ 133.6	
Materials, Equipment, Supplies	\$ 276.9	
Total Payroll and Expenditures		\$ 1,137.6
<i>Source: Air Force 2002a</i>		

INFRASTRUCTURE

Potable Water. Langley AFB's sole potable water source is the Newport News Waterworks. Langley AFB has several non-potable water sources of water that can be used for contingency purposes. Three potable water treatment facilities, Harwood's Mill Water Treatment Plant (WTP), Lee Hall WTP, and a reverse osmosis well field currently make up the Newport News Waterworks with a maximum production capability of 108 million gallons per day (MGD).

There are four potable water storage tanks available at Langley AFB. Two of these tanks (616 and 1374) are currently in use and the remaining two tanks (66 and 1000) are offline. The total active tank storage capacity of the Langley AFB system is 2.5 million gallons (Air Force 2004). Potable water demand at Langley AFB has varied from 0.90 MGD to 1.20 MGD during the FY 1999 – FY 2000 time frame.

Wastewater Treatment. Wastewater generated at the base is discharged through the sanitary sewer system to the Hampton Roads Sanitation District (HRSD). The base has an HRSD Industrial Wastewater Discharge Permit (No. 0011) effective through October 1, 2006, that regulates the amount of pollutants that can be discharged to the wastewater treatment plant. Wastewater from existing CATM range facilities is directed through two pump stations to the main sewer system on base. There are no septic systems at the CATM range.

Electric Power and Natural Gas. Dominion Virginia Power provides electric power to the Back River substation to the base. NASA Langley Research Center purchases electricity, which is then sold to Langley AFB. System upgrades would be necessary to support new structures within the CATM range. Virginia Natural Gas provides natural gas to Langley AFB through an underground main that extends along Sweeney Boulevard. The natural gas system is adequate

to meet existing and short-term projected demand. There is no natural gas system currently installed within the CATM range.

ENVIRONMENTAL JUSTICE

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was issued by the President on February 11, 1994. Objectives of the EO, as it pertains to this document, include identification of disproportionately high and significant health and environmental effects on low-income populations or minority populations that would be caused by a proposed federal action. Accompanying EO 12898 was a Presidential Transmittal Memorandum that referenced existing federal statutes and regulations, including NEPA, to be used in conjunction with EO 12898.

Environmental justice concerns the disproportionate effect of a federal action on low-income or minority populations. The existence of disproportionately high and significant impacts depends on the nature and magnitude of the effects identified for each of the individual resources. If implementation of the proposed action and no-action alternative were to have the potential to significantly affect people, these effects would have to be evaluated for how they adversely or disproportionately affect low-income or minority communities. Because no significant effects occur because of the proposed action or the no-action alternative, neither minority nor low-income groups would be affected disproportionately. Therefore, environmental justice issues were eliminated from further analysis.

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4.0 ENVIRONMENTAL CONSEQUENCES

Chapter 4.0 presents the environmental consequences of the proposed action and no-action alternative at Langley AFB for each of the resource areas discussed in Chapter 1. To define the consequences, this chapter evaluates the project elements described in Chapter 2.0 against the affected environment provided in Chapter 3.0. Cumulative effects of the proposed action and no-action alternative with other foreseeable future actions are presented in Chapter 5.0.

4.1 LAND USE, TRANSPORTATION, AND VISUAL RESOURCES

4.1.1 Proposed Action

LAND USE

Implementation of the proposed action would be consistent with the Base General Plan (Air Force 2004) and the HQ ACC zoning initiative. CATM range construction activities would primarily occur within an area that has been cleared for the past 60 years. The conversion of this open space immediately adjacent to existing industrial land is not considered a significant impact. This change in land use would be noted as part of an update to the Base General Plan in FY 2005. The proposed action is consistent with surrounding industrial land uses and would be in accordance with the Enforceable Regulatory Programs of the Virginia Coastal Resources Management Program. This project would not have any component that would affect any of the following sections of the Enforceable Regulatory Program: Fisheries Management, Subaqueous Lands Management, Dunes Management, and Shoreline Sanitation. Appendix D contains the evaluation of these components.

TRANSPORTATION

With the implementation of the proposed action, on-base vehicular circulation would not be impeded by the demolition and construction of the CATM range. Construction-related truck traffic may lead to some degradation of base road surfaces and occasional congestion at the base's gates. These adverse effects would be short term and not significant.

VISUAL RESOURCES

Development would occur in an area previously developed. This demolition and construction, with a consistent architectural design, would benefit the visual resources of the base with no negative effect to the existing visual and natural character of the base.

4.1.2 No-Action Alternative

No impacts to land use, transportation, and visual resources are anticipated under the no-action alternative because the demolition and construction would not occur and use of existing 40- to 60-year-old structures would remain unchanged.

4.2 CULTURAL RESOURCES

A number of federal regulations and guidelines have been established for the management of cultural resources. Section 106 of the National Historic Preservation Act (NHPA), as amended,

requires federal agencies to take into account the effects of their undertakings on historic properties. Historic properties are cultural resources that are listed in, or eligible for listing in, the National Register of Historic Places (NRHP). Eligibility evaluation is the process by which resources are assessed relative to NRHP significance criteria for scientific or historic research, for the general public, and for traditional cultural groups. Under federal law, impacts to cultural resources may be considered adverse if the resources have been determined eligible for listing in the NRHP or have traditional significance for American Indian groups.

Analysis of potential impacts to cultural resources considers both direct and indirect impacts. Direct impacts may occur by physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or alter its setting; or neglecting the resource to the extent that it deteriorates or is destroyed. Direct impacts are assessed by identifying the types and locations of proposed activity and determining the exact location of cultural resources that could be affected. Indirect impacts result primarily from the effects of project-induced population increases.

4.2.1 Proposed Action

Impacts to archaeological resources could occur as a result of the Proposed Action. A portion of the site has been previously surveyed for archeological resources. While there are no archaeological resources currently identified within the project area, the area has not been completely surveyed for cultural resources (USACE 2004). Additionally, the area is considered to have a high potential for archaeological resources (ACC 2004). The portion of the project area between Buildings 1003 and 1020 is documented as the location of a circa 1917 bunk house/mess complex (USACE 2004). Although disturbances associated with the previous construction in the vicinity of the bunk house/mess complex could have impacted cultural materials, intact deposits may yet remain (USACE 2004). The nearest NRHP-eligible recorded site is the Poole Plantation, located approximately 1,200 feet to the southeast.

Impacts to architectural/engineering resources are not expected as a result of the proposed action. Between 1989 and 1991, a reconnaissance architectural survey was conducted by the National Park Service (NPS) to identify and evaluate architectural and historical resources on Langley AFB (HQ TAC 1992). The survey identified more than 250 contributing and non-contributing structures and defined the boundary of the NRHP-eligible Langley Field Historic District. Of the four structures planned for demolition under the proposed action, only the Storage Shed, Building 1003, is within the boundary of the NRHP eligible Langley Field Historic District. Although it is within the district, it was identified as a non-contributing element and significant alterations to this structure have made it ineligible for listing on the National Register. The remaining three structures, buildings 1013, 1015, and 1020, are outside the boundary of the NRHP-eligible historic district and were not evaluated as NRHP eligible (HQ TAC 1992). Additionally, ongoing survey work to identify architectural/engineering resources related to the Cold War Era has not identified any of the four structures as NRHP-eligible (USACE 2004).

New construction will meet LAFB's architectural standards and will be compatible with neighboring structures within the historic district, unlike existing, non-contributing facilities in the area.

Impacts to traditional resources are not expected under the proposed action. There are no federally recognized Indian lands at Langley AFB, and no issues have been identified by federally recognized or other Indian groups in Virginia. No traditional resources have been identified at this project location on Langley AFB.

Compliance with Section 106 of the NHPA, including consultation with the Virginia State Historic Preservation Office (SHPO) would be completed once a design is finalized and funds allocated.

4.2.2 No-Action Alternative

Under the no-action alternative, no demolition and no construction would take place. No impacts to cultural resources would be expected. Resources would continue to be managed in compliance with federal law and Air Force regulations.

4.3 BIOLOGICAL RESOURCES

4.3.1 Proposed Action

Under the proposed action, demolition and construction would take place in an area that is previously developed or disturbed, currently experiences high levels of continual human activity, lacks native terrestrial habitat, and exhibits a low level of biodiversity. The only plants or animals likely to be displaced from this marginal habitat are individuals of common and locally abundant species. Disturbance to forested areas would be minimal. The overall ecological effect would therefore be insignificant.

There would be no impact to jurisdictional wetlands from the implementation of the proposed action. Wetlands that have been delineated or regulated under state and federal laws and regulations would be avoided during implementation of the proposed action. The proposed action would not conflict with the wetlands management program associated with the Virginia Coastal Zone Management Program. Standard construction and demolition practices would be applied to control sedimentation and erosion during construction and demolition, thereby avoiding secondary effects to any nearby wetlands or freshwater aquatic communities. With the implementation of these practices during demolition and construction, no significant environmental consequences are anticipated.

Species listed, proposed for listing, or candidates for listing as threatened and endangered in accordance with the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 USC 1531 et seq.) are not anticipated to be significantly affected by the proposed action and the no-action alternative (see Appendix A). State-protected species would also not be significantly affected by the proposed action and the no-action alternative because their habitat would not be altered and because changes in base activities are not expected to be biologically significant. No special species or sensitive habitats are expected to be impacted.

4.3.2 No-Action Alternative

Under the no-action alternative, demolition and construction of the CATM range would not occur. There would be no environmental consequences to this resource.

4.4 WATER RESOURCES

4.4.1 Proposed Action

SURFACE WATER/GROUNDWATER

Development of the CATM range would include new impermeable surfaces that would generate additional stormwater runoff. Given the flat, low elevation of the surrounding area, stormwater would be directed to a series of drainage swales following the existing CATM range drainage system.

There would be no significant impacts to water resources from point source or non-point sources with implementation of the proposed action. The existing stormwater outfall between the existing berms would be eliminated, thus resulting in a positive benefit. The proposed action would not conflict with point source or non-point source pollution control objectives associated with the Virginia Coastal Zone Management Program. Prior to the start of construction, silt fences, storm drain inlet and outlet protection, and other appropriate standard construction practices would be instituted in accordance with Department of Conservation and Recreation's (DCR's) *Virginia Erosion and Sediment Control Handbook*. Because more than one acre would be disturbed by construction, a General Permit for Discharges of Stormwater from Construction Activities would be required.

The Snail wet bullet trap system utilizes small amounts of water as lubrication to minimize lead dust. This water is continually recycled through the entire system and does not need replacement. Some new water will be added to the system to account for evaporation. There will be no wash-down water as a result of range maintenance. The Snail wet bullet trap system does not generate perceptible levels of airborne lead and, when coupled with an integrated HVAC and air filtration system, vacuuming of the floor and other surfaces will be sufficient to minimize lead dust exposure.

FLOODPLAINS

Development of the CATM range would be within the 100-year floodplain. As identified in Figure 3-1, the majority of Langley AFB is located within the 100-year floodplain and no practicable alternatives are available for this demolition and construction. In order to reduce the potential for flood damage, all new facilities would be constructed with a first floor elevation at 9 feet MSL. There would be no significant environmental effects to this resource.

4.4.2 No-Action Alternative

Under the no-action alternative, demolition and construction of the CATM range would not occur. There would be no environmental consequences to this resource existing, but 40- to 60-year-old facilities would be subject to occasional flooding.

4.5 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

4.5.1 Proposed Action

HAZARDOUS MATERIALS

Development of facilities within the CATM range may require the use of hazardous materials by contractor personnel. In accordance with the base's HAZMART procedure, copies of Material Safety Data Sheets must be provided to the base and maintained on the construction site. Project contractors would comply with federal, state, and local environmental laws and would employ affirmative procurement practices when economically and technically feasible.

All hazardous materials and construction debris generated by the proposed project would be handled, stored and disposed of in accordance with federal state and local regulations and laws. Construction debris from the demolition of both the existing administrative building and the existing CATM structures will be tested prior to disposal by the contractor to determine appropriate disposal requirements. Permits for handling and disposal of hazardous material are the responsibility of the contractor. Hazardous materials shall not be stored on base. All hazardous materials used at the construction site including, but not limited to, paint, paint thinners, gasoline, diesel, oil and lubricants shall be removed daily. Only quantities of hazardous materials required to carry out the work for the day would be permitted on site.

HAZARDOUS WASTE

Contractor personnel may generate hazardous waste during construction. Storage and disposal of these wastes would be coordinated by the construction contractor with base hazardous waste program managers. Generation of appreciable amounts of hazardous wastes is not anticipated. Any soil suspected of contamination, as discovered during the construction or demolition process, would be tested and disposed of in accordance with proper regulations.

Removal contractors or reclaimers will apply standard Best Management Practices for small arms range lead removal to separate the lead from soil. The soil, if placed back on the range, is exempt from RCRA. However, if the soil were to be removed off-site, then it would require testing to determine if it was an RCRA hazardous waste.

In the event of fuel spillage during construction, the contractor would be responsible for its containment, cleanup, and related disposal costs. The contractor would have sufficient spill supplies readily available on the pumping vehicle and/or at the site to contain any spillage. In the event of a contractor related release, the contractor shall immediately notify the 1 FW Civil Engineering/Environmental Management Office and take appropriate actions to correct its cause and prevent future occurrences.

If asbestos-containing materials (ACM), lead-based paint, or lead are found in or near the demolition areas, then the following federal and state regulations must be followed.

- *Asbestos Removal and Disposal.* Upon classification as friable or non-friable, all waste ACM should be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640) and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 et seq.).

- *Lead-Based Paint Removal and Disposal.* The proposed project should comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations (9 VAC 20-60-261).
- *Lead Abatement.* Removal contractors or reclaimers should apply standard best management practices to separate the lead from soil. The soil, if then placed back on the range, is exempt from RCRA. However, if the soil were to be removed off-site, then it would require testing to determine if it is a RCRA hazardous waste.

STORAGE TANKS

There are no aboveground storage tanks associated with buildings scheduled for demolition. Discussions with range personnel indicate no underground storage tanks currently located within the CATM range site (personal communication, T. Clark).

ENVIRONMENTAL RESTORATION PROGRAM

Development of the proposed CATM range would occur near ERP Sites LF-17, OT-38C, OT-64, and Munitions Response Site SR 148/40 mm Range. The 1 Civil Engineering Squadron, Environmental Restoration Branch (1 CES/CEVR), would request an ACC waiver for construction near these four ERP sites and provide notification to VDEQ and USEPA Region III. Any soil suspected of contamination, as discovered during the demolition and construction process, would be tested and disposed of in accordance with appropriate VDEQ regulations. The environmental consequences to this resource are not anticipated to be significant.

SOLID WASTE MANAGEMENT

Demolition of the four facilities would generate solid wastes consisting of concrete, brick, wood, structural steel, glass, and miscellaneous metal building components. These materials would be generated during FY 2007.

The total amount of demolition waste generated is estimated to be approximately 3,250 cubic yards. Demolition contractors would be directed to recycle materials to the maximum extent possible, thereby reducing the amount of demolition debris disposed in landfills. Materials not suitable for recycling would be taken to a landfill permitted to handle construction debris wastes, such as the Bethel Landfill in Hampton. That landfill has capacity to operate for 59 years (personal communication, Deibler 2003) and the waste generated by the proposed action would not have a significant impact to the operating life of the landfill. No significant environmental effects would result from the implementation of the proposed action.

4.5.2 No-Action Alternative

Under the no-action alternative, demolition and construction of the CATM range would not occur. Management of hazardous wastes would continue under existing Langley AFB programs and there would be no environmental consequences to this resource.

4.6 SAFETY

4.6.1 Proposed Action

GROUND SAFETY

Implementation of this action would result in a short-term increase in the risks associated with construction and demolition; however, no significant environmental consequences are anticipated. Standard demolition and construction practices guided by OSHA and NFPA regulations and codes would be followed. With the construction of new CATM range facilities, substandard structures would be removed from use, improving working conditions and safety for CATM range personnel.

EXPLOSIVE SAFETY

Implementation of this action would not result in any expansion to the existing quantity-distance (Q-D) explosive safety arcs. This is a result of the facility siting and engineering design being developed for new facilities. No adverse environmental consequences are anticipated.

4.6.2 No-Action Alternative

Under the no-action alternative, demolition and construction of the CATM range would not take place. Abandoned and aging structures are considered a safety hazard to personnel conducting operations in the CATM range and continuing the use of these 40- to 60-year-old facilities could increase the potential risk to CATM range personnel.

4.7 NOISE

Noise impact analyses typically evaluate potential changes to existing noise environments that would result from implementation of a proposal. Potential changes in the noise environment can be (1) beneficial (i.e., if they reduce the number of sensitive receptors exposed to unacceptable noise levels); (2) negligible (i.e., if the total area exposed to unacceptable noise levels is essentially unchanged); or (3) adverse (i.e., if they result in increased exposure to unacceptable levels).

4.7.1 Proposed Action

Implementation of the proposed action would have minor, temporary increases in localized noise levels in the vicinity of the project area during demolition and construction. The base is an active military facility that typically experiences high noise levels from daily flight operations. Use of construction and demolition equipment for site preparation and development (i.e., demolition, grading, fill, and construction) would generate noise. However, noise would be similar to typical construction and demolition noise, last only the duration of the specific construction and demolition activities, and could be reduced by the use of equipment sound mufflers and restricting construction and demolition activity to normal working hours (i.e., between 7:00 a.m. and 5:00 p.m.). Table 4-1 shows sound levels associated with typical heavy construction equipment under varying modes of operation.

Table 4-1. Typical Equipment Sound Levels

<i>Equipment</i>	<i>Sound Level (In dBA) Under Indicated Operational Mode¹</i>		
	<i>Idle Power</i>	<i>Full Power</i>	<i>Moving Under Load</i>
Forklift	63	69	91
Backhoe	62	71	77
Dozer	63	74	81
Front-End Loader	60	62	68
Dump Truck	70	71	74
Note: ¹ Measured at 125 Feet. Source: Air Force 1999			

Compared with aircraft noise, noise produced by construction and demolition would be relatively lower in magnitude, and spread out during the business day. Noise from truck traffic hauling construction materials to construction location and demolition materials away from the demolition location and the staging area would not affect base residents because the West Gate would provide demolition and construction access. The noise disruptions would be temporary and would be limited to daytime hours; therefore, impacts are considered insignificant.

Noise from firing operations would be mostly contained within the range building and noise-absorptive acoustical surfaces would reduce transmission of noise outside the building. This would result in an overall positive effect by removing the noise generated by the current outdoor range.

4.7.2 No-Action Alternative

Under the no-action alternative demolition and construction would not occur. Noise levels would remain the same as they are currently.

4.8 AIR QUALITY

4.8.1 Proposed Action

The air quality analysis included an assessment of direct and indirect emissions from the known activities associated with the proposed action and the no-action alternative at Langley AFB that would affect the regional air quality. The activities identified as requiring evaluation included the demolition and construction of facilities within the CATM range. Emissions from the proposed action and the no-action alternative are either “presumed to conform” (based on emissions levels that are considered insignificant in the context of overall regional emissions) or they must demonstrate conformity with approved SIP provisions.

Emissions during the demolition and construction period were quantified to determine the potential impacts on regional air quality. These emissions were compared to federal conformity *de minimis* thresholds for O₃ precursors (volatile organic compounds [VOC] and NO_x). Emissions of VOC, NO_x, CO, and PM₁₀ from construction activities were calculated using emission factors from the *Air Emissions Inventory Guidance Document for Mobile Sources at Air Force Installations* (Air Force 2002b), which is a compilation of USEPA emission factors. The

emission factors included contributions from engine exhaust emissions (i.e., on-site construction equipment, material hauling, and workers' travel), fugitive dust emissions (e.g., from grading and trenching activities). The construction and demolition emissions were calculated over the entire project period, which would extend from FY 2007 through FY 2008. Because actual emissions would be spread over a 2-year period, annual construction and demolition emissions would be less than shown in Table 4-2. The emissions, in tons per construction period, from the proposed action and the no-action alternative are presented in Table 4-2.

Table 4-2. Project Emissions - Proposed Action

<i>Criteria Pollutants</i>	<i>Langley AFB Baseline Emissions (tons per year)</i>	<i>Hampton Roads AQCR (tons per year)</i>	<i>Temporary Construction & Demolition Emissions (tons)</i>
CO	768.09	257,325	1.7
VOCs	115.18	79,750	0.5
NO _x	283.38	83,560	7.3
SO ₂	6.47	110,220	< 0.1
PM ₁₀	10.29	49,860	0.6

Total construction and demolition emissions generated on base and within the Hampton Roads AQCR are less than 1 percent when compared to regional emissions and are below the 100 tons per year *de minimis* federal conformity thresholds for NO_x and VOCs. Emissions generated by construction and demolition projects are temporary in nature and would end when construction and demolition are complete. The emissions from fugitive dust (PM₁₀) would be significantly less due to the implementation of control measures in accordance with standard construction and demolition practices. For instance, frequent spraying of water on exposed soil during construction and demolition, proper soil stockpiling methods, and prompt replacement of ground cover or pavement are standard landscaping procedures that could be used to minimize the amount of dust generated during demolition and construction. The base employs street sweepers to reduce the amount of dirt and debris on the roadways within the base. Using efficient grading practices and avoiding long periods where engines are running at idle could reduce combustion emissions from construction and demolition equipment. Vehicular combustion emissions from construction workers commuting may be reduced by carpooling.

No new stationary sources would be added to the base as a result of the proposed project. The proposed action and the no-action alternative would not conflict with the air pollution control objectives associated with the Virginia Coastal Management Program.

Use of the Snail wet bullet trap system and installation of an integrated Heating, Ventilation and Cooling (HVAC) and filtration system would assure indoor air quality would meet the requirements contained in ETL 02-11 and control exposure to lead in accordance with 29 CFR Part 1910.1025, *Lead Exposure*. The supply and exhaust air system is integral to the operation of an indoor range and the health of building inhabitants. The design will include a positive exhaust system for removal of airborne lead. A slight negative air pressure would be maintained on the range, which can be achieved by exhausting 3 to 7 percent more air than is

supplied. Supply and exhaust fan systems would have control interlocks to ensure simultaneous operation. All doors into the negative pressure area must have air locks. The ventilation system should provide laminar airflow across the firing line toward the bullet trap. At the firing line, the air velocity would be 22.9 meters per minute (mpm) (75 feet per minute), plus or minus 5 percent. Airflow should be evenly distributed across the firing line. The Snail wet bullet trap system does not generate perceptible levels of airborne lead and, when coupled with an integrated HVAC and air filtration system, vacuuming of the floor and other surfaces would be sufficient to minimize lead dust exposure.

Demolition of the existing CATM range and the Junior Eagles Range may result in potential exposure to lead dust. Personal Protective Equipment and other mitigation measures contained in 29 CFR 1910.1025, *Lead Exposure* and 29 CFR 1926.55, *Gases, Vapors, Dusts and Mists*, will be required of all workers during the demolition of these facilities.

General conformity regulations set forth in 40 CFR 51 Subpart W, and adopted in the Virginia Administrative Code (9 VAC 5 Chapter 160), outline *de minimis* levels of emissions, below which it is presumed that the action conforms to the SIP. The *de minimis* levels for O₃ precursors in a maintenance area outside of an O₃ transport region (i.e., Hampton Roads AQCR) are 100 tons per year of VOC emissions and 100 tons per year of NO_x. In addition, the proposed action's emissions (both direct and indirect) must be compared to the regional inventory to determine if the emissions are "regionally significant." Emission increases of O₃ precursors (NO_x and VOCs) are well below the threshold, thus demonstrating compliance with CAA conformity requirements. In addition, the proposed action emissions, as show in Table 4-2, are well below the regional significance threshold defined by 10 percent of the regional emissions (i.e., 836 tons per year of NO_x and 797 tons per year of VOC).

4.8.2 No-Action Alternative

Under the no-action alternative, demolition and construction of the CATM range would not occur. Air quality would remain the same as present conditions.

4.9 SOCIOECONOMICS

4.9.1 Proposed Action

Economic activity associated with the demolition and construction of the CATM range, such as payroll and materials expenditures, would provide short-term economic benefits to the local economy during the projected 4-year period required to complete the project. This impact would comprise less than 0.1 percent of regional employment and earnings. No significant effects to socioeconomic resources would be expected, and there would be a slight beneficial increase in regional economic activity.

Interconnections to the existing Langley AFB utility infrastructure are available to support the construction associated with the CATM range. Upgrades would be necessary for the range support office and for new connections to new range structure. Consumption of potable water and electricity would increase with the operation of these facilities; however, these demands can be met through the existing and upgraded infrastructure. No adverse environmental consequences are anticipated from the construction and operation of these facilities.

4.9.2 No-Action Alternative

Under the no-action alternative, the CATM range would not be constructed and the base small arms training requirements would be met utilizing aging and deteriorated equipment and facilities. There would be no significant effects to this resource.

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5.0 CUMULATIVE EFFECTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

5.1 CUMULATIVE EFFECTS

This section provides (1) a definition of cumulative effects, (2) a description of past, present, and reasonably foreseeable actions relevant to cumulative effects, and (3) an evaluation of cumulative effects potentially resulting from these interactions.

5.1.1 Definition of Cumulative Effects

Council on Environmental Quality (CEQ) regulations stipulate that the cumulative effects analysis within an EA should consider the potential environmental impacts resulting from “the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions” (40 CFR 1508.7). Recent CEQ guidance in *Considering Cumulative Effects* affirms this requirement, stating that the first steps in assessing cumulative effects involve defining the scope of the other actions and their interrelationship with the proposed action and the no-action alternative. The scope must consider geographic and temporal overlaps among the proposed action and the no-action alternative and other actions. It must also evaluate the nature of interactions among these actions.

Cumulative effects are most likely to arise when a relationship or synergism exists between a proposed action and the no-action alternative and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with, or in close proximity to, the proposed action and the no-action alternative would be expected to have more potential for a relationship than actions that may be geographically separated. Similarly, actions that coincide, even partially, in time would tend to offer a higher potential for cumulative effects.

To identify cumulative effects, this EA addresses three questions.

1. Does a relationship exist such that elements of the proposed action and the no-action alternative might interact with elements of past, present, or reasonably foreseeable actions?
2. If one or more of the elements of the proposed action and the no-action alternative and another action could be expected to interact, would the proposed action and the no-action alternative affect or be affected by impacts of the other action?
3. If such a relationship exists, does an assessment reveal any potentially significant impacts not identified when the proposed action and the no-action alternative are considered alone?

In this EA, an effort has been made to identify all actions that are being considered and that are in the planning phase at this time. To the extent that details regarding such actions exist and the actions have a potential to interact with the proposed action and the no-action alternative in

this EA, these actions are included in this cumulative analysis. This approach enables decision makers to have the most current information available so that they can evaluate the environmental consequences of the proposed action and the no-action alternative.

5.1.2 Past, Present, and Reasonably Foreseeable Actions

This EA applies a stepped approach to provide decision makers with not only the cumulative effects of the proposed action and the no-action alternative, but also the incremental contribution of past, present, and reasonably foreseeable actions.

PAST AND PRESENT ACTIONS RELEVANT TO THE PROPOSED ACTION AND THE NO-ACTION ALTERNATIVE

Langley AFB is an active military installation that undergoes continuous change in mission and in training requirements. This process of change is consistent with the U.S. defense policy that the Air Force must be ready to respond to threats to American interests throughout the world.

The base, like any other major installation, also requires occasional new construction, facility improvements, and infrastructure upgrades. The base has been in operation since 1917 and many facilities have outlived their useful life and require extensive renovation or demolition. Demolition of the Langley Tow Tank (720) was completed in 2003 and demolition of the Seaplane Hanger (633) is currently underway. Langley AFB is currently upgrading portions of its water, storm water drainage system, and electrical system. Also constructed in 2004 was a new operations support center, housing management office, dormitory complex, reconstruction of the King Street Gate, and a new outdoor running track.

REASONABLY FORESEEABLE FUTURE ACTIONS

During the FY 2005 to FY 2008 timeframe, Langley AFB has proposed a number of actions that are independent of the proposed action and would be implemented irrespective of a decision on the proposed demolition and construction at the existing CATM range. In order to redevelop portions of the base and to eliminate facilities that are obsolete, the base is considering demolition of various buildings throughout the base. These buildings include the Greenhouse (1001), Dock (610), LTA single-family housing units (868, 869, 948, and 949), and industrial buildings 615, 731, 732, 735, and 1033. The base is also planning to construct a new building to house the Air Force Command and Control, Intelligence, Surveillance, Reconnaissance Center.

Planned community support construction includes a new youth center, visitors' quarters, expansion of the hospital and construction of a new Army and Air Force Exchange Service mini-mall, redevelopment of the marina, reconstruction of the LaSalle and West gates, including widening of a portion of Sweeney Boulevard. The base is also planning a series of infrastructure improvements that include an expansion to the alert area, replacement of the existing 2-million gallon per day (MGD) potable water storage tank, and relocation of the government gas station.

5.1.3 Analysis of Cumulative Impacts

The following analysis examines how the impacts of these other actions might be affected by those resulting from the proposed action at Langley AFB and whether such a relationship would result in potentially significant impacts not identified when the proposed action is considered alone.

None of the future infrastructure actions (analyzed in separate environmental documents) would be expected to result in more than negligible impacts either individually or cumulatively. All actions affect very specific, circumscribed areas, and the magnitude of the actions is minimal. Given that the proposed action would likewise have a minimal effect within the base, the combined impacts of these actions would remain well below the threshold of significance for any resource category.

5.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA requires that environmental analysis include identification of “. . . any irreversible and irretrievable commitments of resources which would be involved in the proposed action and no-action alternative should it be implemented.” Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the uses of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species or the demolition of a historic building).

For the proposed action, any potential environmental consequences would be short-term and temporary, or longer lasting, but negligible. Training operations would continue and involve consumption of nonrenewable resources, such as fuel used in vehicles. None of these activities would be expected to significantly decrease the availability of minerals or petroleum resources. Personal vehicle use by the personnel continuing to support the existing mission would consume water, fuel, oil, and lubricants. The proposed action would increase their use, but would not significantly affect the availability of the resources.

Construction would occur on previously disturbed areas. Minimal impacts would result on vegetation; however the impacts are not irreversible or irretrievable. While construction of new facilities would incur soil disturbance, use of common construction practices and grading would localize and minimize soil loss. No additional impacts on cultural or archaeological resources would result.

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6.0 REFERENCES

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PERSONS AND AGENCIES CONTACTED

Baie, Laura, 2004. Community Planner, 1 CES/CECP, Langley Air Force Base, Virginia.

Clark, TSgt Timothy L., 2005. SFS/SFTC, 1 Fighter Wing, Langley AFB Virginia.

Deibler, Jeff, 2003. Virginia Department of Environmental Quality, Solid Waste Management, Richmond, Virginia.

Green, Paul PhD, 2004. Cultural Resources Manager, ACC/CEVPN, Langley Air Force Base, Virginia.

Goss, Matthew, 2005. EIAP Manager, 1 CES/CEVP, Langley Air Force Base, Virginia.

Hailey, Kathi, 2004. Hazardous Waste Manager, 1 CES/CEVC, Langley Air Force Base, Virginia.

Johnston, Vic, 2004. Public Affairs, 1 FW/PA, Langley Air Force Base, Virginia.

Patterson, Margaret, 2004. Restoration Project Manager, ACC/CEVRE, Langley Air Force Base, Virginia.

Tice, John, 2004. Environmental Restoration Program Manager, 1 CES/CEVR, Langley Air Force Base, Virginia.

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7.0 LIST OF PREPARERS

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Catherine Brandenburg, Document Production

Years of Experience: 4

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APPENDIX A - CONSULTATION LETTERS

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

MAR 21 2005

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Ms. Karen L. Mayne
U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
P.O. Box 99
Gloucester VA 23061

CERTIFIED MAIL
RETURN RECEIPT
7002 3150 0006 0380 9651

Dear Ms. Mayne

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

The proposal consists of six elements: demolition of the existing facility, construction of an enclosed 42 point open-bay firing range, construction of an observation tower, installation of a Snail wet bullet trap, wetland mitigation, and lead abatement.

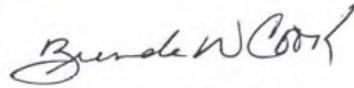
This proposal is intended to upgrade facilities and services to allow for a larger training load and allow the maximum amount of personnel to receive weapons training at Langley AFB. In addition to the proposed action, a no-action alternative will be analyzed in the EA. Attachment 1 is a map that provides an overview of the proposed action area.

Pursuant to analysis of the proposed action, as well as compliance with the Endangered Species Act, please send us information regarding listed threatened, endangered, and candidate species that occur or may occur in the potentially affected area. Please identify a point of contact for any follow-up questions we may have concerning the data you provide and we look forward to receiving your comments as part of this process.

Global Power For America

Please send this information or any requests for additional information to Mr. Matt Goss, of the Environmental Management Flight, at (757) 764-1095.

Sincerely



BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Area

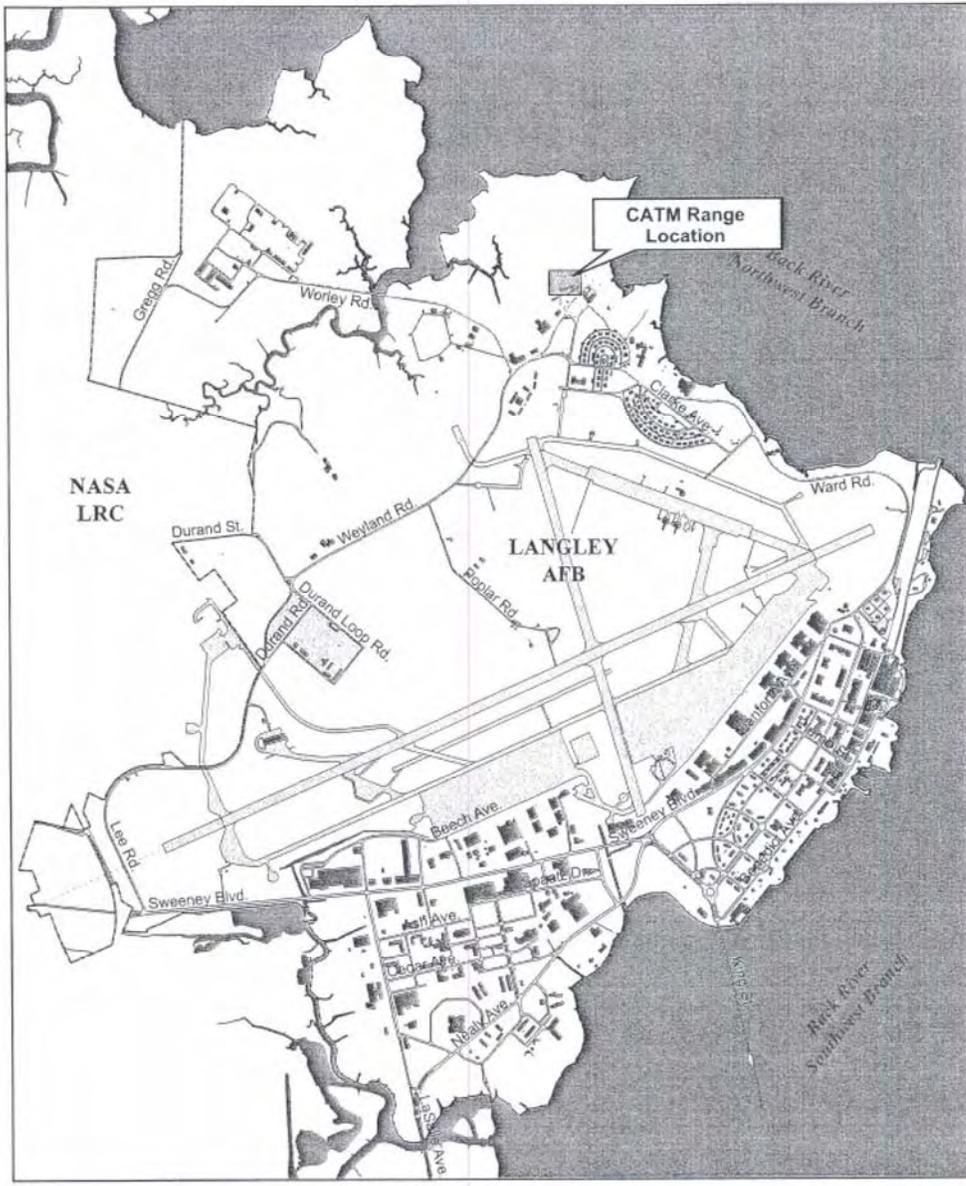


Figure 2-1
 Combined Arms Training Maintenance (CATM) Range
 Langley AFB, VA





DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAR 21 2005

Mr. Gerald P. Wilkes
Virginia Department of Mines, Minerals and Energy
Division of Mineral Resources
P.O. Box 3667
Charlottesville VA 22903

CERTIFIED MAIL
RETURN RECEIPT
7003 1010 0001 9507 9393

Dear Mr. Wilkes

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

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If you have any specific concerns or questions about the proposed actions, please contact Mr. Matt Goss, of the Environmental Management Flight, at (757) 764-1095.

BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Areas

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAR 21 2005

Mr. Thomas A. Barnard, Jr.
Virginia Marine Resources Commission
P.O. Box 1346
Gloucester Point VA 23062

CERTIFIED MAIL
RETURN RECEIPT
7003 1010 0001 9507 9409

Dear Mr. Barnard

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Area

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DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAR 21 2005

Mr. Tony Watkinson
Virginia Marine Resources Commission
2600 Washington Avenue, 3rd Floor
Newport News VA 23607

CERTIFIED MAIL
RETURN RECEIPT
7003 1010 0001 9507 9416

Dear Mr. Watkinson

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Area

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DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAR 21 2005

Mr. Keith Tignor
Virginia Department of Environmental Quality
Office of Plant & Pest Services
1100 Bank Street
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7003 1010 0001 9507 9331

Dear Mr. Tignor

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

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Map of Proposed Action Area

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAR 21 2005

Ms. Catherine Harold
Chesapeake Bay Local Assistance Department
101 N. 14th Street, 17th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7003 1010 0001 9507 9348

Dear Ms. Harold

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

MAR 21 2005

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Mr. John Davy
Virginia Department of Conservation & Recreation
203 Governor Street
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7003 1010 0001 9507 9355

Dear Mr. Davy

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

MAR 21 2005

Mr. Michael Foreman
Virginia Department of Forestry
900 Natural Resources Drive, Suite 800
Charlottesville VA 22903

CERTIFIED MAIL
RETURN RECEIPT
7003 1010 0001 9507 9362

Dear Mr. Foreman

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

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DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

MAR 21 2005

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Mr. Ray Fernald
Virginia Department of Game and Inland Fisheries
4010 West Broad Street
Richmond VA 23230

CERTIFIED MAIL
RETURN RECEIPT
7003 1010 0001 9507 9379

Dear Mr. Fernald

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

MAR 21 2005

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Mr. Alan Weber
Virginia Department of Health
109 Governor Street, 6th Floor
Division of Drinking Water
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7003 1010 0001 9507 9386

Dear Mr. Weber

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

MAR 21 2005

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Ms. Ellie Irons
Virginia Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, 6th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7002 3150 0006 0380 9668

Dear Ms. Irons

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

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If you have any specific questions or concerns about the proposed action, please contact Mr. Matt Goss, of the Environmental Management Flight, at (757) 764-1095.

BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

MAR 21 2005

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Mr. Harold Winer
Virginia Department of Environmental Quality
Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach VA 23462

CERTIFIED MAIL
RETURN RECEIPT
7003 1010 0001 9507 9287

Dear Mr. Winer

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

MAR 21 2005

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Mr. David Grimes
Virginia Department of Transportation
Environmental Division
1401 East Broad Street
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7003 1010 0001 9507 9294

Dear Mr. Grimes

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

MAR 21 2005

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Mr. Kotus S. Narasimhan
Virginia Department of Environmental Quality
Air Data Analysis Program
629 East Main Street, 8th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7003 1010 0001 9507 9300

Dear Mr. Narasimhan

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

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Global Power For America



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

MAR 21 2005

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Mr. Tom Modena
Virginia Department of Environmental Quality
Waste Division
629 East Main Street, 4th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7003 1010 0001 9507 9317

Dear Mr. Modena

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

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If you have any specific questions or concerns about the proposed action, please contact Mr. Matt Goss, of the Environmental Management Flight, at (757) 764-1095.

BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Area

Global Power For America



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

MAR 21 2005

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Ms. Ellen Gilinsky
Virginia Department of Environmental Quality
Virginia Water Protection Program
629 East Main Street, 9th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7003 1010 0001 9507 9324

Dear Ms. Gilinsky

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal to demolish current facilities and construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley AFB.

The proposal consists of six elements: demolition of the existing facility, construction of an enclosed 42 point open-bay firing range, construction of an observation tower, installation of a Snail wet bullet trap, wetland mitigation, and lead abatement.

This proposal is intended to upgrade facilities and services to allow for a larger training load and allow the maximum amount of personnel to receive weapons training at Langley AFB. In addition to the proposed action, a no-action alternative will be analyzed in the EA. Attachment 1 is a map that provides an overview of the proposed action area.

If you have any specific questions or concerns about the proposed action, please contact Mr. Matt Goss, of the Environmental Management Flight, at (757) 764-1095.

BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Area

Global Power For America



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.virginia.gov

W. Taylor Murphy, Jr.
Secretary of Natural Resources

Robert G. Burnley
Director

(804) 698-4000
1-800-592-5482

March 25, 2005
ODA-087-05

Brenda W. Cook
Chief Environmental Management Flight
Langley Air Force Base
37 Sweeney Blvd
Langley AFB VA 23665-2107

Dear Ms. Cook

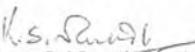
Thank you for giving DEQ-AIR an opportunity to comment on the proposed Environmental Assessment (EA) process concerning the construction of new facilities following demolition at Combat Arms Training Maintenance (CATM) Range at Langley.

While preparing the EA, the following Virginia Air Regulations may be kept in view:

1. 9 VAC 5-40-5600 et seq. – Open Burning
2. 9 VAC 5-50-60 et seq. Fugitive Dust Emissions
3. 9 VAC 5-40-5490 et seq. – Asphalt Paving operations

Besides, being in an area of ozone non-attainment, all precautions are necessary to restrict the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x) during construction.

If you have any questions, please do not hesitate to contact me.


(Kotur S. Narasimhan)
Environmental Engineer Senior
Air Data Analysis



COMMONWEALTH of VIRGINIA

Taylor Murphy, Jr.
Secretary of Natural Resources

Marine Resources Commission

2600 Washington Avenue
Third Floor
Newport News, Virginia 23607
April 4, 2005

William A. Pruitt
Commissioner

Brenda Cook
Department of the Air Force
ICES/CEV
37 Sweeney Blvd.
Langley AFB, VA 23665-2107

Re: construction of an indoor Combat
Arms Training Maintenance Range
Langley Air Force Base, Hampton

Dear Ms. Cook:

In accordance with your March 21, 2005 letter, we have reviewed the above-referenced letter for demolition of current facilities and the construction of a new indoor Combat Arms Training Maintenance Range at Langley Air Force Base in the City of Hampton.

The Marine Resources Commission, pursuant to Chapter 12 of Title 28.2 of the Code of Virginia, is responsible for issuing permits for encroachments in, on, or over State-owned submerged lands throughout the Commonwealth. From the information provided in your letter, the project does not appear to involve any encroachments channelward of mean low water along any natural rivers and streams. If you believe that the project may result in the encroachment over, under, on, or through natural rivers or streams within our jurisdiction, please contact our office and we will forward the necessary permit applications.

Thank you for the opportunity to comment on this project. If we may be of further assistance, please do not hesitate to give us a call.

Sincerely,

A handwritten signature in black ink, appearing to read 'Traycie L. West'.

Traycie L. West
Environmental Engineer

TLW/moj
HM

cc: DEQ- Office of EIR

An Agency of the Natural Resources Secretariat

Web Address: www.mrc.virginia.gov

Telephone (757) 247-2200 (757) 247-2292 V/TDD Information and Emergency Hotline 1-800-541-4646 V/TDD



COMMONWEALTH of VIRGINIA

Department of Historic Resources

2801 Kensington Avenue, Richmond, Virginia 23221

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

Kathleen S. Kilpat
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-238
www.dhr.state.va.us

April 8, 2005

Ms Brenda W. Cook
1 CES/CEV
37 Sweeney Boulevard, Langley Air Force Base
Hampton, Virginia 23665-2107

Re: Construction of an Indoor Combat Arms Training Maintenance Range (CATM)
Langley Air Force Base
Hampton, Virginia
DHR File No. 2005-0416

Dear Ms Cook:

We have received your notification of the Air Force's intent to develop an Environmental Assessment (EA) for the above referenced project. It is our understanding that the Air Force proposes to construct an Indoor Combat Arms Training Maintenance Range (CATM) at Langley Air Force Base located in the City of Hampton. The undertaking includes the demolition of an existing facility on site and construction of the new facility.

The undertaking has the potential to effect historic properties. We request that in order to carry out its responsibilities pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR 800, to identify historic properties listed in or eligible for the National Register of Historic Places that the Air Force consult the Department of Historic Resources (DHR) Archive. Once it has identified all historic properties within the project Area of Potential Effect (APE), the Air Force, in consultation with DHR, must evaluate the effect of its undertaking on such resources. We look forward to continued coordination between our agencies on this project.

If you have any questions about the Section 106 review process or our comments, please call me at (804) 367-2323, Ext. 114.

Sincerely,
Marc Hulma, Architectural Historian
Office of Review and Compliance

Administrative Services
10 Courthouse Avenue
Petersburg, VA 23803
Tel: (804) 863-1624
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Ave.
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Portsmouth Region Office
612 Court Street, 3rd Floor
Portsmouth, VA 23704
Tel: (757) 396-6707
Fax: (757) 396-6712

Roanoke Region Office
1030 Penmar Ave., SE
Roanoke, VA 24013
Tel: (540) 857-7585
Fax: (540) 857-7588

Winchester Region Office
107 N. Kent Street, Sx
Winchester, VA 22601
Tel: (540) 722-3427
Fax: (540) 722-7535



COMMONWEALTH of VIRGINIA

Taylor Murphy, Jr.
Secretary of Natural Resources

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Robert G. Burnley
Director

(804) 698-4000
1-800-592-5482

April 20, 2005

Mr. Matthew Goss
Environmental Management Flight
Department of the Air Force
Headquarters, 1st Fighter Wing
1 CES/CEV
37 Sweeney Boulevard
Langley Air Force Base, Virginia 23665

RE: Combat Arms Training Maintenance (CATM) Range at Langley AFB
(Certified Mail Return Receipt #7002-3150-0006-0380-9668)

Dear Mr. Goss:

This is in response to the March 21, 2005 letter from Ms. Brenda W. Cook announcing the preparation of an Environmental Assessment for the proposed demolition of current facilities and the construction of a new indoor Combat Arms Training Maintenance Range, and soliciting comments on the scope of the document.

According to the letter, the project consists of six elements:

- Demolition of the existing CATM range facility;
- Construction of an enclosed 42-point open-bay firing range;
- Construction of an observation tower;
- Installation of a Snail wet bullet trap;
- Wetland mitigation; and
- Lead abatement.

The roles of the Virginia Department of Environmental Quality (DEQ) in relation to the project under consideration are as follows. First, DEQ's Office of Environmental Impact Review (this Office) will coordinate Virginia's review of any environmental documents prepared pursuant to the National Environmental Policy Act (NEPA) and comment to the Air Force on behalf of the Commonwealth. A similar review process will pertain to the federal consistency determination that must be provided pursuant to the Coastal Zone Management Act (CZMA). If the federal consistency determination is included as part of the EA or EIS, there can be a single review.

Mr. Matthew Goss
Page 2

Environmental Review and Scoping

We are sharing Ms. Cook's letter with selected state and local Virginia agencies, which are likely to include the following (note: starred (*) agencies administer one or more of the Enforceable Policies of the Virginia Coastal Resources Management Program; see "Federal Consistency..." below):

Department of Environmental Quality:
Office of Environmental Impact Review
Tidewater Regional Office*
Air Division*
Waste Division

Department of Game and Inland Fisheries*

Department of Conservation and Recreation:
Division of Chesapeake Bay Local Assistance*
Division of Soil and Water Conservation*
Division of Planning and Recreation Resources

Department of Health*
Marine Resources Commission*
Department of Historic Resources
Virginia Institute of Marine Science
Hampton Roads Planning District Commission
City of Hampton
City of Poquoson.

In order to ensure an effective coordinated review of the Environmental Impact Statement or Environmental Assessment and the consistency determination, we will require 18 copies of the document when it is published. The document should include a U.S. Geological Survey topographic map as part of its information. We recommend, as well, that project details unfamiliar to people outside the Air Force, such as the Snail wet bullet trap, be adequately described. While this Office does not participate in scoping efforts beyond the advice given herein, other agencies are free to provide scoping comments concerning the preparation of the NEPA documents for the proposed project.

Federal Consistency under the Coastal Zone Management Act

Pursuant to the Coastal Zone Management Act of 1972, as amended, federal activities affecting Virginia's coastal resources or coastal uses must be consistent with the Virginia Coastal Resources Management Program (VCP) (see section 307(c)(1) of the Act and the Federal Consistency Regulations, 15 CFR Part 930, sub-part C). The Air Force must provide a consistency determination which involves an analysis of the activities in light of the Enforceable Policies of the VCP (first enclosure), and a

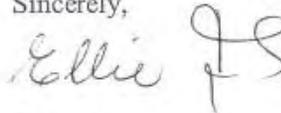
Mr. Matthew Goss
Page 3

commitment to comply with the Enforceable Policies. In addition, we invite your attention to the Advisory Policies of the VCP (second enclosure). The federal consistency determination may be provided as part of the NEPA documentation or independently, depending on your agency's preference; we recommend, in the interests of efficiency for all concerned, that it be provided together with the NEPA document and that 60 days be allowed for review in keeping with the Federal Consistency Regulations (see section 930.41(a)). Section 930.39 of the Federal Consistency Regulations and Virginia's Federal Consistency Information Package (see below) give content requirements for the consistency determination.

The Federal Consistency Information Package is available on DEQ's web site, <http://www.deq.state.va.us>. Select "Programs" on the left, then scroll to "Environmental Impact Review/Federal consistency" and select this heading. Select "federal consistency reviews" on the left. This gives you access to the document. If you have questions about the environmental review process or the federal consistency review process, please feel free to call me (telephone (804) 698-4325) or Charles Ellis of this Office (telephone (804) 698-4488).

I hope this information is helpful to you.

Sincerely,



Ellie L. Irons
Program Manager
Office of Environmental Impact Review

cc: Harold J. Winer, DEQ-TRO
Kotur S. Narasimhan, DEQ-Air
Allen Brockman, DEQ-Waste
Andrew K. Zadnik, DGIF
C. Scott Crafton, DCR
Alan D. Weber, VDH
Tony Watkinson, MRC
Ethel R. Eaton, DHR
Alice R. T. Baird, DCR-DCBLA
Thomas A. Barnard, Jr., VIMS
Arthur L. Collins, Hampton Roads PDC
James Freas, City of Hampton
Charles W. Burgess, Jr., City of Poquoson



COMMONWEALTH of VIRGINIA

Joe Murphy, Jr.
Director
Department of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
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Mailing address: P. O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.virginia.gov

Robert G. Burnley
Director

(804) 698-4000
1-800-592-5482

Attachment 1

Enforceable Regulatory Programs comprising Virginia's Coastal Resources Management Program (VCP)

- a. Fisheries Management - The program stresses the conservation and enhancement of finfish and shellfish resources and the promotion of commercial and recreational fisheries to maximize food production and recreational opportunities. This program is administered by the Marine Resources Commission (VMRC); Virginia Code sections 28.2-200 to 28.2-713 and the Department of Game and Inland Fisheries (DGIF); Virginia Code sections 29.1-100 to 29.1-570.

The State Tributyltin (TBT) Regulatory Program has been added to the Fisheries Management program. The General Assembly amended the Virginia Pesticide Use and Application Act as it related to the possession, sale, or use of marine antifoulant paints containing TBT. The use of TBT in boat paint constitutes a serious threat to important marine animal species. The TBT program monitors boating activities and boat painting activities to ensure compliance with TBT regulations promulgated pursuant to the amendment. The VMRC, DGIF, and Virginia Department of Agriculture Consumer Services (VDACS) share enforcement responsibilities; Virginia Code sections 3.1-249.59 to 3.1-249.62.

- b. Subaqueous Lands Management - The management program for subaqueous lands establishes conditions for granting or denying permits to use state-owned bottomlands based on considerations of potential effects on marine and fisheries resources, tidal wetlands, adjacent or nearby properties, anticipated public and private benefits, and water quality standards established by the Department of Environmental Quality (DEQ). The program is administered by the Marine Resources Commission; Virginia Code sections 28.2-1200 to 28.2-1213.

- c. Wetlands Management - The purpose of the wetlands management program is to preserve wetlands, prevent their despoliation, and accommodate economic development in a manner consistent with wetlands preservation.

(1) The tidal wetlands program is administered by the Marine Resources Commission; Virginia Code sections 28.2-1301 through 28.2-1320.

(2) The Virginia Water Protection Permit program administered by DEQ includes protection of wetlands --both tidal and non-tidal; Virginia Code section 62.1-44.15:5 and Water Quality Certification pursuant to section 401 of the Clean Water Act.

Attachment 1, page 2

- d. Dunes Management - Dune protection is carried out pursuant to The Coastal Primary Sand Dune Protection Act and is intended to prevent destruction or alteration of primary dunes. This program is administered by the Marine Resources Commission; Virginia Code sections 28.2-1400 through 28.2-1420.
- e. Non-point Source Pollution Control – (1) Virginia's Erosion and Sediment Control Law requires soil-disturbing projects to be designed to reduce soil erosion and to decrease inputs of chemical nutrients and sediments to the Chesapeake Bay, its tributaries, and other rivers and waters of the Commonwealth. This program is administered by the Department of Conservation and Recreation; Virginia Code sections 10.1-560 et seq.
- (2) Coastal Lands Management is a state-local cooperative program administered by the DCR's Division of Chesapeake Bay Local Assistance and 84 localities in Tidewater (see i) Virginia; Virginia Code sections 10.1-2100 through 10.1-2114 and 9 VAC10-20 et seq.
- f. Point Source Pollution Control - The point source program is administered by the State Water Control Board (DEQ) pursuant to Virginia Code section 62.1-44.15. Point source pollution control is accomplished through the implementation of:
- (1) the National Pollutant Discharge Elimination System (NPDES) permit program established pursuant to section 402 of the federal Clean Water Act and administered in Virginia as the Virginia Pollutant Discharge Elimination System (VPDES) permit program.
- (2) The Virginia Water Protection Permit (VWPP) program administered by DEQ; Virginia Code section 62.1-44.15:5 and Water Quality Certification pursuant to section 401 of the Clean Water Act.
- g. Shoreline Sanitation - The purpose of this program is to regulate the installation of septic tanks, set standards concerning soil types suitable for septic tanks, and specify minimum distances that tanks must be placed away from streams, rivers, and other waters of the Commonwealth. This program is administered by the Department of Health (Virginia Code sections 32.1-164 through 32.1-165).
- h. Air Pollution Control - The program implements the federal Clean Air Act to provide a legally enforceable State Implementation Plan for the attainment and maintenance of the National Ambient Air Quality Standards. This program is administered by the State Air Pollution Control Board (Virginia Code sections 10-1.1300 through 10.1-1320).
- (i) Coastal Lands Management is a state-local cooperative program administered by the DCR's Division of Chesapeake Bay Local Assistance and 84 localities in Tidewater, Virginia established pursuant to the Chesapeake Bay Preservation Act; Virginia Code sections 10.1-2100 through 10.1-2114 and Chesapeake Bay Preservation Area Designation and Management Regulations; Virginia Administrative Code 9 VAC 10-20-10 et seq.

Attachment 2

Advisory Policies for Geographic Areas of Particular Concern

- a. Coastal Natural Resource Areas - These areas are vital to estuarine and marine ecosystems and/or are of great importance to areas immediately inland of the shoreline. Such areas receive special attention from the Commonwealth because of their conservation, recreational, ecological, and aesthetic values. These areas are worthy of special consideration in any planning or resources management process and include the following resources:
- a) Wetlands
 - b) Aquatic Spawning, Nursery, and Feeding Grounds
 - c) Coastal Primary Sand Dunes
 - d) Barrier Islands
 - e) Significant Wildlife Habitat Areas
 - f) Public Recreation Areas
 - g) Sand and Gravel Resources
 - h) Underwater Historic Sites.
- b. Coastal Natural Hazard Areas - This policy covers areas vulnerable to continuing and severe erosion and areas susceptible to potential damage from wind, tidal, and storm related events including flooding. New buildings and other structures should be designed and sited to minimize the potential for property damage due to storms or shoreline erosion. The areas of concern are as follows:
- i) Highly Erodible Areas
 - ii) Coastal High Hazard Areas, including flood plains.
- c. Waterfront Development Areas - These areas are vital to the Commonwealth because of the limited number of areas suitable for waterfront activities. The areas of concern are as follows:
- i) Commercial Ports
 - ii) Commercial Fishing Piers
 - iii) Community Waterfronts

Although the management of such areas is the responsibility of local government and some regional authorities, designation of these areas as Waterfront Development Areas of Particular Concern (APC) under the VCRMP is encouraged. Designation will allow the use of federal CZMA funds to be used to assist planning for such areas and the implementation of such plans. The VCRMP recognizes two broad classes of priority uses for waterfront development APC:

- i) water access-dependent activities;
- ii) activities significantly enhanced by the waterfront location and complementary to other existing and/or planned activities in a given waterfront area.

attachment 2, page 2

Advisory Policies for Shorefront Access Planning and Protection

- a. Virginia Public Beaches - Approximately 25 miles of public beaches are located in the cities, counties, and towns of Virginia exclusive of public beaches on state and federal land. These public shoreline areas will be maintained to allow public access to recreational resources.
- b. Virginia Outdoors Plan - Planning for coastal access is provided by the Department of Conservation and Recreation in cooperation with other state and local government agencies. The Virginia Outdoors Plan (VOP), which is published by the Department, identifies recreational facilities in the Commonwealth that provide recreational access. The VOP also serves to identify future needs of the Commonwealth in relation to the provision of recreational opportunities and shoreline access. Prior to initiating any project, consideration should be given to the proximity of the project site to recreational resources identified in the VOP.
- c. Parks, Natural Areas, and Wildlife Management Areas - Parks, Wildlife Management Areas, and Natural Areas are provided for the recreational pleasure of the citizens of the Commonwealth and the nation by local, state, and federal agencies. The recreational values of these areas should be protected and maintained.
- d. Waterfront Recreational Land Acquisition - It is the policy of the Commonwealth to protect areas, properties, lands, or any estate or interest therein, of scenic beauty, recreational utility, historical interest, or unusual features which may be acquired, preserved, and maintained for the citizens of the Commonwealth.
- e. Waterfront Recreational Facilities - This policy applies to the provision of boat ramps, public landings, and bridges which provide water access to the citizens of the Commonwealth. These facilities shall be designed, constructed, and maintained to provide points of water access when and where practicable.
- f. Waterfront Historic Properties - The Commonwealth has a long history of settlement and development, and much of that history has involved both shorelines and near-shore areas. The protection and preservation of historic shorefront properties is primarily the responsibility of the Department of Historic Resources. Buildings, structures, and sites of historical, architectural, and/or archaeological interest are significant resources for the citizens of the Commonwealth. It is the policy of the Commonwealth and the VCRMP to enhance the protection of buildings, structures, and sites of historical, architectural, and archaeological significance from damage or destruction when practicable.



City of Hampton

RECEIVED

JUN 14 2005

DEQ-Office of Environmental
Impact Review

JUNE 9, 2005

Charles H. Ellis III
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219

**Re: Comment on draft Environmental Assessment -
Combat Arms Training Maintenance Range
Langley Air Force Base, Virginia
Project number - 05-142F**

Dear Mr. Ellis:

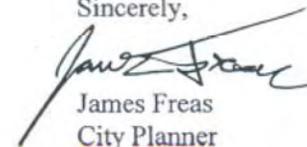
Planning staff has received and reviewed the draft Environmental Assessment (EA) for the construction of the Combat Arms Training Maintenance Range at Langley Air Force Base (LAFB), Virginia. The project entails demolishing the former training facilities and building a new indoor firing range that complies with existing Air Force safety requirements.

The project scope does not appear to impact the site significantly with respect to any of the identified natural and cultural resources. In addition, the project does not appear to conflict with any of the City's current plans or policies.

The City supports the commitment by LAFB to recycle the demolition debris materials from the project to the maximum extent possible (page 2-1). In addition the City recommends that LAFB explore innovative means of reducing the environmental impacts of the proposed new building while improving its overall efficiency by utilizing such technologies as a green roof or similar design feature.

Please let me know if I can be of further assistance regarding this project (757-728-5233 or jfreas@hampton.gov).

Sincerely,



James Freas
City Planner

PLANNING DEPARTMENT (757) 727-6140 FAX: (757) 728-2449
ONE FRANKLIN STREET, SUITE 603, HAMPTON, VIRGINIA 23669-3522



COMMONWEALTH of VIRGINIA

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

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Robert G. Burnley
Director

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1-800-592-5482

June 23, 2005

Major Robert A. Langhill, USAF
Deputy Chief, Environmental Management Flight
Department of the Air Force
Headquarters, 1st Fighter Wing
1 CES/CEV
37 Sweeney Boulevard
Langley Air Force Base, Virginia 23665

RE: Draft Environmental Assessment and Federal Consistency Determination,
Combat Arms Training Maintenance Range at Langley Air Force Base
DEQ-05-142F

Dear Major Langhill:

The Commonwealth of Virginia has completed its review of the Draft Environmental Assessment and Federal Consistency Determination named above (hereinafter "Draft EA"). The Department of Environmental Quality (DEQ) is responsible for coordinating Virginia's review of federal environmental documents prepared pursuant to the National Environmental Policy Act and responding to appropriate federal officials on behalf of the Commonwealth. DEQ is also the lead agency for Virginia's review of federal consistency determinations and certifications submitted pursuant to the Coastal Zone Management Act and the Virginia Coastal Resources Management Program. The following agencies, regional planning district commission, and locality joined in this review:

Department of Environmental Quality
Department of Game and Inland Fisheries
Department of Conservation and Recreation
Department of Health
Marine Resources Commission
Virginia Institute of Marine Science
Department of Historic Resources

Hampton Roads Planning District Commission
City of Hampton

In addition, the City of Poquoson was invited to comment.

Project Description

The Air Force proposes to demolish two existing small arms ranges and associated facilities, and to construct a new indoor Combat Arms Training Maintenance (CATM) Range at Langley Air Force Base. The new project would include (Draft EA, Draft Finding of No Significant Impact, "Description" heading):

- Construction of an enclosed 42-firing-point firing range; and
- Installation of a "Snail wet bullet trap" system that captures bullets and shot; and
- A new ventilation system to eliminate airborne lead contamination from firing; and
- Various safety improvements.

The existing CATM range is at the northwestern tip of the Air Force Base along the Northwest branch of the Back River (Draft EA, Figure 2-2). Demolition of the range involves removal of soil berms and separation of lead from the berms to the extent possible (Draft EA, page 2-1, section 2.1.1, "Demolition" heading; see also enclosed comments from DEQ's Tidewater Regional Office and DEQ's Waste Division).

Environmental Impacts and Mitigation

1. Natural Heritage Resources. The Department of Conservation and Recreation (DCR) has searched its Biotics Data System for occurrences of natural heritage resources in the project area. "Natural heritage resources" are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations. DCR records indicate the presence of natural heritage resources in the vicinity of the project, but DCR does not anticipate that the CATM Range project would adversely affect these resources because of the scope of the project and the distance to the resources.

Under a memorandum of agreement between DCR and the Virginia Department of Agriculture and Consumer Services (VDACS), DCR represents VDACS in commenting on project impacts on state-listed endangered and

threatened plant and insect species. The proposed project will not affect any such species, according to DCR.

2. *Wildlife Resources.* The Department of Game and Inland Fisheries, as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over wildlife and freshwater fish, including state or federally listed endangered or threatened species, but excluding listed insects. The Department (hereinafter "DGIF") is a consulting agency under the U.S. Fish and Wildlife Coordination Act (16 U.S.C. sections 661 *et seq.*), and provides environmental analysis of projects or permit applications coordinated through the Department of Environmental Quality and several other state and federal agencies. DGIF determines likely impacts upon fish and wildlife resources and habitat, and recommends appropriate measures to avoid, reduce, or compensate for those impacts.

(a) *Findings.* DGIF does not anticipate that this project would give rise to significant adverse impacts upon threatened or endangered wildlife species under the Department's jurisdiction. See also "Federal Consistency..." item 1, below.

(b) *Recommendations.*

(i) *Wetlands.* For unavoidable impacts upon wetlands, the Air Force should provide compensatory mitigation as follows:

- at least 2 acres of replacement or mitigation for each 1 acre of palustrine forested wetlands (PFO) (i.e., 2:1 mitigation);
- at least 1.5:1 mitigation for PSS wetlands;
- at least 1:1 mitigation for PEM wetlands; and
- at least 1:1 mitigation for POW wetlands.

These wetland mitigation ratios are based on wetland creation or restoration activities. Enhancement or preservation-only activities should require greater mitigation ratios.

(ii) *Riparian Buffers.* Riparian buffers of at least 100 feet in width should be preserved along any wetlands used for mitigation as well as any wetlands that are avoided but remain in proximity to the project.

(c) *Additional Information.* DGIF maintains a data base of wildlife locations which includes threatened and endangered species, trout streams, and anadromous fish waters. Access to the data base is through DGIF's web site:

- http://www.dgif.virginia.gov/wildlife/info_map/index.html.

Questions on this data base may be addressed to DGIF (Shirl Dresser, telephone (804) 367-6913).

3. *Air Quality.* According to DEQ's Division of Air Program Coordination, Langley Air Force Base is in an ozone non-attainment area. For this reason, the Air Force and its contractors should restrict emissions of volatile organic compounds (VOCs) and oxides of nitrogen (NO_x), which are precursors of atmospheric ozone, to the best of their ability during construction.

(a) *Open Burning.* If project activities include the burning of construction or demolition material, this activity must meet the requirements of the Regulations for open burning (9 VAC 5-40-5600 et seq.), and it may require a permit. The Regulations provide for, but do not require, the local adoption of a model ordinance concerning open burning. The Air Force should contact appropriate local officials to determine what local requirements, if any, exist. The model ordinance includes, but is not limited to, the following provisions:

- All reasonable effort shall be made to minimize the amount of material burned, with the number and size of the debris piles;
- The material to be burned shall consist of brush, stumps and similar debris waste and clean burning demolition material;
- The burning shall be at least 500 feet from any occupied building unless the occupants have given prior permission, other than a building located on the property on which the burning is conducted;
- The burning shall be conducted at the greatest distance practicable from highways and air fields;
- The burning shall be attended at all times and conducted to ensure the best possible combustion with a minimum of smoke being produced;
- The burning shall not be allowed to smolder beyond the minimum period of time necessary for the destruction of the materials; and
- The burning shall be conducted only when the prevailing winds are away from any city, town or built-up area.

(b) *Fugitive Dust Control.* During construction, fugitive dust must be kept to a minimum by using control methods outlined in 9 VAC 5-50-60 et seq. of the

Regulations for the Control and Abatement of Air Pollution. These precautions include, but are not limited to, the following:

- Use, where possible, of water or chemicals for dust control (see EA, page 2-1, section 2.1.1);
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
- Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

(c) *Air Quality Permitting.* Fuel-burning heating facilities for the new building and other fuel-burning equipment may require air pollution control permits from DEQ. See "Regulatory and Coordination Needs," item 1, below.

4. *Solid and Hazardous Waste Management.* According to DEQ's Waste Division, both solid and hazardous waste issues were addressed adequately in the Draft EA. The document did not, however, include a search of waste-related data bases.

(a) *Waste Division Listings.* Waste Division staff performed a cursory review of the Division's data files and found that Langley Air Force Base is listed three ways:

- Under DEQ's Federal Facilities Installation Restoration Program (identification number VA2800005033); and
- As a Formerly Used Defense Site (FUDS) (identification number VA9799F1590); and
- As a RCRA (Resource Conservation and Recovery Act) small-quantity generator of hazardous waste (identification number VAD988222527).

The following web sites may be helpful in locating additional information about these identification numbers:

- http://www.epa.gov/echo/search_by_permit.html and
- http://www/epa/gov/enviro/html/rcris/rcris_query_java.html.

In addition, the Air Force Base is listed under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). See item 3(b), next.

(b) *CERCLA Listing and Nearby Sites.* Langley Air Force Base is listed on the National Priorities List (NPL). The Air Force is the party responsible for remediation of CERCLA sites on the Base in order to get it removed from the NPL. Oversight of the CERCLA sites on the Base is charged to the Langley Air Force Base Environmental Restoration Program (ERP).

The proposed building sites for the training range lie on top of the Base-wide Groundwater Site, ERP site OT-64. Both of these sites lie in close proximity to four active or closed ERP sites: DP-09, LF-17, OT-25, and OT-38C. Brief descriptions follow.

(i) *Site DP-09.* Site DP-09 was a gas cylinder disposal area located approximately 500 feet east of the preferred building site; this area covered 1.8 acres. A Decision Document was signed in November 1997; it recommended "No Further Remedial Action Proposed."

(ii) *Site LF-17.* Site LF-17 is a former waste disposal area, skeet range, coastal filling (land expansion) area, and burn pit. It is located approximately 1,000 feet northeast of the proposed range. The site covers approximately 6.2 acres (excluding the down-range area) and includes the co-located Site OT-25 and Site OT-38C. Site LF-17 is an active Environmental Restoration Program (ERP) site currently in the Feasibility Study phase of the CERCLA process.

(iii) *Site OT-25.* Site OT-25 is a former entomology building and storage yard and is now included in the restoration process for Site LF-17 (above).

(iv) *Site OT-38C.* Site OT-38C is a former waste oil and trash burning area, and is, like Site OT-25, included in the restoration process for Site LF-17.

See "Regulatory and Coordination Needs," item 3(b), below.

(c) *Soil from Firing Ranges.* The EA indicates that soil from the two existing range berms would be sifted to remove and recycle lead bullets and fragments, and that the sifted soil would be placed back on the construction area or on site (see Draft EA, page 3-12, section 3.5.4). DEQ's Waste Division requires more information from the Air Force on how the sifted soil would be re-used, in order to ensure that the Virginia Solid Waste Management Regulations and the Virginia Hazardous Waste Management Regulations are met. See item 5, below, and also "Regulatory and Coordination Needs," item 3(a), below.

(d) *Pollution Prevention.* DEQ encourages the Air Force to implement pollution prevention principles, including reducing waste at the source, re-using materials, and recycling materials to the greatest extent practicable.

5. *Waste Management Guidance: Soil Berm Removal and Reclaiming.*
The following guidance applies to the dismantling of an outdoor firing range.

(a) *RCRA Guidance and Requirements.* Removal contractors should apply standard management practices to separate lead from the soil. If the soil is then placed back on the range, it is exempt from the requirements of RCRA (federal Resource Conservation and Recovery Act). However, if the soil is removed off site, it would require testing to determine whether it is a RCRA hazardous waste (see "Regulatory and Coordination Needs," item 3(a)).

Because Virginia is an EPA-authorized state, some of the Virginia regulations differ from EPA guidance. While the Commonwealth does not have specific regulations governing the management of firing ranges, our regulations fully cover the management of the potentially contaminated soil in question.

(b) *Characterization of Soil as Hazardous.* If the berms are to be removed, we assume that prior to its disposal or re-use, the bullets will be screened from the soil and sent off for recycling. After the screening takes place and before disposal or re-use, federal regulations (Title 40, Code of Federal Regulations (CFR), section 262.11) requires the soil to be characterized. If it is determined to be hazardous waste, it must be removed and properly managed at a permitted hazardous waste treatment/disposal facility.

(c) *Characterization of Soil as Non-Hazardous.* If the soil is determined not to be a hazardous waste, the Virginia Solid Waste Management Regulations, at 9 VAC 20-80-60.E.7, provide for a conditional exemption from permitting for landfilling. The requirement contemplates only rocks, brick, block, dirt, broken concrete, and road pavement. The waste must not include paper, yard waste, or wood waste. Moreover, no open dump, hazard, or public nuisance may be created by the disposal of the material.

If the soil is not hazardous but is nonetheless contaminated above background levels, the landfilling or re-use of the soil would not be covered by the conditional exemption provided by 9 VAC 20-80-60. In this circumstance, the contaminated soil would have to be disposed of at a permitted solid waste management facility. The Regulations, at 9 VAC 20-80-150.E.2, also provide for an exclusion from the definition of solid waste – and therefore from regulation – if it can be demonstrated that the contaminated soil can be used beneficially, as

long as it can be managed so as not to create an open dump, hazard, or public nuisance. Procedures for making this beneficial use determination are provided in the Regulations at 9 VAC 20-80-150.E.2.b.

(c) *Testing.* All testing must be done by an independent private laboratory. The federal rules cited above, 40 CFR section 262.11, which are incorporated by reference into the Virginia Hazardous Waste Management Regulations, require the generator of a waste to determine if that waste is hazardous. A waste may be considered hazardous if it is a listed waste or a characteristic waste. Based on the information in the Draft EA, the waste in question does not appear to be a hazardous waste, according to DEQ's Tidewater Regional Office. However, the determination would have to be made in accordance with Subpart D of 40 CFR Part 261. The determination of whether the waste is a characteristic waste may be made by testing according to 40 CFR Part 261, Subpart C, or by using knowledge of the hazard characteristic in light of the materials or processes used.

To obtain representative samples of the material, the Air Force or its contractor must develop and implement a sampling plan in accordance with EPA's SW-846. At that point, DEQ's Tidewater Regional Office recommends that the samples be tested by the Toxic Characteristic Leaching Procedure for metals, to determine whether they are hazardous wastes and for total concentrations to compare levels with background levels.

(d) *Treatment of Soil.* The soil may be treated on site, according to DEQ's Tidewater Regional Office. However, the regulatory requirements for the treatment depend on when the soil is determined to be a waste. If material has not yet been discarded, it is not defined as waste. Once the soil is characterized as a hazardous waste, the accumulation and treatment of it must comply with the requirements of 40 CFR section 262.34 and 40 CFR Part 268. If, on the other hand, the soil is determined not to be hazardous, but is a solid waste, the treatment would require a permit under the Virginia Solid Waste Management Regulations (9 VAC 20-80 et seq.).

6. *Wetlands and Water Quality.* The proposed project will involve impacts to surface waters and wetlands, which means that the Air Force should fill out a Joint Federal-State Permit Application (JPA). The JPA should document that impacts to wetlands have been avoided and minimized to the maximum extent practicable, and that remaining unavoidable impacts have been properly compensated. The JPA must be submitted to the Marine Resources Commission for distribution to other regulatory agencies including DEQ's Tidewater Office; see "Regulatory and Coordination Needs," item 2, below.

(a) *Technical Errors with regard to Water Permitting Authority.* The Draft EA contains several errors, repeated from environmental documents for earlier projects. Recurrence of these errors suggests a lack of understanding of state surface water and wetland permitting requirements, according to DEQ's Tidewater Regional Office. DEQ recommends that Air Force personnel responsible for preparing NEPA documents, or overseeing NEPA document preparation, should become more familiar with the differences between various surface water and wetland regulatory programs administered by DEQ, the Marine Resources Commission, and the Army Corps of Engineers ("Corps"). Particular attention should be given to the independent nature of DEQ's Virginia Water Protection Permit program relative to the Section 404 permitting program of the Corps. Under Virginia law, DEQ's regulatory authority over surface waters and wetlands is more encompassing than federal authority under Section 404 of the Clean Water Act.

(b) *Specific Issues of Concern.* DEQ's Tidewater Regional Office has identified a number of examples of limited understanding of water and wetland permitting issues in the Draft EA.

(i) *Draft Finding of No Significant Impact ("FONSI"), page 2, lines 4-6.* The discussion refers to a specific area as "jurisdictional" from the Corps perspective. Since Corps jurisdiction over wetland areas is limited to wetlands that are also "waters of the United States," these Corps "jurisdictional" wetlands represent a subset of the wetland areas regulated under Virginia law. DEQ suggests that references to "jurisdictional wetlands or waters of the U.S." be corrected to read "waters or wetlands regulated by state and/or federal law and regulation" in the Final EA and all subsequent consistency determination submissions.

(ii) *Draft FONSI, page 2, line 8.* More than one permit may be issued as a result of a Joint Permit Application. The document should indicate that all required permits will be obtained and their requirements followed.

(iii) *Page ES-2, lines 13-14.* Given that Corps jurisdiction is limited to wetlands that are also waters of the United States, these Corps "jurisdictional" wetlands represent a sub-set of the wetland areas regulated under Virginia law. As in item 6(b)(i), above. DEQ suggests that references to "jurisdictional wetlands or waters of the U.S." be corrected to read "waters or wetlands regulated by state and/or federal law and regulation" in the Final EA and all subsequent consistency determination submissions.

(iv) *Page ES-2, lines 25-26.* The term “non-jurisdictional upland wetlands” has no regulatory meaning, is ambiguous, and should be corrected.

(v) *Figure 2-2 (page 2-3).* This site plan shows no surface water or wetland areas, or impacts. Since impacts to surface waters and wetlands are proposed, they should be shown on the site plan for clarity and ease of review.

(vi) *Table 2-1 on Regulatory Requirements (page 2-5).* In row 2, the reference to the Clean Water Act should note that related state programs include not only VPDES/VPA permitting but also state section 401 certification of any activities regulated by section 404 through the Virginia Water Protection Permit program.

In row 3, the Joint Permit Application is an application form used to obtain several independent environmental permits from federal, state, and local regulatory agencies. It is not an application for a “joint permit” as referenced in Appendix B (see “Wetlands Management” row, “Consistency” discussion). Furthermore, the JPA and subsequent state authorization are required for diverse impacts to tidal and non-tidal wetlands as well as surface waters, whether these areas constitute “waters of the United States” or not. The fact that the Draft EA is intended to serve as “a tool for Air Force personnel to ensure compliance with all regulatory requirements from proposal through project implementation” (page 2-5, lines 22-24) should dictate that the information therein be both accurate and unambiguous. As DEQ has previously advised the Air Force relative to EA submissions for Langley Air Force Base, the federal permitting process that requires a finding that “waters of the United States” would be affected has little, if any, bearing on DEQ’s regulatory authority. Under Virginia law (*Virginia Code* section 62.1-44.15:5), there is no need to find that a water or wetland meets the definition of “waters of the United States” for it to be regulated. Virginia has independent regulatory authority over these areas that exceeds the authority contained in the Clean Water Act. As indicated above (items 6(b)(i) and 6(b)(iii)), DEQ suggests that references to “jurisdictional wetlands or waters of the U.S.” be corrected to read “waters or wetlands regulated by state and/or federal law and regulation” in the Final EA and all subsequent consistency determination submissions.

(vii) *Page 3-5, line 25.* These lines refer to Figure 3-1 (page 3-9) as a wetlands map. No wetlands are shown on the map, even though the Draft EA indicates that nearly 500 out of 650 acres at Langley Air Force Base are wetlands.

(viii) *Page 3-5, lines 24-27.* Most NEPA submissions for Langley Air Force Base refer to a 2000 wetland delineation under jurisdictional determination review by the Corps, as in these lines. As DEQ has indicated previously, the delineation should be confirmed prior to making application for a permit for this project. The factual status of this jurisdictional determination review, as presented in this and other recent Langley Air Force Base submissions, is uncertain. See attached comments from DEQ's Tidewater Regional Office (e-mail print, Winer to Ellis, dated June 14, 2005), page 2 for details.

In this regard, Corps confirmation of wetland delineations is typically valid for five years. This is intended to ensure that delineations reflect current conditions. DEQ believes that continued references to a five-year-old, unconfirmed wetland delineation are unacceptable and should not be used as the basis for DEQ's environmental consistency decisions. Similarly, repeated preparation and submission of consistency determinations without a confirmation by the Corps of a wetland delineation is unreasonable.

(ix) *Appendix B, page B-4.* The listing of statutes improperly cites provisions of the Virginia law (i.e., *Virginia Code* sections 28-2-1200 through -1213 for Subaqueous Lands Management) as Virginia regulations ("*Virginia Administrative Code*"). Similar mistakes are made with regard to the other coastal programs on that page. For the wetlands management program, the proper Virginia law citation is "*Virginia Code* section 62.1-44.15:5" and the regulation promulgated thereunder is cited as "9 VAC 25-210-10 et seq." The chart also appears to misrepresent the scope of that law and regulation. As stated above, the regulatory requirements under Virginia law encompass more than the Draft EA suggests; and the "Joint Permit" as used in this Appendix does not exist.

(c) *Cumulative Wetland Impacts.* As the Hampton Roads Planning District Commission states, the Draft EA indicates that this project will affect wetlands on the Air Force Base. In order to adequately assess the effects of wetland encroachment, the impacts of this project should be considered in conjunction with those of a number of other projects on the base that will also affect wetlands. To this end, review of a master plan addressing all projects underway and those proposed would be useful to the Air Force and to reviewing agencies. See "Project Planning Recommendations," below.

7. Chesapeake Bay Preservation Areas.

(a) *Requirements.* While Chesapeake Bay Preservation Areas are not locally designated on federal lands, the Air Force must still conduct its activities consistently with the requirements of the Chesapeake Bay Preservation Act (*Virginia Code* sections 10-1-2100 *et seq.*) and the Chesapeake Bay Preservation Area Designation and Management Regulations (9 VAC 10-20-10 *et seq.*). This law and set of regulations constitute the Coastal Lands Management Enforceable Policy of the Virginia Coastal Resources Management Program.

The Regulations provide for the definition and protection of certain lands called Chesapeake Bay Preservation Areas, which, if improperly used or developed, may result in substantial damage to the water quality of the Chesapeake Bay and its tributaries.

(i) *Designation.* Under the Regulations, the City of Hampton has designated the following types of land areas as requiring stringent performance criteria for their protection:

- tidal wetlands
- non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams
- tidal shores
- a 100-foot vegetated buffer area adjacent to and landward of the above features, and along both sides of any water body with perennial flow.

Less stringent performance criteria apply to the following types of land area:

- A 100-foot wide land area that is contiguous to and landward of the 100-foot buffer mentioned above.

(ii) *Protection.* Federal actions on installations in Tidewater Virginia, including Langley Air Force Base, are required to be consistent with the general performance criteria in the Regulations (9 VAC 10-20-120 *et seq.*), particularly with regard to minimizing land disturbance. For land disturbance covering 2,500 square feet or more, the project must comply with the Virginia Erosion and Sediment Control Law (see item 8, below; also see "Federal Consistency..." item 4 and "Regulatory and Coordination Needs," item 5, below). The general performance criteria also require stormwater management criteria consistent with the water quality protection provisions of the Virginia Stormwater

Management Regulations (4 VAC 3-20-71) (see “Regulatory and Coordination Needs,” item 5, below).

(b) *The Document.* The Draft EA does not mention the coastal lands management program other than to say that the project will be consistent with it (Appendix B, page B-6). The description of the scope of the Act and the Regulations is inaccurate. The program does **not** “protect and restore coastal ... habitats, and species of the Commonwealth.” The areas protected by the program do **not** include “subaqueous lands and vegetation, sand dune systems, barrier islands, underwater or maritime cultural resources, riparian forested buffers, and endangered or threatened species” as indicated in the chart on page B-6. Instead, the coastal lands management program designates and protects land areas as mentioned above (item 7(a)).

8. *Erosion and Sediment Control; Stormwater Management.* Federal agencies and their authorized agents conducting regulated land-disturbing activities on public and private lands in the Commonwealth of Virginia must comply with the Virginia Erosion and Sediment Control Law, the Virginia Stormwater Management Law, and other applicable federal non-point source pollution control mandates such as section 313 of the Clean Water Act and the federal consistency requirements of the Coastal Zone Management Act. Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, or other structures, soil/dredge spoil areas, or related land conversion activities that disturb 10,000 square feet or more (2,500 square feet or more in Chesapeake Bay Preservation Areas; see item 7, above) are regulated by the Erosion and Sediment Control Law and its implementing regulations. Similar activities that disturb one acre or more are regulated by the Stormwater Management Law and its implementing regulations. Accordingly, the Air Force should prepare and implement Erosion and Sediment Control Plans and Stormwater Management Plans that comply with state law. The Air Force is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliance, and/or other mechanisms consistent with Air Force policy. See “Federal Consistency...,” item 3 and “Regulatory and Coordination Needs,” item 5, below.

9. *Historic Structures and Archaeological Resources.* According to the Draft EA, the project is to take place on the northeast boundary of the Langley Field Historic District, which is eligible for listing on the National Register of Historic Places. One of the four structures proposed for demolition, Building 1003, is within the Historic District (Draft EA, page 3-4, section 3.2.2). The Department of Historic Resources states that none of the buildings proposed for demolition contribute to the Historic District; however, the introduction of new

facilities within the Historic District boundaries has the potential to affect the historic character of the District. For this reason, and to carry out its responsibilities under section 106 of the National Historic Preservation Act, the Air Force should consult with the Department of Historic Resources. See "Regulatory and Coordination Needs," item 4, below.

10. Natural Area Preserves. According to the Department of Conservation and Recreation, the proposed training range would not affect any state Natural Area Preserves under the jurisdiction of that Department.

11. Pollution Prevention. DEQ advocates that principles of pollution prevention be used in all construction projects as well as in facility operations. Effective siting, planning, and on-site Best Management Practices (BMPs) will help to ensure that environmental impacts are minimized. However, pollution prevention techniques also include decisions related to construction materials, design, and operational procedures that will facilitate the reduction of wastes at the source. We have several pollution prevention recommendations that may be helpful in constructing or operating this project:

- Consider development of an Environmental Management System (EMS). An effective EMS will ensure that the proposed facility is committed to minimizing its environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ offers EMS development assistance and recognizes facilities with effective Environmental Management Systems through its Virginia Environmental Excellence Program.
- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content, toxicity level, and amount of packaging should be considered and can be specified in purchasing contracts.
- Consider contractors' commitments to the environment (such as an EMS) when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.
- Choose sustainable materials and practices for infrastructure and building construction and design. These could include asphalt and concrete containing recycled materials, and integrated pest management in landscaping, among other things.
- Integrate pollution prevention techniques into facility maintenance and operation, to include the following: inventory control (record-keeping and centralized storage for hazardous materials), product substitution

(use of non-toxic cleaners), and source reduction (fixing leaks, energy-efficient HVAC and equipment). Maintenance facilities should be designed with sufficient and suitable space to allow for effective inventory control and preventive maintenance.

DEQ's Office of Pollution Prevention provides free information and technical assistance relating to pollution prevention techniques and EMS. If interested, the Air Force may contact that Office (Tom Griffin, telephone (804) 698-4545).

12. Subaqueous Bed Encroachment. The Marine Resources Commission is responsible for issuing permits for encroachments in, on, or over state-owned submerged lands (*Virginia Code* sections 28.2-1200 *et seq.*). It does not appear to the Commission that this project would involve any such lands.

13. Local and Regional Comments. As indicated above (item 6(c)), the Hampton Roads Planning District Commission recommends a master planning effort to facilitate the assessment of impacts upon wetlands from multiple Air Force projects at Langley Air Force Base (see "Project Planning Recommendations," below). In addition, according to the Commission, the Draft EA identifies endangered and threatened species known to occur in the vicinity, but does not make any site-specific assessment; and the information may be out of date. However, see also items 1 and 2, above.

The City of Hampton supports the commitment to recycle demolition debris to the maximum extent possible (Draft EA, page 2-1, section 2.1.1). The City also recommends that the Air Force explore innovative means of reducing the environmental impacts of the proposed new building by using such technologies as a "green roof" or similar design feature. Questions on this matter may be directed to the City (James Freas, telephone (757) 728-5233).

Federal Consistency under the Coastal Zone Management Act

Pursuant to the Coastal Zone Management Act of 1972, as amended, federal activities located inside or outside of Virginia's designated coastal management area that can have reasonably foreseeable effects on coastal resources or coastal uses must, to the maximum extent practicable, be implemented in a manner consistent with the Virginia Coastal Resources Management Program (VCP). The VCP consists of a network of programs administered by several agencies. DEQ coordinates the review of federal consistency determinations with agencies administering the Enforceable and Advisory Policies of the VCP. The federal consistency determination for this project is provided in the Draft EA (Appendix B; see also page 3-2).

A public notice for this project review was published on DEQ's web site from May 20 through June 15, 2005. No comments were received.

Based on the information submitted and the comments of reviewing agencies, we concur that the proposed activity is consistent with the Virginia Coastal Resources Management Program, provided that the Air Force and its contractors comply with all applicable requirements and with the recommendations in this letter.

1. Fisheries Management. According to the Department of Game and Inland Fisheries, the project is consistent with the Fisheries Management component of the Virginia Coastal Resources Management Program.

2. Wetlands Management. As stated above ("Environmental Impacts and Mitigation," item 6), this project will require a Virginia Water Protection Permit, compliance with which will ensure project consistency with the Wetlands Management component of the Virginia Coastal Resources Management Program.

3. Coastal Lands Management. The Coastal Lands Management program is a state-local cooperative program administered by the Department of Conservation and Recreation's Division of Chesapeake Bay Local Assistance and 84 local governments in Tidewater Virginia. The program was established by the Chesapeake Bay Preservation Act (*Virginia Code* sections 10-1-2100 et seq.) and the Chesapeake Bay Preservation Area Designation and Management Regulations (9 VAC 10-20-10 et seq.).

The Draft EA and consistency determination did not address coastal lands management, other than to mention that the proposed project conforms to the requirements of the Regulations (Appendix B, page B-6).

Provided that the demolition and construction activities of this project adhere to the general performance criteria of the Regulations (see "Environmental Impacts and Mitigation," item 7(a), above) as well as to the Virginia Erosion and Sediment Control Law and the Virginia Stormwater Management Law (see "Regulatory and Coordination Needs," item 5, below), the project will be consistent with the Coastal Lands Management component of the Virginia Coastal Resources Management Program.

4. Non-point Source Pollution Control. Compliance with the Virginia Erosion and Sediment Control Law (*Virginia Code* section 10.1-560) will ensure

that the project is consistent with the Non-point Source Pollution Control component of the Virginia Coastal Resources Management Program.

Regulatory and Coordination Needs

1. *Air Quality Regulation.* As indicated above ("Environmental Impacts and Mitigation," item 3(c)), the project may require air pollution control permits for heating and other fuel-burning equipment. In addition, if open burning is contemplated, open burning permits may be necessary. Questions on the applicability of, and requirements for, both these permits may be addressed to DEQ's Tidewater Regional Office (Jane Workman, Air Permits Manager, telephone (757) 518-2112).

2. *Water and Wetland Permitting.* Impacts to wetlands or waterways that are likely to result from this project will require a Virginia Water Protection Permit from DEQ. Questions on applicability of the permitting requirement and on requirements for permit processing and compliance may be directed to DEQ's Tidewater Regional Office (Bert Parolari, telephone (757) 518-2166).

3. *Solid and Hazardous Waste Management.* All waste generated during construction must be characterized and properly disposed of, according to DEQ's Tidewater Regional Office. The Air Force is considered the generator of the waste, and the waste must be managed through the Base's hazardous waste program. See also item 3(b), below.

(a) *Contaminated Soil: General Guidance.* Any soil suspected of contamination, or wastes that are generated, must be tested and disposed of in accordance with all applicable federal, state, and local laws and regulations. These include, but are not limited to, the following:

- Virginia Waste Management Act (*Virginia Code* sections 10.1-1400 et seq.);
- Virginia Hazardous Waste Management Regulations (9 VAC 20-60);
- Virginia Solid Waste Management Regulations (9 VAC 20-80);
- Resource Conservation and Recovery Act (42 U.S.C. sections 6901 et seq.).

(See enclosed DEQ memo, Brockman to Ellis, dated June 15, 2005 for additional citations.) In regard to the re-use of soil from the existing range berms

(see "Environmental Impacts and Mitigation," item 4(c), above), the Air Force should contact DEQ's Waste Division (Steve Frazier, telephone (804) 698-4199).

(b) CERCLA Obligations. DEQ's Waste Division, Federal Facilities Restoration Program recommends that the Air Force contact the Langley Air Force Base Environmental Restoration Office (John Tice, telephone (757) 764-1082) for information on CERCLA obligations at or near the proposed construction sites. These obligations must be undertaken prior to initiating any disturbance of land, sediment, or groundwater.

(c) Building Demolition or Renovation. Buildings to be demolished or renovated must be checked for asbestos-containing materials and lead-based paint. If lead-based paint is found, the Air Force must comply with state regulations in addition to those listed above, i.e. 9 VAC 20-60-261 in the Hazardous Waste Management Regulations. Similarly, if asbestos-containing materials are found, the Air Force must comply with the Solid Waste Management Regulations at 9 VAC 20-80-640 as well as with the other rules listed above.

4. Historic Resources. To ensure compliance with section 106 of the National Historic Preservation Act, and its implementing regulations at 36 CFR Part 800, the Air Force is requested to coordinate directly with the Department of Historic Resources (Marc Holma, telephone (804) 367-2323, extension 114) concerning project impacts upon the Langley Field Historic District.

5. Erosion and Sediment Control Plan; Stormwater Management Plan. The Air Force is encouraged to contact the Department of Conservation and Recreation's Chowan, Albemarle, and Coastal Watersheds Office (Jeff Hancock, telephone (757) 925-2468) to obtain plan development or implementation assistance. This will aid the Air Force in ensuring project compliance with the Virginia Erosion and Sediment Control Law (*Virginia Code* section 10.1-560 et seq.) and the Virginia Stormwater Management Law (*Virginia Code* section 10.1-603.1 et seq.) during and after construction.

6. VPDES Stormwater Management General Permit. In addition to the Plan requirements stated above ("Environmental Impacts and Mitigation," item 7 and "Regulatory and Coordination Needs," item 5), projects disturbing one acre or more of land area are subject to a stormwater permitting requirement administered by the Department of Conservation and Recreation's Division of Soil and Water Conservation. Questions on applicability and compliance should be directed to that Division (Eric Capps, telephone (804) 786-3957).

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Project Planning Recommendations

Based on the projects recently reviewed at Langley Air Force Base, it appears that the Air Force is planning a number of projects at Langley Air Force Base, each of which requires environmental review and federal consistency review. It would be helpful to reviewers, and perhaps also to the Air Force, if the individual Environmental Assessments could make reference to a master plan document, or a Programmatic Environmental Impact Statement (EIS) and Plan, that shows, with effective topographic and other mapping and diagrams, the relationships of many of these projects to one another on the ground (and also in time). Our review of a Programmatic EIS and a master plan document, prior to a number of individual project reviews over the next few years, might enable us to respond somewhat faster to individual project documents. It would also diminish the workload of the Air Force in producing the individual documents, because in these the Air Force could make reference to the larger planning document, and the comments it received thereon, as a means of disposing of certain issues that have been effectively addressed previously. Of course, the idea presupposes that the Programmatic EIS would be prepared and reviewed in the first place; and we assume that the EIS, and accompanying plans for development, would cover a defined time frame (for example: 2005 through 2008, or 2005 through 2015). It would also be necessary to allow modification of individual projects and the Plan itself as circumstances, including fiscal and environmental constraints, make necessary.

A planning effort of this nature could include such things as stormwater master plans, which might be easier to develop and follow than individual stormwater plans for each project. Providing for the effective management of stormwater in a developing area could prevent later conflicts over individual projects for which stormwater management can no longer be effectively provided. The planning effort would also allow the Air Force to make an effective allocation of its proposed land uses in accordance with development restrictions such as those inherent in wetland and Chesapeake Bay regulations.

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Thank you for the opportunity to review the Draft EA and federal consistency determination for this project. We look forward to reviewing the Final EA.

Sincerely,



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Enclosures

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Marlee A. Parker, VDOT
Tony Watkinson, MRC
Thomas A. Barnard, Jr., VIMS
Alice R. T. Baird, DCR-DCBLA
John M. Carlock, Hampton Roads PDC
James Freas, City of Hampton

Ellis, Charles

From: Andrew Zadnik [Andrew.Zadnik@dgif.virginia.gov]
Sent: Wednesday, June 08, 2005 2:11 PM
To: Ellis, Charles
Cc: ProjectReview.Richmond_PO.DGIF@dgif.virginia.gov
Subject: 05-142F_ESSLOG 20350_Langley AFB_Combat Arms Training Range

This project involves demolishing the existing facility, constructing a new firing range and observation tower, as well as wetland mitigation and a lead abatement program. The site is an area that has previously been disturbed and developed. Impacts will include the loss of 0.5 ac of wetland.

We do not anticipate a significant adverse impact upon threatened or endangered wildlife resources under our jurisdiction to occur due to this project.

We recommend providing compensatory mitigation for unavoidable wetland impacts at ratios of at least 2:1 for PFO wetlands, 1.5:1 for PSS wetlands, 1:1 for PEM wetlands, and 1:1 for POW wetlands. These ratios are based on wetland creation or restoration activities. Enhancement or preservation-only activities should require greater mitigation ratios. In addition, riparian buffers of at least 100 ft in width should be preserved along any wetlands used for mitigation as well as any wetlands that are avoided but remain in proximity to this project.

We find this project to be consistent with the Fisheries Section of the VA Coastal Resources Management Program.

Thank you,

Andrew K. Zadnik
Environmental Services Section Biologist
Department of Game and Inland Fisheries
4010 West Broad Street
Richmond, VA 23230

(804) 367-2733
(804) 367-2427 (fax)

W. Tayloe Murphy, Jr.
Secretary of Natural
Resources



Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

217 Governor Street
Richmond, Virginia 23219-2010
Telephone (804) 786-7951 FAX (804) 371-2674 TDD (804) 786-2121

May 27, 2005

Charles H. Ellis III
Virginia Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219

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MAY 31 2005

DEQ-Office of Environmental
Impact Review

Re: DEQ# 05-142F, Combat Arms Training Maintenance Range - Langley AFB

Dear Mr. Ellis:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

Biotics documents the presence of natural heritage resources in the project area. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources.

In addition, our files do not indicate the presence of any State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the Virginia Department of Conservation and Recreation (DCR), DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

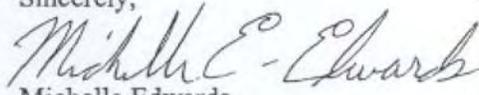
New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

The Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters, which may contain information not documented in this letter. Their database may be accessed from www.dgif.virginia.gov/wildlife/info_map/index.html, or contact Shirl Dressler at (804) 367-6913.

*State Parks • Soil and Water Conservation • Natural Heritage • Outdoor Recreation Planning
Chesapeake Bay Local Assistance • Dam Safety and Floodplain Management • Land Conservation*

Should you have any questions or concern
opportunity to comment on this project.

Sincerely,

A handwritten signature in black ink that reads "Michelle Edwards". The signature is written in a cursive style with a large, stylized "M" and "E".

Michelle Edwards
Locality Liaison

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

- A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.
- B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.
- C. Use your agency stationery or the space below for your comments. IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.

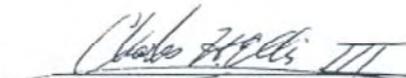
Please return your comments to:

MR. CHARLES H. ELLIS III
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

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JUN 09 2005

DEQ-Office of Environmental
Impact Review


CHARLES H. ELLIS III
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

No comments

(signed) Alan D. Weber (date) 6-7-05
(title) _____
(agency) VOH

PROJECT # 05-142F

8/98

COMMONWEALTH of VIRGINIA

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P. O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.virginia.gov

Robert G. Burnley
Director

(804) 698-4000

1-800-592-5482

RECEIVED

JUN 15 2005

DEQ-Use of Environmental
Impact Review

MEMORANDUM

TO: Charles H. Ellis, III, Environmental Program Planner

FROM: *ARB* Allen Brockman, Waste Division Environmental Review Coordinator

DATE: June 15, 2005

COPIES: Sanjay Thirunagari, Waste Division Environmental Review Manager; Paul Herman, file

SUBJECT: Environmental Assessment
DOD/Air Force—Langley Air Force Base, Combat Arms Training Maintenance Range, DEQ Project #05-142F

The Waste Division has completed its review of the Environmental Impact report for the Combat Arms Training Maintenance Range at Langley Air Force Base, Hampton, in Virginia. We have the following comments concerning the waste issues associated with this project:

Both solid and hazardous waste issues were addressed adequately in the report. However, the report did not include a search of waste-related data bases. The Waste Division staff performed a cursory review of its data files and determined that the facility is under DEQ's Federal Facilities Installation Restoration Program (VA2800005033), a Formerly Used Defense Site (VA9799F1590), and a RCRA small quantity generator of hazardous waste (VAD988222527). The following websites may prove helpful in locating additional information for these identification numbers: http://www.epa.gov/echo/search_by_permit.html or http://www.epa.gov/enviro/html/rcris/rcris_query_java.html. Paul Herman of DEQ's Federal Facilities Program has been contacted for his review of this report and will reply in a separate memo, if he identifies any additional issues.

Any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-80); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained

in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous materials, 49 CFR Part 107.

Also, all structures being demolished/renovated/ removed should be checked for asbestos-containing materials (ACM) and lead-based paint prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-80-640 for ACM and 9VAC 20-60-261 for LBP must be followed.

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Allen Brockman at (804) 698-4468.

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY - WASTE DIVISION
Federal Facilities Restoration Program
629 E. Main Street P.O. Box 10009 Richmond, Virginia 23240

SUBJECT: Environmental Assessment – Langley Air Force Base – Proposed Combat Arms Training Maintenance Range

TO: Charles H. Ellis, III, VCP

FROM: Paul E. Herman, P.E., FFR *PEH*

DATE: June 17, 2005

COPIES: Allen Brockman, File

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JUN 17 2005

DEQ-Office of Environmental
Impact Review

The Langley Air Force Base report entitled *Draft EA for the Proposed Combat Arms Training Maintenance Range* dated May 2005 has been reviewed as requested by Allen Brockman, Waste Division Environmental Review Manager. The document presents one potential construction action alternative for a new Combat Arms Training Maintenance Range as well as the no-action alternative.

Langley Air Force Base (LAFB) is on the National Priorities List (NPL) and is the party responsible for remediation of CERCLA sites on Base in order to be removed from the NPL. The LAFB Environmental Restoration Program (ERP) is charged with oversight of the CERCLA sites on Base.

The proposed range lies atop the Base-wide Groundwater Site, ERP Site OT-64 and in close proximity to four active or closed ERP sites; DP-09, LF-17, OT-25, and OT-38C. Site DP-09 was a gas cylinder disposal area that was located approximately 500 feet east-southeast of the proposed range and covered approximately 1.8 acres. A Decision Document stating No Further Remedial Action Proposed was signed in November 1997. Site LF-17 is a former waste disposal area, skeet range, coastal filling (land expansion area), and burn pit and is located approximately 1000 feet east-northeast of the proposed range. The site covers approximately 6.2 acres (excluding the down-range area) and includes the co-located Site OT-25 and Site OT-38C. This site is an active ERP site currently in the Feasibility Study phase of the CERCLA process. Site OT-25 is a former entomology building and storage yard and is now included in the restoration process for Site LF-17. Site OT-38C is a former waste oil and trash burning area and is now included in the restoration process for Site LF-17.

The Environmental Assessment indicates that soil from the two existing range berms would be sifted to remove and recycle lead bullets and lead fragments and the sifted soil would be placed back on the construction area or on site. VDEQ requires additional information from LAFB concerning the specifics of how the sifted soil will be reused. LAFB must provide this information in order to ensure that Virginia's Solid and Hazardous Waste Management Regulations are met. For more information on the reuse of soil from firing ranges, please contact Mr. Steve Frazier, (804) 698-4199.

The Federal Facilities Restoration Program recommends the facility contact Mr. John Tice, LAFB Environmental Restoration at (757) 764-1082, for information concerning the CERCLA obligations at or near the proposed construction sites prior to initiating any land, sediment, or ground water disturbing activities.

Ellis, Charles

From: Winer, Harold
Sent: Tuesday, June 14, 2005 1:37 PM
To: Ellis, Charles
Cc: Parolari, Bert; Johnston, Milton
Subject: EIR #05-142F, Combat Arms Training Maintenance Range at Langley Air Force Base

s requested, TRO staff has reviewed the supplied information and has the following comments:

Regarding Virginia Water Protection (VWP) Permit Program issues, we note that the proposed project will clearly involve impacts to surface waters, including wetlands. As such, a Joint Permit Application documenting that impacts to these areas have been avoided and minimized to the maximum extent practicable and that remaining unavoidable impacts have been properly compensated should be prepared and submitted to DEQ and other state/local regulatory agencies for review and authorization prior to commencing work.

Having said that, the Draft EA contains several technical errors relative to Virginia's surface water and wetland authority which cause us concern, especially relative to the repetitive nature of their recurrence from proposed project to proposed project. These errors could be construed to indicate a significant lack of understanding concerning State surface water and wetland permitting requirements. Our general suggestion is that personnel responsible for preparing these documents, or overseeing their development, should re-familiarize themselves with the similarities and differences between various surface water and wetland regulatory programs administered by the USACE, DEQ and MRC. Particular attention should be given to the independent nature of DEQ's Virginia Water Protection Permit Program relative to the USACE regulatory program under Section 404 of the CWA. Under Virginia law, DEQ regulatory authority over surface waters and wetlands is clearly more encompassing than Federal authority under Section 404 of the CWA.

Specific Issues of Concern

- **Draft FONSI page 2 of 3 line 4-6** This discussion references a specific area as "jurisdictional" from the USACE perspective. Given that USACE jurisdiction over wetland areas is limited to those wetlands that are also waters of the United States, these USACE "jurisdictional" wetlands represent a subset of the wetland areas regulated under Virginia Law. We suggest that references to "jurisdictional wetlands or waters of the U.S." be corrected to read "waters or wetlands regulated by State and/or Federal law and regulation." in this and all subsequent consistency determination submissions.
- **Draft FONSI page 2 of 3 line 8** More than one permit may be issued as a result of a Joint Permit Application submittal. This document should indicate that all required permits will be obtained and complied with.
- **Page ES-2 line 13-14** Again, given that USACE jurisdiction over wetland areas is limited to those wetlands that are also waters of the United States, these USACE "jurisdictional" wetlands represent a subset of the wetland areas regulated under Virginia Law. We suggest that references to "jurisdictional wetlands or waters of the U.S." be corrected to read "waters or wetlands regulated by State and/or Federal law and regulation." in this and all subsequent consistency determination submissions.
- **Page ES-2 lines 25-26** This part of the document references "non-jurisdictional upland wetlands." This characterization is clearly ambiguous, has no regulatory meaning and should be corrected.
- **Figure 2-2** No surface water/wetland areas or impacts are shown on this site plan. Given that impacts are proposed, they should be shown on the site plan for clarity and ease of review.

6/14/2005

Table 2-1, Summary of Regulatory Requirements –

- o **Row 2 - “Clean Water Act (CWA)”** should note that related State programs include not only VPA/VPDES permitting but also State 401 certification of any CWA Section 404 regulated activities through the Virginia Water Protection Permit Program.
 - o **Row 3 - “ Joint Permit Application, Clean Water Act Section 404”.** This is an **application form** utilized to obtain several independent and discrete environmental permits from federal, state and local regulatory bodies, not an application for a **“joint permit”** as referenced in Appendix B (Page B-4). Furthermore this application and subsequent state authorization is required for diverse impacts to tidal and nontidal wetlands as well as surface waters whether these areas constitute waters of the United States or not. The fact that this report is intended to serve as “a tool for Air Force Personnel to ensure compliance with all regulatory requirements from proposal through project implementation” (Page 2-5, Line 22-24) should mandate that information contained therein be both accurate and unambiguous. As we have previously advised Langley AFB relative to their EIR submissions, the federal permitting process that requires a finding that “Waters of the United States” will be affected has little, if any, bearing on DEQ’s regulatory authority. Under Virginia Law, there is no need to find that a water or wetland meets the definition of “Waters of the United States” for those waters or wetlands to be regulated. In fact, Virginia has independent regulatory authority over these areas that clearly exceed that contained in the Clean Water Act. We suggest that references to “jurisdictional wetlands or waters of the U.S” be corrected to read “waters or wetlands regulated by State and/or Federal law and regulation” in this and all subsequent consistency determination submissions.
- **Page 3-5 line 25** Figure 3.1 is referenced as constituting a wetlands map. No wetlands are shown on this map even though the report indicates that nearly 500 out of 650 acres at Langley AFB are wetlands.
 - **Page 3-5 line 24-27** Most Langley AFB EIR submissions indicate that a 2000 wetland delineation is “under jurisdictional determination review by the Norfolk USACE.” As we have previously commented on several occasions, the delineation should be finalized (confirmed) prior to making application for this project. We are confused as to the factual status of this review based on discrepancies in various documents submitted by LAFB. A draft EIR, dated April 2005 was recently reviewed by DEQ in which a wetland map was provided showing such things as “ area previously identified and **confirmed** (emphasis added) as non-wetlands/non-waters”, “area previously identified and **confirmed** (emphasis added) as wetlands/waters”, “additional wetland /waters identified during wetlands delineation” and “wetlands and waters.” At the time of our review of that document, we assumed that Langley had finally received the USACE confirmation of the 2000 delineation that was referenced repeatedly as “under jurisdictional determination review”. The current document once again references the delineation as “under jurisdictional determination review.” In our opinion, continued preparation and submittal of consistency determinations without the requisite delineation confirmation by the Corps is both unreasonable and unacceptable. This office needs for wetlands to be delineated on maps in order for us to properly evaluate these EIRs. This is an ongoing issue that should be resolved satisfactorily to DEQ before any further consistency determinations are finalized for Langley AFB. The generally accepted “life span” of confirmed delineations is 5 years to ensure that it accurately represents current site conditions. Continued references to a 5 year old, unconfirmed, delineation are simply an unacceptable basis on which the Department should base environmental consistency decisions.
 - **Appendix B (B-4)** This appendix improperly quotes Virginia Law as regulation (Virginia Administrative Code) relative to Subaqueous Lands Management and Wetlands Management. Furthermore, this DEQ “regulatory” citation is incorrect. The referenced section does not exist in Virginia Administrative Code (regulation) or the Code of Virginia (law) and should be corrected. The proper Code section is “Virginia Code §62.1-44.15:5”. The VWP regulation promulgated under Virginia law may be cited as “9VAC25-210-10 et seq.” More importantly,

14/2005

it appears to misrepresents the scope of Section 62.1-44.15:5 and the regulations promulgated under that authority. Again, these regulatory requirements are significantly more encompassing than represented in this document. Finally, the term "Joint Permit" as referenced in this Appendix does not exist. A Joint Permit Process is one that results in multiple permits being issued under discrete regulatory authority as a result of a Joint Permit Application.

Regarding Waste issues, The following is information the facility must consider when dismantling an outdoor firing range:

Removal contractors or reclaimers should apply standard best management practices to separate the lead from soil. The soil, if then placed back on the range, is exempt from RCRA. However, if the soil is to be removed off-site, then it could require testing to determine if it is a RCRA hazardous waste.

Please understand that the guidance from EPA is just that, guidance. Virginia is an EPA authorized state so some of our regulations and interpretations differ from EPA. Virginia does not have specific regulations governing the management of firing ranges. However, our regulations fully cover the management of the potentially contaminated soil in question.

If the bullets are going to be removed, it is assumed that prior to disposal or re-use of the soil the bullets will be screened from the soil and sent off for recycling. After the screening takes place and prior to disposal or re-use, 40 CFR 262.11 requires the waste (soil) to be characterized. If it is determined to be a hazardous waste it must be removed and properly managed at a permitted hazardous waste treatment/disposal facility.

If it is determined to not be a hazardous waste, the Virginia Solid Waste Management Regulations "VSWMR" 9 VAC 20-80-60.E.7 provides for a conditional exemption from permitting for the landfilling of solid waste which includes primarily rocks, brick, block, dirt, broken concrete, and road pavement and which contains no paper, yard, or wood wastes provided no open dump, hazard, or public nuisance is created. If it is determined that the soil is not a hazardous waste and is not contaminated above background, the landfilling or re-use of the soil would not be covered by the conditional exemption provided by 9 VAC 20-80-60 and the contaminated soil would have to be disposed at a permitted solid waste management facility. The VSWMR 9 VAC 20-80-150.E.2 also provides for an exclusion from the definition of solid waste and therefore from regulation if it can be demonstrated that the contaminated soil can be beneficially used as long as the material can be managed so as to not create an open dump, hazard or public nuisance. The procedures for making this beneficial use determination are provided for in 9 VAC 20-80-150E.2.b.

Soil testing must be done by an independent private laboratory. 40 CFR 262.11 (incorporated by reference into the Virginia Hazardous Waste Management Regulations) requires the generator of a waste to determine if that waste is a hazardous waste. A waste may be considered a hazardous waste if it is a listed waste or a characteristic waste. Based on the information we have been provided it does not appear to be a listed hazardous waste, however, that determination in accordance with Subpart D of 40 CFR Part 261 would have to be made. If it is determined to not be a listed hazardous waste, the generator must determine if it is a characteristic waste in accordance with Subpart C of 40 CFR Part 261. The determination of whether the waste is a characteristic waste may be made by testing according to the methods outlined in Subpart C of 40 CFR Part 261 or by using knowledge of the hazard characteristic in light of the materials or processes used.

To obtain representative samples of the material, a sampling plan developed in accordance with the methods contained in EPA's SW-846 needs to be developed and implemented. At that point we recommend the samples be tested by the Toxic Characteristic Leaching Procedure for metals to determine if they are a hazardous waste and for total metal concentrations to compare the levels to background.

If the soil may be treated on site. However, the regulatory requirements for the treatment would depend on when the soil is determined to be a waste. If material has not yet been discarded it is not a waste. However, once it is determined that the soil is a solid waste and is characterized as a hazardous waste, the accumulation and treatment of the soil would have to be in accordance with 40 CFR 262.34 and 40 CFR Part 268. However, if it is determined the soil is not a hazardous waste, but it is a solid waste, a permit for the treatment of the waste would be required under the Virginia

14/2005

Solid Waste Management Regulations (VSWMR) 9 VAC 20-80 *et.seq.*

Thanks for the opportunity to comment.

Harold J. Winer
Deputy Regional Director
Virginia DEQ, Tidewater Regional Office
Phone: 757-518-2153/Fax: 757-518-2003
Email: hjwiner@deq.virginia.gov

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

- A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.
- B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.
- C. Use your agency stationery or the space below for your comments. IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.

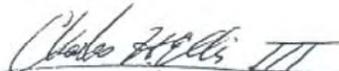
Please return your comments to:

MR. CHARLES H. ELLIS III
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

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DEQ-Office of Environmental
Impact Review


CHARLES H. ELLIS III
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

The Marine Resources Commission, pursuant to Chapter 12 of Title 28.2 of the Code of Virginia, is responsible for issuing permits for encroachments in, on, or over State-owned submerged lands throughout the Commonwealth. It does not appear that this project involves any lands subject to the jurisdiction of this agency. Thank you for the opportunity to comment on this project.

(signed)  Twest (date) 5/26/05
(title) Env't Engineer
(agency) UMMC

PROJECT # 05-142F

8/98



COMMONWEALTH of VIRGINIA

Department of Historic Resources

2801 Kensington Avenue, Richmond, Virginia 23221

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

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DEQ-Office of Environmental
Impact Review

Kathleen S. Kilpatrick
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.state.va.us

June 14, 2005

Ms Brenda W. Cook
1 CES/CEV
37 Sweeney Boulevard, Langley Air Force Base
Hampton, Virginia 23665-2107

Re: Construction of an Indoor Combat Arms Training Maintenance Range (CATM)
Langley Air Force Base
Hampton, Virginia
DHR File No. 2005-0416

Dear Ms Cook:

We have received, through the Department of Environmental Quality (DEQ), the Environmental Assessment (EA) for the construction by the Air Force of an Indoor Combat Arms Training Maintenance Range (CATM) at Langley Air Force Base located in the City of Hampton. The undertaking includes the demolition of an existing facility on site and construction of the new facility.

According to the EA, the undertaking will occur within the northeast boundary of the National Register of Historic Places-eligible Langley Field Historic District. Although none of the buildings proposed for demolition contribute to the historic district, the introduction of the new facility within the limits of the historic district has the potential to affect the historic character of the resource. We request that in order to carry out its responsibilities pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR 800, to identify historic properties listed in or eligible for the National Register of Historic Places that the Air Force consult the Department of Historic Resources (DHR) directly on this undertaking. We look forward to continued coordination between our agencies on this project.

If you have any questions about the Section 106 review process or our comments, please call me at (804) 367-2323, Ext. 114.

Sincerely,

Marc Holma, Architectural Historian
Office of Review and Compliance

Administrative Services
10 Courthouse Avenue
Petersburg, VA 23803
Tel: (804) 863-1624
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Ave.
Richmond, VA 23221
Tel: (804) 367-2323
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Portsmouth Region Office
612 Court Street, 3rd Floor
Portsmouth, VA 23704
Tel: (757) 396-6707
Fax: (757) 396-6712

Roanoke Region Office
1030 Penmar Ave., SE
Roanoke, VA 24014
Tel: (540) 857-7585
Fax: (540) 857-7588

Winchester Region Office
107 N. Kent Street, Suite 203
Winchester, VA 22601
Tel: (540) 722-3427
Fax: (540) 722-7535

Cc: Mr. Charles H. Ellis, III, Department of Environmental Quality

Murphy, Jr.
Natural



Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street, Suite 302
Richmond, Virginia 23219-2010
Phone: (804) 786-6124 Fax: (804) 786-6141
June 16, 2005

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JUN 21 2005

DEQ-Office of Environmental
Impact Review

Mr. Charles Ellis III
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Fl
Richmond, Virginia 23219

Re: Combat Arms Training Maintenance Range at Langley Air Force Base, DEQ# 05-142F
DCR-DCBLA Project # FSPR-USAF-17-05

Dear Mr. Ellis,

We have reviewed the environmental assessment and consistency determination for the Combat Arms Training Maintenance Range at Langley Air Force Base and have the following comments:

Pursuant to the Coastal Zone Management Act of 1972, as amended, Federal activities affecting Virginia's coastal resources or coastal uses must be consistent with the Virginia Coastal Resources Management Program (VCP)(see section 307(c)(1) of the Act and the *Federal Consistency Regulations*, 15 CFR Part 930, sub-part C). In evaluating the various proposed actions for environmental consequences, the environmental assessment does not address Coastal Lands Management as one of the enforceable regulatory programs of the Coastal Zone Management Act and the Virginia Coastal Resources Management Program (VCP).

The Coastal Lands Management program is a state-local cooperative program administered by the Department of Conservation and Recreation's Division of Chesapeake Bay Local Assistance and 84 localities in Tidewater, Virginia established pursuant to the Chesapeake Bay Preservation Act; Code of Virginia § 10.1-2100 thru § 10.1-2114 and Chesapeake Bay Preservation Area Designation and Management Regulations; Virginia Administrative Code 9 VAC 10-20-10 *et seq.*

While Chesapeake Bay Preservation Areas are not locally designated on federal lands, this does not relieve the Air Force of its responsibilities to be consistent with the provisions of the Chesapeake Bay Preservation Area Designation and Management

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Chesapeake Bay Local Assistance • Dam Safety and Floodplain Management • Land Conservation*

Regulations (Regulations), as one of the enforceable programs of Virginia's Coastal Resources Management Program (VCRMP). Federal actions on installations located within Tidewater Virginia are required to be consistent with the performance criteria of the Regulations on lands analogous to locally designated Chesapeake Bay Preservation Areas.

In Hampton, the areas protected by the Chesapeake Bay Preservation Act, as locally implemented requiring stringent performance criteria, include: tidal wetlands, non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams, tidal shores and a 100-foot vegetated buffer area located adjacent to and landward of the aforementioned features, and along both sides of any water body with perennial flow. Less stringent performance criteria apply to land that is contiguous to the 100-foot buffer for a distance of 100 feet in the landward direction.

The activity in those areas protected by the *Chesapeake Bay Act and Regulations* are subject to the general performance criteria, § 9 VAC 10-20-120 et seq., especially with regard to minimizing land disturbance. For land disturbance activities over 2,500 square feet, the project must comply with the requirements of the *Virginia Erosion & Sediment Control Handbook*, Third Edition, 1992. In addition, stormwater management criteria consistent with water quality protection provisions (§4 VAC 3-20-71 et seq.) of the *Virginia Stormwater Management Regulations* (§ 4 VAC 3-20) shall be satisfied.

Provided the demolition and construction adhere to the general performance criteria, Erosion and Sediment Control Law (§ 10.1-560 et seq. of the Code of Virginia) and the Virginia Stormwater Management Act (§ 10.1-603.1 et seq. of the Code of Virginia), the project will be consistent with the *Chesapeake Bay Preservation Act & Regulations*.

Please note however, that the description of the scope of the *Chesapeake Bay Preservation Act* (the Act) and the *Chesapeake Bay Preservation Area Designation and Management Regulations* (the Regulations) on page B-6 is inaccurate. The program does **not** “protect and restore coastal ...habitats, and species of the Commonwealth.” The areas protected by the Act and Regulations does **not** include, “subaqueous lands and vegetation, sand dune systems, barrier islands, underwater or maritime cultural resources,... and endangered or threatened species.”

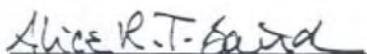
The purpose of the *Chesapeake Bay Preservation Area Designation and Management Regulations* (§ 9 VAC 10-20-10 et seq.) is to protect and improve the water quality of the Chesapeake Bay, its tributaries, and other state waters by minimizing the effects of human activity upon these waters and implementing the Act, which provides for the definition and protection of certain lands called Chesapeake Bay Preservation Areas, which if improperly used or developed may result in substantial damage to the water quality of the Chesapeake Bay and its tributaries. A Chesapeake Bay Preservation Area consists of a Resource Protection Area (RPA) and a Resource Management Area (RMA).

The RPA includes tidal wetlands, non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow, tidal shores, and a buffer not less than 100-feet in width located adjacent to and landward of the above components and

along both sides of any water body with perennial flow. The RMA includes land types that, if improperly used or developed, have a potential for causing significant water quality degradation or for diminishing the functional value of the RPA. A Resource Management Area shall be provided contiguous to the entire inland boundary of the Resource Protection Area. Please make a note of this for future consistency determinations.

We appreciate the opportunity to provide comments on this project. Please do not hesitate to contact us at 1-800-CHESBAY should you have any questions.

Sincerely,



Alice R. T. Baird, LA
Chesapeake Bay
Special Projects Coordinator



Brad Belo
Chesapeake Bay
Senior Environmental Planner

C: Scott Crafton, DCR

Ellis, Charles

From: Tom Barnard [barn@sweethall.wetlan.vims.edu]
Sent: Friday, June 17, 2005 11:05 AM
To: Ellis, Charles
Subject: Re: Air Force EA on "Combat Arms Training Maintenance Range at Langley AFB," DEQ-142F

Charlie,

I have reviewed the subject EA from a marine environmental perspective and am of the opinion that so long as the proponents give highest priority to avoiding direct impact (filling, etc.) to wetlands and use compensatory mitigation only for unavoidable wetland losses, the activities proposed are probably consistent with the coastal program. The permit application will provide the detail necessary for a full determination.

Let me know if you have any questions regarding this email.

Tom

Thomas A. Barnard, Jr. *
College of William and Mary * phone (804) 684-7383
Virginia Institute of Marine Science * fax (804) 684-7179
Center for Coastal Resources Management * email <barn@vims.edu>
P.O. Box 1346 *
1208 Greate Road *
Gloucester Point, VA 23062-1346 *



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Impact Review

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James O. McReynolds, *County Administrator*
Thomas G. Shepperd, Jr., *Chairman*

June 10, 2005

Mr. Charles H. Ellis III
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, Virginia 23219

Re: Combat Arms Training Maintenance
Range at Langley Air Force Base
DEQ #05-142F (ENV:GEN)

Dear Mr. Ellis:

Pursuant to your request of May 20, 2005, the staff of the Hampton Roads Planning District Commission has reviewed the Environmental Assessment and Consistency Determination for the proposed construction of a new 42-Firing Point Firing Range and demolition of two smaller facilities at Langley Air Force Base. We have contacted the City of Hampton regarding the project.

Based on this review, we offer the following comments. The information provided indicates that this project will impact wetlands and potential habitat areas. In order to adequately assess the effects of the proposed encroachment, it should be considered in conjunction with a number of other projects on the base that are also known to impact wetlands. A master plan addressing all projects underway and proposed would be useful for this purpose.

The EA also identifies endangered and threatened species known to occur in the area of the base, but provides no site-specific assessment of these species. The federally listed threatened species bald eagle is known to occur in the northern area of the base, but the most recent information provided is from surveys conducted in 1993 and 1994. We encourage the applicant to provide current site assessment information to allow for a more thorough review of the project's effects on endangered and threatened species.

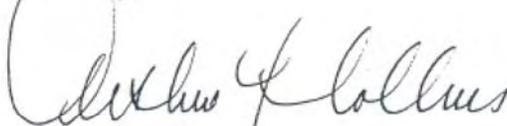
HEADQUARTERS • THE REGIONAL BUILDING • 723 WOODLAKE DRIVE • CHESAPEAKE, VIRGINIA 23320 • (757) 420-8
PENINSULA OFFICE • 2101 EXECUTIVE DRIVE • SUITE C • HAMPTON, VIRGINIA 23666 • (757) 262-0

Mr. Charles H. Ellis III
June 10, 2005
Page 2

The City of Hampton has submitted comments directly to you in a separate letter (copy attached). We concur with their support of both green building and materials recycling activities at Langley Air Force Base.

We appreciate the opportunity to review this project. If you have any questions, please do not hesitate to call.

Sincerely,



Arthur L. Collins
Executive Director/Secretary

MLJ:fh

Attachment

Copies: Mr. James Freas, HA

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APPENDIX B - PUBLIC NOTIFICATION MATERIALS

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LANGLEY AFB PUBLIC AFFAIRS OFFICE PRESS RELEASE

United States Air Force

1st Fighter Wing Public Affairs, 9th Air Force (Air Combat Command)
159 Sweeney Blvd., Suite 100, Langley AFB, VA, 23665-2292
(757) 764-2018
Release No.: 1
May 16, 2005

Environmental assessment

LANGLEY AFB, VA- Langley AFB has prepared a Draft Environmental Assessment (EA) to analyze the potential impacts of the construction of a new indoor firing range at Langley AFB. The Draft EA assesses the potential environmental consequences resulting from the demolition of the existing outdoor firing range, and the construction of a new indoor firing range. The analysis also assesses the environmental consequences of the No Action alternative.

The Draft EA and a Draft Finding of No Significant Impact/Finding of No Practicable Alternative will be available for review beginning today at the locations below. Comments should be submitted by June 14, 2005.

Poquoson Public Library	500 City Hall Avenue
Hampton Public Library	4207 Victoria Blvd
York County Public Library	100 Long Green Blvd
Bateman Library	42 Ash Avenue Langley AFB

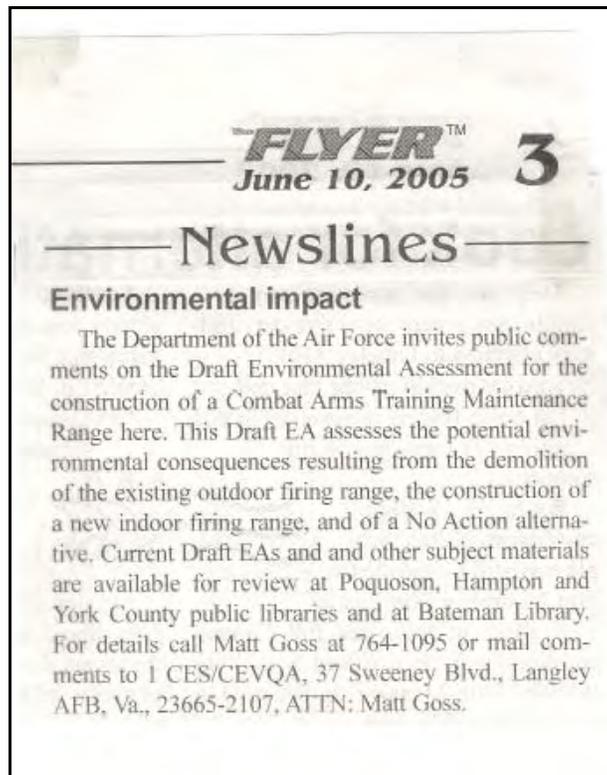
To acquire more information, please contact Mr. Matt Goss. Written comments should be mailed to:

1 CES/CEVQA
37 Sweeney Boulevard
Langley AFB, VA 23665-2107
ATTN: Matt Goss

-30-

For additional details call 1st Fighter Wing Public Affairs at 764-2018.

BASE NEWSPAPER NOTIFICATION IN “THE FLYER”



DAILY PRESS PUBLIC NOTICE

B6 | SUNDAY, MAY 15, 2005

The Department of the Air Force Invites Public Comments On the Draft Environmental Assessment for construction of a Combat Arms Training Maintenance Range at Langley Air Force Base (AFB)

Langley AFB has prepared a Draft Environmental Assessment (EA) to analyze the potential impacts of the construction of a new indoor firing range at Langley AFB. The Draft EA assesses the potential environmental consequences resulting from the demolition of the existing outdoor firing range, and the construction of a new indoor firing range. The analysis also assesses the environmental consequences of the No Action alternative.

The Draft EA and a Draft Finding of No Significant Impact/Finding of No Practicable Alternative will be available for review beginning May 16, 2005 at the locations below. Comments should be submitted by June 14, 2005.

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Bateman Library	42 Ash Avenue Langley AFB

To acquire more information, please contact Mr. Matt Goss. Written comments should be mailed to:

**1 CES/CEVQA
37 Sweeney Boulevard
Langley AFB, VA 23665-2107
ATTN: Matt Goss**

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APPENDIX C - AIR EMISSION CALCULATIONS

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DEMOLITION	Year	Square Feet	Height (ft)	Cubic Feet	Proposed Action
		14,400	10	144,000	
TOTAL DEMOLITION				Cubic Feet 144,000	

(Assume building is single story, 10 ft high).
(Assume no emission sources are eliminated by demolition of bldg.)

Demolition Emission Factor 0.00042 lb PM10/cubic foot (SCAQMD, 1993)

Emissions (lb)	PM10
	60
	0.030

Removal of pavement
Pavement thickness 0.5 ft
Volume to be removed 0 cu ft

Total volume to be removed (bldgs + parking) 3,250 cu yd

Volume per truckload 15 cu yd/truckload
Number of truckloads 217 truckloads
Round trip mileage 40 miles/load
Miles traveled 8667 miles

	CO (g/ml)	VOC (g/ml)	NOx (g/ml)	SOx (g/ml)	PM (g/ml)	Reference
Dump truck emission factors	11.22	2.16	10.81	0.09	1.65	(from Jagelski & O'Brien, 1994 - HDDV)
Emissions (grams)	97240	18720	93667	765	14317	
Emissions (tons)	0.1	0.0	0.1	0.0	0.0	
Total for demolition and hauling	0.1	0.0	0.1	0.0	0.0	

Langley CATM EA.xls
Construction

Building Construction		Area sq ft
Year		
	New indoor firing range	30,000
	Total	30,000

Emission Factors (lbs/const period/1000 sq ft GFA)						
Land Use	RCC	CO	NOx	SO2	PM10	Reference
General Industrial	32.8	104.8	481.9	0.0	34.2	CECA 1993, Table 9-1

Emissions (tons/year)					
CO	VOC	NOx	SOx	PMI	PMI
1.6	0.5	7.2	-	-	0.5

Langley CATM EA.xls
Emissions Summary

	CO	VOC	NOx	SOx	PM
Demolition	0.1	0.0	0.1	0.0	0.0
Construction	1.6	0.5	7.2	0.0	0.5
Total Construction	1.7	0.5	7.3	0.0	0.6

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APPENDIX D - CONSISTENCY DETERMINATION

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APPENDIX D - FEDERAL AGENCY COASTAL ZONE MANAGEMENT ACT (CZMA) CONSISTENCY DETERMINATION

INTRODUCTION

This document provides the Commonwealth of Virginia with the U.S. Air Force's Consistency Determination under CZMA Section 307 and 15 C.F.R. Part 930 sub-part C. The information in this Consistency Determination is provided pursuant to 15 C.F.R. Section 930.39.

Pursuant to Section 307 of the Coastal Zone Management Act, 16 U.S.C. § 1456, as amended, its implementing regulations at 15 C.F.R. Part 930, this is a Federal Consistency Determination for activities described within the Environmental Assessment for the Combat Arms Training Maintenance (CATM) Range at Langley Air Force Base, Virginia (Chapter 2.0 of the document).

Proposed Federal Agency Action

The proposed action of the EA is the construction and demolition at the Combat Arms Training Maintenance (CATM) Range at Langley Air Force Base (AFB), Virginia.

The U.S. Air Force has evaluated the Proposed Action and Alternatives for potential effects to the land or water uses or natural resources of the Commonwealth's coastal zone within the context of the statutes listed in the Virginia Coastal Resources Management Program (below).

Federal Consistency Review

Statutes addressed as part of the Virginia Coastal Resources Management Program consistency review and considered in the analysis of the proposed action are discussed in the following table.

<i>Statute</i>	<i>Scope</i>	<i>Consistency</i>
<p><i>Fisheries Management</i> Virginia Administrative Code 28.2-200 to 28.2-713 (Virginia Marine Resources Commission) and 29.1-100 to 29.1-570 (Department of Game and Inland Fisheries)</p>	<p>Stresses the conservation and enhancement of finfish and shellfish resources and the promotion of commercial and recreational fisheries to maximize food production and recreational opportunities.</p>	<p>Fisheries would not be affected by the proposed action.</p>
<p><i>Subaqueous Lands Management</i> Virginia Code Section 28.2-1200 to 28.2-1213</p>	<p>Establishes the conditions for granting or denying permits to use state-owned bottomlands based on considerations of potential effects on marine and fisheries resources, wetlands, adjacent or nearby properties, anticipated public and private benefits and water quality standards established by the Virginia Department of Environmental Quality.</p>	<p>No aspects of the proposed action occur in state waters. There will be no dredge and fill operations. The proposed action would not involve the use of state submerged lands.</p>
<p><i>Wetlands Management</i> Virginia Code Section 28.2-1301 to 28.2-1320 (Marine Resources Commission) and 62.1-44.15.5 et seq and Section 401 of the Clean Water Act (Department of Environmental Quality)</p>	<p>Preserves tidal wetlands, prevent their destruction, and accommodates economic development in a manner consistent with wetlands preservation. Also, establishes a Water Quality Certification program consistent with Section 401 of the Clean Water Act.</p>	<p>The proposed action would not conflict with the wetlands management program associated with the Virginia Coastal Zone Management Program. There would be no significant impacts to wetlands from the implementation of the proposed action. Standard construction and demolition practices would be applied to control sedimentation and erosion during construction, and demolition, thereby avoiding secondary effects to any nearby wetlands or freshwater aquatic communities.</p>
<p><i>Dunes Management</i> Virginia Code 28.2-1400 through 28.2-1420 (Marine Resources Commission)</p>	<p>Provides for protection of primary dunes as contained in the Coastal Primary Sand Dune Protection Act.</p>	<p>The proposed project would not adversely affect beach and shore management, nor impact any primary dunes as defined by the Coastal Primary Sand Dune Act. There are no sand-covered</p>

<i>Statute</i>	<i>Scope</i>	<i>Consistency</i>
		beaches or sand dunes in the vicinity of this project.
<p><i>Non-point Source Pollution Control</i></p> <p>Virginia Code Sections 28.2-1400 to 28.2-1420 (Department of Conservation and Recreation)</p>	Requires soil disturbing activities be designed to reduce soil erosion and to decrease inputs of chemical nutrients into state waters.	The proposed action would result in minor soil erosion and potential increases in turbidity from soil erosion. Standard construction practices for preventing and controlling erosion would be necessary and are described in Chapter 4 of the document.
<p><i>Point Source Pollution Control</i></p> <p>Virginia Code 62.1-44.15 (State Water Control Board)</p>	Point source water pollution control is accomplished by implementation of the National Pollutant Discharge Elimination System (NPDES) permit Program pursuant to Section 402 of the Clean Water Act. Administered in Virginia as the VPDES Permit Program.	No point source discharges into surface water or effects to public drinking water supplies would occur from the proposed action.
<p><i>Shoreline Sanitation</i></p> <p>Virginia Code Sections 32.1-164 through 32.1-165 (Virginia Department of Health)</p>	Regulates the installation of septic tanks, sets standards concerning soil types suitable for septic tanks, and specifies minimum distances for placement from streams, rivers and other state waters.	Installation of septic tank systems is not contained in this proposal. All sanitary sewage would be routed to an on-base central sewage collection system and treated at the Hampton Roads Sanitation District's regional wastewater treatment facility.
<p><i>Air Pollution Control</i></p> <p>Virginia Code Section 10-1.1300 (State Air Pollution Control Board)</p>	Implements the federal Clean Air Act to provide the legally enforceable State Implementation Plan for the attainment of the National Ambient Air Quality Standards.	The proposed action would not involve additional long-term air emissions. Air quality impacts were not considered significant given the amount of construction involved in the proposed action.

<i>Statute</i>	<i>Scope</i>	<i>Consistency</i>
<p><i>Coastal Lands Management</i> Virginia Code Sections 10.1-2100 and Virginia Administrative Code 10-20-10 et seq. (Chesapeake Bay Local Assistance Department and 84 localities in Tidewater Virginia)</p>	<p>A state-local cooperative program pursuant to the Chesapeake Bay Preservation Act and Chesapeake Bay Preservation and Management Regulations to regulate activities in the Chesapeake Bay Resource Management Areas. The main goal of this program is protect and restore coastal resources, habitats, and species of the Commonwealth. These include, but are not limited to, wetlands, subaqueous lands and vegetation, sand dune systems, barrier islands, underwater or maritime cultural resources, riparian forested buffers, and endangered or threatened species</p>	<p>State, Federal, and regional agencies were provided the opportunity to review the environmental assessment. The proposed action, which occurs on federal property, conforms to the requirements of the Chesapeake Bay Preservation and Management Regulations.</p>

Pursuant to 15 C.F.R. § 930.41, the Commonwealth of Virginia Clearinghouse has 60 days from receipt of this document in which to concur with or object to this Consistency Determination or to request an extension, in writing, under 15 C.F.R. § 930.41(b). Virginia’s concurrence was received by 1 FW on June 23, 2005.