STAFF SUMMARY SHEET

	TO	ACTION	SIGNATURE (Surname), GRADE AND DATE		TO	ACTION	SIGNATURE (Surname), GRADE AND DATE
1	75 ABW/ JAE	Coord	Shaw GS-13 26 Oct 05	6	75 CEG/ CC	Sig	Brereton Col 12 Dec 05
2	75 CEG/ CEVOR	Coord	GS-13 1-Nov 05	7			
3	309MXW/ QPE	Coord	Guy Whalen GS-11 5 Dec 05	8			
4	309EMXG /MXVT	Coord	Don Norman 01 Dec 05	9			
5	75 CEG/ CD	Coord	(12/9)	10			

SURNAME OF ACTION OFFICER AND GRADE	SYMBOL	PHONE	TYPIST'S INITIALS	SUSPENSE DATE
Kay Winn, GS-12	75CEG/CEVOR	DSN 777-0383	kp	

SUBJECT: Environmental Assessment for Proposed Armament Overhaul and Test Facility, Hill Air Force Base, Utah

DATE: 20051019

SUMMARY

1. An Environmental Assessment (EA) Tab 3, has been prepared to analyze the environmental effects of the proposed action. The purpose of the proposed action is to accommodate current United States Air Force (USAF) missions by constructing an Armament Overhaul and Test Facility at Hill Air Force Base (AFB). This new facility would completly restructure the armament testing and verification process as it would eliminate batching, minimize component travel time, and reduce work in process. An Executive Summary is located at Tab 2.

2. The EA was prepared in accordance with the National Environmental Policy Act of 1969 and 32 CFR Part 989.

3. RECOMMENDATION: 75 CEG/CC, Commander, coordinate. Upon completion of the public comment period, FONSI will be submitted for signature.

Comment period complete Nov 7, 2005

W. ROBERT JAMES, Ph.D., P.E.
Chief, Environmental Management Division
75 Civil Engineer Group

3 Tabs
1. Finding of No Significant Impact
2. Executive Summary
3. Environmental Assessment

Report Documentation Page

Form Approved
OMB No. 0704-0188

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Proposed Final Environmental Assessment (EA): Proposed Armament Overhaul and Test Facility, Hill Air Force Base, Utah	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Streamline Consulting,1713 N. Sweetwater Lane,Farmington,UT,84025**	8. PERFORMING ORGANIZATION REPORT NUMBER
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14. ABSTRACT

15. SUBJECT TERMS

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a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**35**	

FINDING OF NO SIGNIFICANT IMPACT

1. NAME OF ACTION: Construct an armament overhaul and test facility at Hill Air Force Base (AFB), Utah.

2. DESCRIPTION OF THE PROPOSED ACTION: Hill AFB proposes to accommodate current United States Air Force (USAF) missions by constructing an armament overhaul and test facility on Hill AFB.

The proposed action includes all work necessary to construct the armament overhaul and test facility at Hill AFB. The proposed action would construct a facility large enough to house all of the required facilities for overhaul, repair, and testing for 20 millimeter (mm) and 30 mm guns for various aircraft systems, as well as small arms. The new facility would be constructed of reinforced concrete footings, foundation, and floor slab; steel frame and/or masonry bearing walls; an insulated metal roof; and a 20-foot high earthen berm on all sides of the gun range. The structure would house: a boiler; a chemical storage room; phosphate plating tanks; a temper etching chemical process; parts cleaning and degreasing equipment; a welding station; a tempering oven; non-destructive inspection (NDI) equipment; a glass bead media blaster; mill and lathe equipment; an annealing process with cooling water; a reverse osmosis unit; a dry lube area; a bearing repack area; a hydraulic system operating at 3,000 pounds per square inch (psi) pressure and 60 gallons per minute (gpm) flow; waste accumulation points; secondary containment for hazardous liquids; an ammunition and arms storage room; and a bullet trap system.

3. SELECTION CRITERIA: The following criteria were used to assemble alternatives. The facility that accommodates the Hill AFB Gun Section's overhaul, repair, and testing functions should:

- have sufficient space to house all of the necessary equipment and workers;
- provide capacity to complete future USAF workload requirements;
- significantly reduce process flow time;
- incorporate on-site testing capability for the 20 mm and the 30 mm guns; and
- be protective of facilities, human health, and the environment

4. ALTERNATIVES CONSIDERED OTHER THAN THE PROPOSED ACTION:

Under the no action alternative, process flow time would not be reduced, 30 mm guns would be shipped to Eglin AFB for testing, resulting in lengthy delays before final delivery of guns back into service, and it is predicted that Hill AFB may be unable to provide sufficient capacity for overhaul, repair, and testing functions for 20 mm and 30 mm guns for various aircraft. It is therefore possible that aircraft would be grounded, and mission requirements for sorties would not be met.

Hill AFB planners and engineers evaluated several alternative locations for housing the activities that currently occur in Buildings 752, Building 509, and Eglin AFB. These alternatives were not retained for detailed consideration due to issues such as proximity to related processes, and lack of USAF approval for overhauling 20 mm and 30 mm guns at any location other than Hill AFB.

5. SUMMARY OF ANTICIPATED ENVIRONMENTAL EFFECTS:

a. Proposed Action: This alternative fully satisfies all applicable regulations and provides for accomplishment of mission objectives without significant impacts to human health or the environment. The proposed action could be implemented with minor environmental impacts. If contaminated soils exist, they would be properly handled during the construction process. Following the construction phase, backfill and paving operations would prevent erosion of the site. The proposed action could be implemented with minor air emissions of both short term and long term duration. A natural gas-fired boiler would produce minor ongoing air emissions. The facility's operational air emissions and solid and hazardous waste streams would not be newly created; they would be relocating from other on-base locations. No adverse cumulative environmental impacts are expected.

b. No Action Alternative: Under the no action alternative, current conditions would continue. Opportunities to eliminate batching; minimize component travel time; reduce work in process; and implement technological advancements in fired round collection and laser image projection systems would not be realized. Under the no action alternative, it is predicted that Hill AFB may be unable to provide sufficient capacity for overhaul and testing of 20 mm and 30 mm weapons for use on USAF aircraft.

6. FINDING OF NO SIGNIFICANT IMPACT: Based on the above considerations, a Finding of No Significant Impact (FONSI) is appropriate for this assessment.

Approved by: _____ Date: 12 Dec 05
HARRY BRIESMASTER III, Colonel, USAF
Commander

Proposed Final
Environmental Assessment (EA): Proposed Armament Overhaul and Test Facility, Hill Air Force Base, Utah

Contract F42620-00-D0028, Delivery Order #0016

Department of the Air Force
Air Force Materiel Command
Design Engineering Support Program (DESP)
Hill Air Force Base, Utah 84056

September 23, 2005

Prepared in accordance with the Department of the Air Force Environmental Impact Analysis Process (EIAP) 32 CFR Part 989, Effective July 6, 1999, which implements the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality (CEQ) regulations.

EXECUTIVE SUMMARY

Purpose and Need

The purpose of the proposed action is to better accommodate current United States Air Force (USAF) missions by constructing a co-located armament overhaul and test facility. This new facility would completely restructure the armament testing and verification process because it would eliminate batching, minimize component travel time, and reduce work in process. USAF managers propose to implement technological advancements in fired round collection and laser image projection systems to more accurately determine pattern disbursement and acceleration rates. More accurate initial tests would decrease retesting requirements.

The proposed action is needed to meet future USAF workload requirements (for F/A-22, F-35 JSF, and UCAV aircraft) and to allow the gun section to support the ordnance workload of the other Department of Defense services. Thirty millimeter (mm) ammunition cannot be tested in existing Building 752, so these guns must currently be shipped to Eglin AFB for testing (sometimes more than once per gun if fine-tuning is required after the initial overhaul), which causes lengthy delays before final delivery of guns back into service.

Scope of Review

No cultural resources were identified within the area of the proposed action on Hill Air Force Base (AFB) property. No species of plants or animals listed as endangered, threatened, or sensitive by state or federal agencies are known to exist in the vicinity of the proposed action. No hazardous waste is expected to be generated by the construction activities, but accidental spills of fuel, lubricants, or other chemicals during construction could occur. Shallow soil contamination could exist within the area of the proposed action. Solid, liquid, and airborne hazardous waste streams would be generated by operating the proposed facility.

The issues that were identified and analyzed in the document are: air quality, solid and hazardous wastes, physical environment (surface soils), and biological resources. Environmental effects of the no action alternative were also considered. The proposed demolition of existing Building 752 is being addressed in a separate environmental assessment.

Selection Criteria

The facility that accommodates the Hill AFB Gun Section's overhaul, repair, and testing functions should:

- have sufficient space to house all of the necessary equipment and workers;
- provide capacity to complete future USAF workload requirements;
- significantly reduce process flow time;
- incorporate on-site testing capability for the 20 mm and the 30 mm guns; and

- be protective of facilities, human health, and the environment.

Proposed Action

Proposed Action - The proposed action includes all work necessary to construct the armament overhaul and test facility at Hill AFB. The proposed action would construct a facility large enough to house all of the required facilities for overhaul, repair, and testing for 20 mm and 30 mm guns for various aircraft systems, as well as small arms. The new facility would be constructed of reinforced concrete footings, foundation, and floor slab; steel frame and/or masonry bearing walls; an insulated metal roof; and a 20-foot high earthen berm on all sides of the gun range. The structure would house: a boiler; a chemical storage room; phosphate plating tanks; a temper etching chemical process; parts cleaning and degreasing equipment; a welding station; a tempering oven; non-destructive inspection (NDI) equipment; a glass bead media blaster; mill and lathe equipment; an annealing process with cooling water; a reverse osmosis unit; a dry lube area; a bearing repack area; a hydraulic system operating at 3,000 pounds per square inch (psi) pressure and 60 gallons per minute (gpm) flow; waste accumulation points; secondary containment for hazardous liquids; an ammunition and arms storage room; and a bullet trap system.

No Action Alternative – Under the no action alternative, process flow time would not be reduced, 30 mm guns would be shipped to Eglin AFB for testing, resulting in lengthy delays before final delivery of guns back into service, and it is predicted that Hill AFB may be unable to provide sufficient capacity for overhaul, repair, and testing functions for 20 mm and 30 mm guns for various aircraft. It is therefore possible that aircraft would be grounded, and mission requirements for sorties would not be met.

Additional Alternatives - Hill AFB planners and engineers evaluated several alternative locations for housing the activities that currently occur in Buildings 752, Building 509, and Eglin AFB. These alternatives were not retained for detailed consideration due to issues such as proximity to related processes, and lack of USAF approval for overhauling 20 mm and 30 mm guns at any location other than Hill AFB.

Results of the Environmental Assessment

The proposed action and the no action alternative were both considered in detail. The proposed action could be implemented with minor environmental impacts. If contaminated soils exist, they would be properly handled during the construction process. Following the construction phase, backfill and paving operations would prevent erosion of the site. The proposed action could be implemented with minor air emissions of both short term and long term duration. A natural gas-fired boiler would produce minor ongoing air emissions. The facility's operational air emissions and solid and hazardous waste streams would not be newly created; they would be relocating from other on-base locations. No cumulative environmental impacts are expected from either the proposed action or the no action alternative.

COMPARISON OF ALTERNATIVES

Issue	Proposed Action Construct the Armament Overhaul and Test Facility	No Action Do Not Construct the Armament Overhaul and Test Facility
Air Quality	Temporary construction-related emissions. Other than minor emissions from a natural-gas fired boiler, no new air emissions would be created. A portion of existing base emissions would be relocated to the new facility.	Current conditions would continue.
Solid and Hazardous Wastes	Existing waste streams (almost identical in type and quantity) would be relocated to the new facility.	Current conditions would continue.
Surface Soils	Construction-related erosion control measures may be required. If contaminated soils exist, they would be properly handled during the construction process.	No impact.
Biological Resources	No impact. The site contains poor quality habitat.	No impact.

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LIST OF ACRONYMS AND CHEMICAL TERMS

AFB	Air Force Base
bgs	Below Ground Surface
BTU	British Thermal Units
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CWA	Clean Water Act
DAQ	Utah Division of Air Quality
DWQ	Utah Division of Water Quality
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EPA	United States Environmental Protection Agency
FONSI	Finding of No Significant Impact
ft^2	Square Feet
gpm	Gallons Per Minute
HAP	Hazardous Air Pollutant
IRP	Installation Restoration Program
IWTP	Industrial Wastewater Treatment Plant
lb/yr	Pounds Per Year
MILCON	Military Construction
mm	Millimeters
NAAQS	National Ambient Air Quality Standards
NDCSD	North Davis County Sewer District

NDI	Non-Destructive Inspection
NEPA	National Environmental Policy Act
NOI	Notice of Intent
NO_x	Oxides of Nitrogen
O_3	Ozone
OSHA	Occupational Safety and Health Administration
PM-10	Particulates Smaller Than 10 Microns in Diameter
psi	Pounds Per Square Inch
RCRA	Resource Conservation and Recovery Act
RD	Requirements Document
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TSCA	Toxic Substances Control Act
UAC	Utah Administrative Code
UBC	Uniform Building Code
UPDES	Utah Pollutant Discharge Elimination System
US	United States
USAF	United States Air Force
VOC	Volatile Organic Compound

1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

Hill Air Force Base (AFB) is an air logistics center that maintains aircraft, missiles, and munitions for the United States Air Force (USAF). In support of that mission, Hill AFB: provides worldwide engineering and logistics management for the F-16 Fighting Falcon and A-10 Thunderbolt; accomplishes depot repair, modification, and maintenance of the F-16, A-10 Thunderbolt, and C-130 Hercules aircraft; and overhauls and repairs landing gear, wheels and brakes for military aircraft, rocket motors, air munitions, guided bombs, photonics equipment, training devices, avionics, instruments, hydraulics, software, and other aerospace related components.

This document addresses proposed construction activities related to facilities that house the overhaul, repair, and testing functions for 20 millimeter (mm) and 30 mm guns for various aircraft systems including: 20 mm guns for the F-14, F-15, F-16, F-18, F-22, and M-197 aircraft; 30 mm guns for the A-10 and C-130 aircraft; as well as small arms. These activities are currently performed in accordance with USAF mission requirements and technical order specifications in Building 752 and Building 509, Hill AFB, by the Hill AFB Gun Section (the section's organizational designation is OO-ALC/MXCNAG).

1.2 Purpose and Need

The purpose of the proposed action is to better accommodate current USAF missions by constructing a co-located armament overhaul and test facility (the test facility is also called a gun range). This new facility would completely restructure the armament testing and verification process because it would eliminate batching, minimize component travel time, and reduce work in process. USAF managers propose to implement technological advancements in fired round collection and laser image projection systems to more accurately determine pattern disbursement and acceleration rates. More accurate initial tests would decrease retesting requirements. The proposed facility is part of the Air Logistics Command's depot strategy for Hill AFB.

The proposed action is needed to meet future USAF workload requirements (for F/A-22, F-35 JSF, and UCAV aircraft) and to allow the gun section to support the ordnance workload of the other Department of Defense services.

The proposed action is also needed to incorporate lean manufacturing concepts into the gun section's work processes. Currently, subcomponents of gun systems are routed out of the shop to strip, weld, machine, perform non-destructive inspection (NDI) activities, and plate. The routing process adds 60 percent to the process flow time. The new lean design incorporates these processes into one location and eliminates the requirement to route components. The proposed action would achieve a 75 percent reduction in flow days and work in progress.

Finally, the proposed action is needed to allow for on-site testing of the 30 mm guns. The 30 mm ammunition cannot be tested in existing Building 752, so the 30 mm guns must currently be shipped to Eglin AFB for testing (sometimes more than once per gun if fine-tuning is required after the initial overhaul), which causes lengthy delays before final delivery of guns back into service.

1.3 Location of the Proposed Action

Hill AFB is located approximately twenty five miles north of downtown Salt Lake City and seven miles south of downtown Ogden, Utah (Figure 1). Hill AFB is surrounded by several communities: Roy and Riverdale to the north; South Weber to the northeast; Layton to the south; and Clearfield, Sunset, and Clinton to the west. The base lies primarily in northern Davis County with a small portion located in southern Weber County.

The proposed action and existing Building 752 are both located near the southeastern boundary of the base, approximately 2,000 feet north of the Hill AFB golf course (Figure 2).

1.4 Scope of the Environmental Review and Anticipated Environmental Issues

The scope of this environmental review is to analyze environmental concerns related to the proposed construction of an armament overhaul and test facility. During the construction process, soil would be disturbed to construct and/or install: the armament overhaul and test facility; an earthen berm surrounding the test facility; a parking lot; and underground utilities. During construction activities, solid wastes may be generated, and hazardous wastes could be generated if a spill of fuel, lubricants, or construction-related chemicals occurs.

Construction drawings have not been completed for the proposed facility. Based on the requirement for approximately 26,000 square feet (ft^2) of structure; 8,000 ft^2 of earthen berm; a 60-vehicle parking lot; and utility trenches, the total square footage to be disturbed would likely exceed 1 acre.

No species of plants or animals listed as threatened or endangered are known to occur on Hill AFB (Hill AFB 2005a; Hill AFB 2005b). No species of plants or animals listed as endangered, threatened, or sensitive by state or federal agencies were observed in or around the proposed project area, and no suitable habitat for any such species is likely to be disturbed by the project.

No cultural resources (defined as archaeological, architectural, or traditional cultural properties) are known to exist within the boundaries of the proposed action.

Shallow soil contamination (lead) has been detected immediately to the east of the proposed action near Building 752, and there are two former landfills in the vicinity (former landfill LF003 was located to the north of the proposed action and former landfill LF001 was located east of Building 752).

No surface water resources exist within the immediate area of the proposed action. According to the Hill AFB maps reviewed, the closest area of known groundwater contamination is approximately 400 feet to the northwest of the proposed action (Hill AFB 2005c). Due to this horizontal distance, and a maximum proposed excavation depth of approximately 10 feet below the ground surface (bgs) compared to the local depth to groundwater of approximately 25 feet bgs, groundwater impacts will not be addressed by this document.

As a result of the proposed armament overhaul and testing operations, minor amounts of hazardous waste would be generated, in both solid and liquid forms. Air emissions would be produced by construction equipment and by ongoing operations such as degreasing and NDI in the proposed armament overhaul and test facility.

The military construction (MILCON) requirements document (RD) for the proposed action considers noise issues. External jet noise would be addressed by incorporating noise level reduction measures into the building design, in compliance with the Uniform Building Code (UBC) Chapter 35, and the current version of the Hill AFB air installation compatibility use zone report. In relation to noise created by test firing the guns, the RD states, "Sound attenuation materials shall be added to the floor, ceilings, and wall to absorb and mitigate shock wave propagation, and to reduce interior and exterior noise." Since noise mitigation measures are being provided by design engineers through structural engineering controls, noise impacts will not be addressed by this document.

The issues that have been identified for detailed consideration and are therefore presented in Sections 3 and 4 are: air quality, solid and hazardous wastes, physical environment (surface soils), and biological resources. Environmental effects of the proposed action and the no action alternative were both considered in detail. Section 2.4 describes additional alternatives that were eliminated from detailed consideration.

The proposed demolition of existing Building 752 is being addressed in a separate environmental assessment.

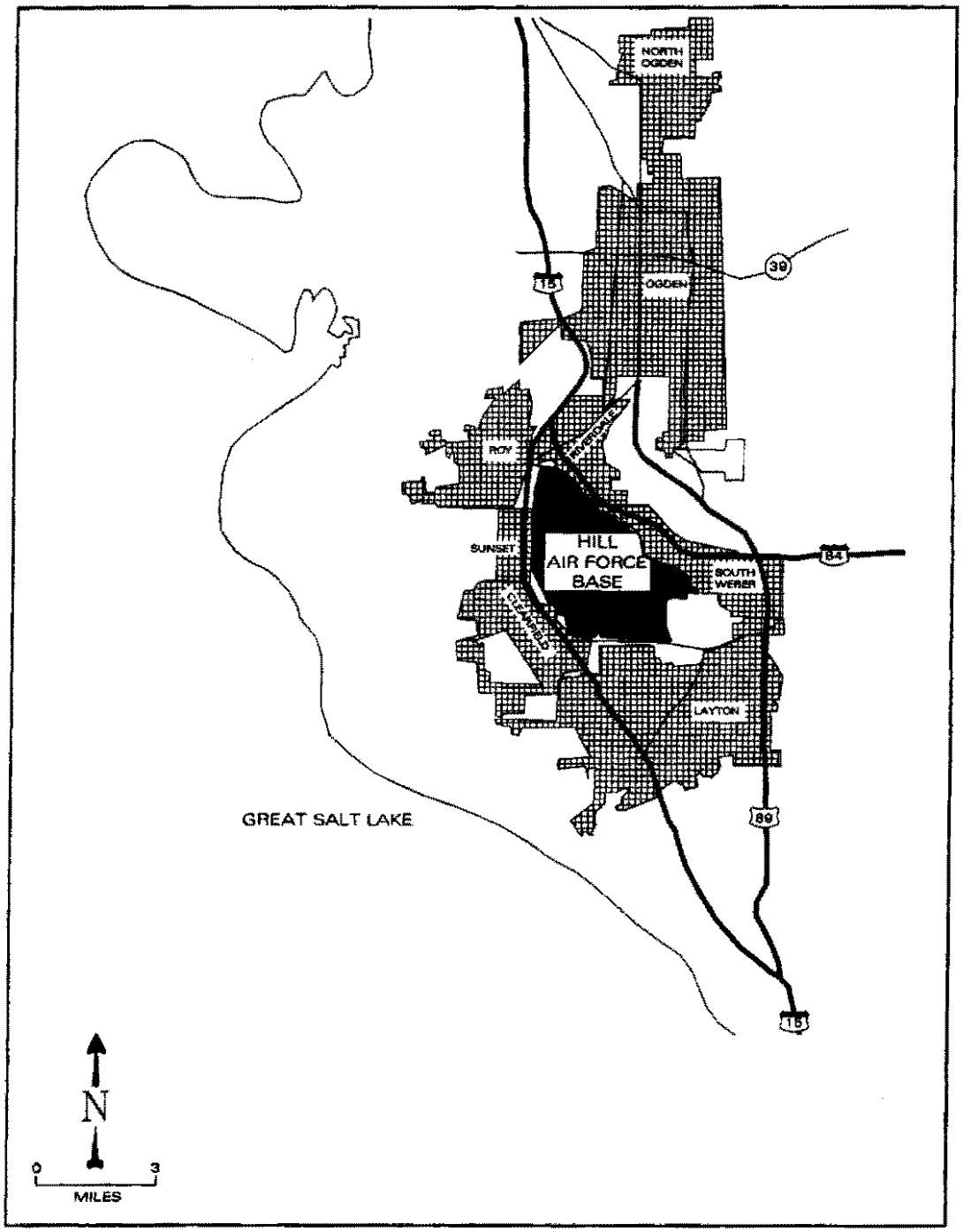

Figure 1: Hill AFB Location Map

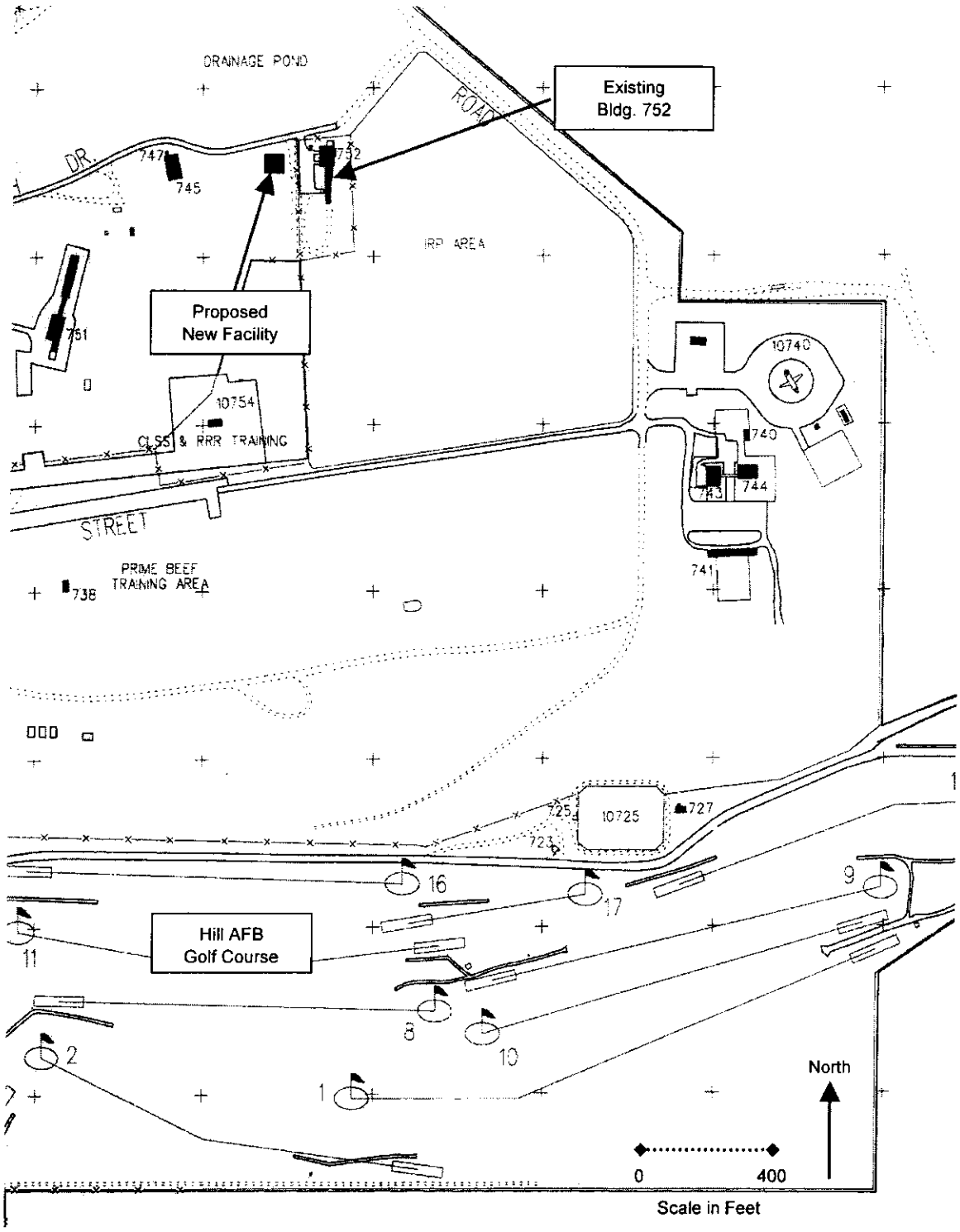

Figure 2: Location of the Proposed Armament Overhaul and Test Facility

1.5 Applicable Regulations and Permits

USAF activities are mandated to comply with conditions of the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality's regulations for implementing the procedural provisions of NEPA in Title 40 of the *Code of Federal Regulations* (CFR), 40 CFR 1500-1508, and USAF-specific requirements contained in 32 CFR Part 989, *Environmental Impact Analysis Process* (EIAP).

Throughout the construction phase of the project, Hill AFB contractors would follow safety guidelines of the Occupational Safety and Health Administration (OSHA) as presented in the CFR. Should any Hill AFB employees participate in constructing the proposed action, they would comply with relevant Air Force occupational safety and health standards.

Should the proposed construction in fact disturb at least 1 acre, it would be covered under Utah's general construction permit rule for stormwater compliance. Prior to initiating any construction activities, this permit must be obtained and erosion and sediment controls must be installed according to a stormwater pollution prevention plan. Since the proposed action would disturb less than five acres, it might qualify for a waiver from the permit based on low potential for erosion at the site. The waiver only applies to sites where construction begins and site stabilization is completed between January and April of the same year. A certification form must be filled out and sent to the Utah Division of Water Quality (DWQ) to obtain this wavier. Stormwater compliance is discussed in Sections 3 and 4 of this document (see the discussion of erosion of surface soil).

Air emissions generated by the proposed action (both during construction and during future facility operations) must be addressed in accordance with Utah's fugitive emissions and fugitive dust rules (*Utah Administrative Code* [UAC] Section R307-309) and Utah's *State Implementation Plan* (UAC Section R307-110), which complies with the Clean Air Act's *General Conformity Rule*, Section 176 (c). A conformity analysis was conducted for this proposed action as specified by "*Determining Conformity of Federal Actions to State or Federal Implementation Plans*," 40 CFR 93.154. Any air emissions associated with operating the proposed armament overhaul and test facility must be compliant with the Hill AFB *Title V Operating Permit* (*Permit Number: 1100007001*) and revisions to the operating permit could be required. Specific discussions for air emissions and potential impacts related to the proposed action are presented in Sections 3 and 4 of this document.

The proposed action would be expected to generate solid wastes that are regulated by the Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act (TSCA), and similar laws. Hazardous wastes at Hill AFB are routinely and properly handled in accordance with RCRA regulations, Utah hazardous waste management regulations contained in UAC Section R315, and the *Hill AFB Hazardous Waste Management Plan*. These regulations control hazardous waste from its origin and storage to ultimate treatment, and/or disposal. In Utah, the above regulations are enforced by the Utah Division of Solid and Hazardous Waste. Hill AFB industrial wastewater discharges

must comply with an industrial pretreatment permit issued by the North Davis County Sewer District (NDCSD). The pretreatment permit regulates the quality of water entering the county sewer system and ensures compliance with requirements of the Clean Water Act (CWA) and the Utah Pollutant Discharge Elimination System (UPDES). The requirements for storing, treating, and disposing hazardous waste created by operations within the proposed armament overhaul and test facility are discussed in Sections 3 and 4 of this document.

If shallow soil contamination were to be identified within the area covered by the proposed action, it would be addressed by the Hill AFB Installation Restoration Program (IRP), based upon the type of contamination present and its origin, either according to RCRA requirements, or the conditions of a federal facility agreement under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). Specific discussions for soil contamination and requirements related to the proposed action are presented in Sections 3 and 4 of this document.

The proposed construction is not expected to contact any cultural resources. If suspected or actual cultural resources should be observed during construction, work in the immediate vicinity would stop, and the Hill AFB cultural resources manager would implement inadvertent discovery procedures in accordance with the Hill AFB *Integrated Cultural Resources Management Plan.*

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This section describes selection criteria, the proposed action, the no action alternative, and additional alternatives that were considered.

2.1 Selection Criteria

As discussed in Sections 1.1 and 1.2, the Hill AFB Gun Section overhauls, repairs, and tests 20 mm and 30 mm guns for various aircraft systems in accordance with USAF mission requirements and technical order specifications. The current operations in Building 752 and Building 509 do not provide efficient work flow, or have the capacity to meet future operational requirements.

Due to these considerations, the following selection criteria were established. The facility that accommodates the Hill AFB Gun Section's overhaul, repair, and testing functions should:

- have sufficient space to house all of the necessary equipment and workers;
- provide capacity to complete future USAF workload requirements;
- significantly reduce process flow time;
- incorporate on-site testing capability for the 20 mm and the 30 mm guns; and
- be protective of facilities, human health, and the environment.

2.2 Proposed Action: Construct the Armament Overhaul and Test Facility

The proposed action includes all work necessary to construct the armament overhaul and test facility at Hill AFB.

The proposed action would construct a facility large enough to house all of the required facilities for overhaul, repair, and testing for 20 mm and 30 mm guns for various aircraft systems, as well as small arms. The new facility would be constructed of reinforced concrete footings, foundation, and floor slab; steel frame and/or masonry bearing walls; an insulated metal roof; and a 20-foot high earthen berm on all sides of the gun range. The structure would house: a boiler; a chemical storage room; phosphate plating tanks; a temper etching chemical process; parts cleaning and degreasing equipment; a welding station; a tempering oven; NDI equipment; a glass bead media blaster; mill and lathe equipment; an annealing process with cooling water; a reverse osmosis unit; a dry lube area; a bearing repack area; a hydraulic system operating at 3,000 pounds per square inch (psi) pressure and 60 gallons per minute (gpm) flow; waste accumulation points; secondary containment for hazardous liquids; an ammunition and arms storage room; and a bullet trap system. The bullet trap could consist of more than one technology. A waterfall trap would be effective for the 20 mm bullets. For the 30 mm bullets, possible technologies are: a water/sand mixture; recycled tires; and a metal, funnel-shaped snail trap.

The environmental impacts of the proposed action are summarized in Section 4.5 of this document, and are discussed at greater length throughout Section 4 of this document.

2.3 No Action Alternative: Continue to Use Existing Facilities

The no action alternative does not meet the selection criteria to have sufficient space to house all of the necessary equipment and workers; provide capacity to complete future USAF workload requirements; significantly reduce process flow time; or incorporate on-site testing capability for the 20 mm and the 30 mm guns. However, the framework of an environmental assessment requires that the no action alternative must be considered even if it does not meet all of the selection criteria.

Under the no action alternative, process flow time would not be reduced, 30 mm guns would be shipped to Eglin AFB for testing, resulting in lengthy delays before final delivery of guns back into service, and it is predicted that Hill AFB may be unable to provide sufficient capacity for overhaul, repair, and testing functions for 20 mm and 30 mm guns for various aircraft. It is therefore possible that aircraft would be grounded, and mission requirements for sorties would not be met.

The environmental impacts of the no action alternative are summarized in Section 4.5 of this document, and are discussed at greater length throughout Section 4 of this document.

2.4 Identification of Alternatives Eliminated From Further Consideration

Hill AFB Commodities Division's program managers evaluated, but eliminated, other potential locations for housing the activities that currently occur in Buildings 752, Building 509, and Eglin AFB. Hill AFB is the only location authorized by USAF to overhaul 20 mm and 30 mm guns. No other building exists on Hill AFB that could accommodate this workload, either in its current condition or by being renovated. No off-site local industrial facility exists (for example at Freeport Center in Clearfield, Utah) with sufficient space and/or security measures to accommodate this workload. Renovating existing Building 752 was eliminated, as this building is too small, and is over 40 years old, having outlived its useful life span. Constructing a new facility that would not be able to test the 30 mm guns was eliminated because of the time that would be lost in shipping guns to a remote testing location.

3.0 EXISTING ENVIRONMENT

3.1 Air Quality

Hill AFB is located in Davis and Weber Counties, Utah. Neither county is in complete attainment status with federal clean air standards (Figure 4). Nonattainment areas fail to meet national ambient air quality standards (NAAQS) for one or more of the criteria pollutants: oxides of nitrogen (NO_x), sulfur dioxide (SO_2), ozone (O_3), particulates less than 10 microns in diameter (PM-10), carbon monoxide (CO), and lead. Davis County was upgraded from an ozone non-attainment area to a maintenance area, effective 1997. Current status according to the Utah Division of Air Quality (DAQ 2003) for the City of Ogden in Weber County (approximately seven miles north of the proposed action) is designation as a non-attainment area for PM-10 and a maintenance area for CO.

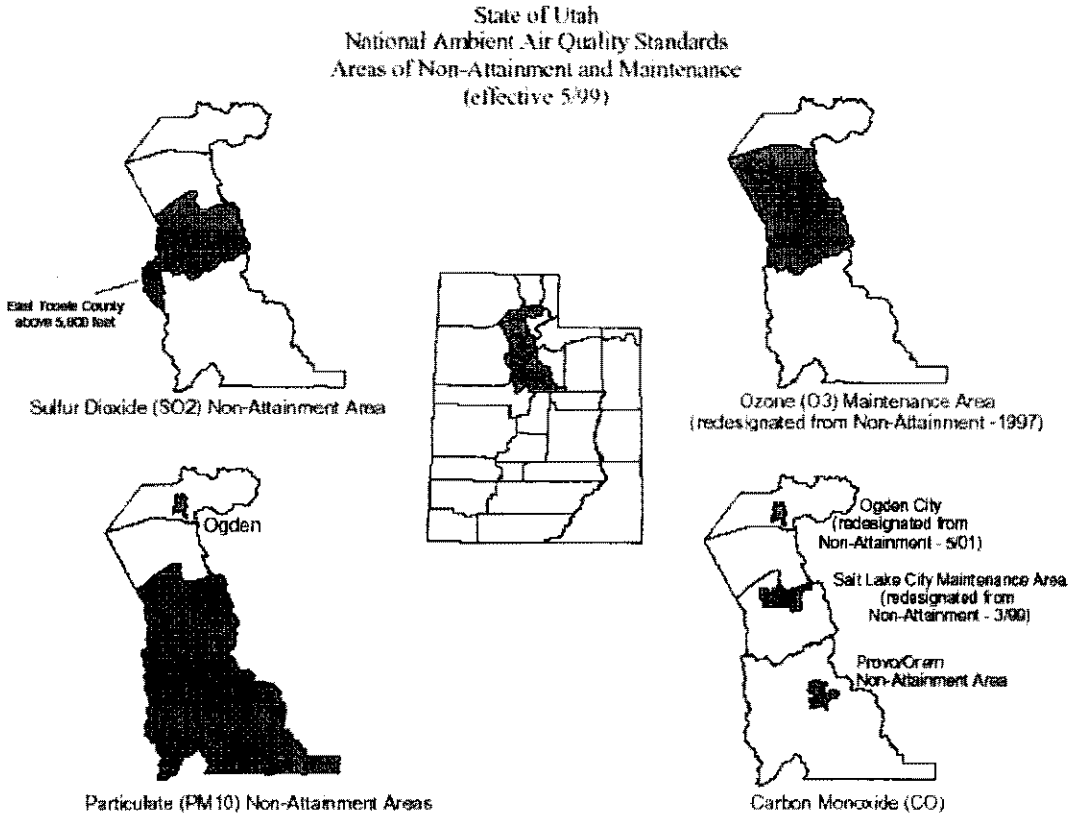

Figure 4: State of Utah National Ambient Air Quality Standards, Areas of Non-Attainment and Maintenance (Effective 5/99)

The current air quality trend at Hill AFB is one of controlling emissions as Hill AFB managers implement programs to eliminate ozone-depleting substances, limit use of volatile organic compounds (VOCs), install VOC emission control equipment for painting operations, switch to lower vapor pressure solvents and aircraft fuel, convert internal combustion engines from gasoline and diesel to natural gas, and improve the capture of particulates during painting and abrasive blasting operations (in compliance with the base's Title V air quality permit).

The Hill AFB air quality database contractors from CH2M HILL, Inc. performed a database query related to the existing armament overhaul processes that could be creating air emissions. These processes are: degreasing; bead blasting; oil used for NDI; milling and lathing; welding; annealing; electric tempering; dry lube graphite spraying; phosphating; and temper etching. For all of these activities, the only two that were found to have measurable air emissions were degreasing and NDI. Related to existing degreasing operations in Building 509, the VOC emission rate is estimated to be 198 pounds per year (lb/yr), and the hazardous air pollutant (HAP) emission rate is estimated to be 0.07 lb/yr. The NDI process is estimated to emit 510 lb/yr of VOCs, and no measurable HAPs.

3.2 Solid and Hazardous Wastes

In general, hazardous wastes include substances that, because of their concentration, physical, chemical, or other characteristics, may present substantial danger to public health or welfare or to the environment when released into the environment or otherwise improperly managed. Hazardous wastes generated at Hill AFB are managed as specified in the *Hill AFB Hazardous Waste Management Plan* with oversight by personnel from the Environmental Management Directorate and the Defense Reutilization and Marketing Office. Hazardous wastes at Hill AFB are properly stored during characterization, and then manifested and transported off site for treatment and/or disposal.

The existing armament overhaul and testing activities on Hill AFB produce known waste streams. A description of each waste stream and the type of waste created is presented in Table 1.

Table 1: Existing Armament Overhaul and Testing Waste Streams

Process	Solid	Liquid
Degreasing with Stoddard solvent PD 680. Currently performed in Building 509.	Wipes are disposed as hazardous waste.	Drummed and sent for disposal as hazardous waste due to characteristic of ignitability. Recycling by distillation is possible.

Process	Solid	Liquid
Bead blasting to remove phosphates from gun surfaces using either glass beads or garnet beads. Currently performed in Building 509.	Blast media are recycled and not a waste (used to make concrete blocks for building construction). Glove box filters disposed as hazardous waste.	None.
Phosphating tanks, currently located in Building 505. Contents include manganese phosphate and dilute chromic acid.	A few wipes are generated and disposed as hazardous waste. Any scale or sludge is accepted by the base industrial wastewater treatment plant (IWTP).	Small quantities of liquids are generated, at peak times reaching several hundred gallons per week; they are drummed and sent to the IWTP.
Temper etching tanks, currently located in Building 505. Contents include hydrochloric acid, nitric acid, and sodium carbonate.	A few wipes are generated and disposed as hazardous waste. Any scale or sludge is accepted by the IWTP.	Very small quantities of liquids are generated; they are drummed and sent to the IWTP.
Milling and lathing using a water-based lubricant/coolant, currently performed in Building 510.	A few wipes are generated and disposed as hazardous waste.	Liquids are drummed and sent to the IWTP.
Welding.	No solid waste.	No liquid waste.
Electric tempering oven.	No solid waste.	No liquid waste.
Magnetic particle NDI using an oil-based penetrant. Currently performed in Building 509.	A few wipes are generated and disposed as hazardous waste.	The oil is re-used, on base, as fuel oil.
Annealing process with cooling water.	No solid waste.	The only water used is clean, non-contact cooling water.
Reverse osmosis.	None.	Reverse osmosis effluent is routed to the sanitary sewer. For every nine gallons, 5 gallons pass the membrane as usable water, and 4 gallons are back flushed into the sanitary sewer.
Dry lube graphite spraying; currently performed in Buildings 505 and 509.	Filters are disposed as solid waste, non hazardous. A few wipes are generated, and disposed as hazardous waste due to possible VOC content.	None.
Repack bearings.	A few wipes are generated and disposed as hazardous waste.	None. For cleaning, see the comments above for PD 680.

Process	Solid	Liquid
Hydraulic system, closed loop except for possible leaks. Currently performed in Building 752.	Any sorbent pads from leaks are drummed and disposed as a regulated petroleum waste.	Any liquids from leaks are drummed or collected in sorbent pads, and disposed as a regulated petroleum waste.
Bullet trap. Currently performed in Building 752.	Non hazardous solid waste. No lead bullets are used.	None.

Sources: Personal communications and e-mails with Guy Whalen, Dean Roy, John Clark, Hal Olmstead, Jerry Yoneda, Blair Armstrong, Allan Cooley, Carolyn Chando, Richard Chinnock, Paul Betts (documented in the project administrative record).

3.3 Physical Environment (Surface Soils)

The surface soils in the vicinity of proposed action are flat and covered with weeds and gravel roads. Evidence of erosion was not observed during a site visit on April 20, 2005. Shallow soil contamination (lead) has been detected immediately to the east of the proposed action near Building 752 (personal communication, Mr. Mark Loucks), and there are two former landfills in the vicinity (former landfill LF003 was located to the north of the proposed action and former landfill LF001 was located east of Building 752 [personal communication, Ms. Shannon Smith]). Soil analytical data for the exact area of the proposed action were not available.

3.4 Biological Resources

On April 20, 2005, a site visit was conducted to observe the existing environment for the proposed action. Conditions were cloudy and cool (50°F), with no snow on the ground. The proposed site can be characterized as a vacant lot with several piles of gravel, and situated adjacent to a paved access road.

The local vegetation consists primarily of weeds. Principal plant species include cheatgrass (Bromus tectorum, 40 percent), bulbous bluegrass (Poa bulbosa, 20 percent), crested wheatgrass (Agropyron cristatum, 20 percent), common sunflower (Helianthus annuus, 10 percent), and wormwood (Artemisia spp., 10 percent). Vegetation in the surrounding area is similar; several shrubs and trees exist within a half-mile radius.

The proposed location and its immediate surroundings may provide habitat for some birds and mammals such as foxes and small rodents. For the rodents, burrows were observed. No birds, including raptors, were observed. The poor quality groundcover and lack of shrubs probably limits the number of ground-nesting species using this area.

There are no plant or animal species listed as endangered, threatened, or sensitive by state or federal agencies that are known to occur on the proposed location, nor were any observed in the vicinity. Furthermore, no big game habitat has been identified by state agencies in the vicinity of the proposed action.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Air Quality

4.1.1 Impacts of the Proposed Action

Emissions of PM-10 would be produced as soil is disturbed during proposed construction activities. The United States (US) Environmental Protection Agency (EPA) has estimated that fugitive dust emissions from construction activities produce 0.11 tons of PM-10 per acre per month (EPA 1996). The proposed action would involve approximately three days of excavation and backfill activities for approximately one acre being disturbed during construction of buried power lines, foundations, and pavement. Fugitive dust emissions of 0.01 tons of PM-10 were therefore calculated for the proposed action. To mitigate emissions of fugitive dust, the construction contractor would be required to have a water truck on site as needed during dry and windy weather for the purpose of dust suppression and reducing the emissions of PM-10.

The internal combustion engines of heavy equipment would also generate emissions of PM-10, VOCs, NO_x, and CO. Fugitive emissions from construction activities should be mitigated according to *Utah Administrative Code, Rule R307-205, Emission Standards: Fugitive Emissions and Fugitive Dust*. Good housekeeping practices should be used to maintain construction opacity at less than 20 percent. Haul roads should be kept wet, and any soil that is deposited on nearby paved roads by construction vehicles should be removed from the roads and returned to the site or appropriate disposal area.

Assumptions and estimated emissions for the construction period are listed in Table 2.

Table 2: Calculated Heavy Equipment Emissions

Data Assumptions

Equipment Type	Diesel Emission Factor (lbs/hr)					
	VOC (HC)	CO	NOx	PM10	HAPs	SOx
Asphalt Paver	0.28	1.24	2.96	0.24	0.05	0.25
Bobcat Loader	0.14	0.67	1.00	0.10	0.01	0.08
Cable Plow	0.59	3.75	4.49	0.59	0.08	0.38
Compressor (boring)	0.25	1.62	1.94	0.25	0.04	0.16
Concrete Truck	0.80	3.55	8.50	0.69	0.15	0.72
Crane	2.14	6.96	17.08	2.39	0.33	1.54
Dump Truck	0.63	2.04	6.98	0.58	0.16	0.65
Flat Bed Truck	0.48	1.54	5.29	0.44	0.12	0.49
Fork Lift	0.42	2.47	1.98	0.40	0.05	0.23
Generator	0.02	0.10	0.12	0.02	0.00	0.01
Loader/Backhoe	0.87	4.12	6.12	0.64	0.06	0.52
Motored Grader	0.83	2.01	5.08	0.53	0.06	0.46
Scraper	0.33	2.31	4.03	0.58	0.13	0.42
Track Hoe	0.91	6.65	13.75	1.84	0.26	1.19
Vibratory Compactor	0.38	1.44	4.31	0.36	0.09	0.46
Water Truck	1.10	3.58	12.28	1.02	0.28	1.14
Wheeled Dozer	0.46	1.48	5.08	0.35	0.08	0.49

Note: VOCs = Hydrocarbons and HAPs = Aldehydes
Source: Industry Horsepower Ratings and EPA 460/3-91-02

Construct Armament Overhaul and Test Facility

EQUIPMENT TYPE	HOURS OF OPERATION	Diesel Emissions (lbs)					
		VOC	CO	NOx	PM10	HAPs	SOx
Asphalt Paver	16	4.48	19.84	47.36	3.84	0.8	4
Bobcat Loader		0	0	0	0	0	0
Cable Plow		0	0	0	0	0	0
Compressor (boring)		0	0	0	0	0	0
Concrete Truck	40	32.0	142.0	340.0	27.6	6.0	28.8
Crane	40	85.6	278.4	683.2	95.6	13.2	61.6
Dump Truck	16	10.1	32.6	111.7	9.3	2.6	10.4
Flat Bed Truck		0.0	0.0	0.0	0.0	0.0	0.0
Fork Lift		0.0	0.0	0.0	0.0	0.0	0.0
Generator		0.0	0.0	0.0	0.0	0.0	0.0
Loader/Backhoe	16	13.9	65.9	97.9	10.2	1.0	8.3
Motored Grader		0.0	0.0	0.0	0.0	0.0	0.0
Scraper	16	5.3	37.0	64.5	9.3	2.1	6.7
Track Hoe		0.0	0.0	0.0	0.0	0.0	0.0
Vibratory Compactor	8	3.0	11.5	34.5	2.9	0.7	3.7
Water Truck	24	26.4	85.9	294.7	24.5	6.7	27.4
Wheeled Dozer	16	7.4	23.7	81.3	5.6	1.3	7.8
TOTAL ESTIMATED EMISSIONS (lbs)		**188.2**	**696.9**	**1755.1**	**188.8**	**34.3**	**158.7**
TOTAL ESTIMATED EMISSIONS (tons)		**0.09**	**0.35**	**0.88**	**0.09**	**0.02**	**0.08**

Source of Hours: Discussions With Don Norman, Hill AFB Facility Engineer

Since the proposed action is nearly identical to the existing armament overhaul activities discussed in Section 3.1, only the proposed degreasing and NDI activities would be expected to produce air emissions that are measurable. Because the proposed action

would relocate existing armament overhaul activities, no new air emissions would be created. For degreasing, a portion of the existing 198 lb/yr VOC emissions and a portion of the existing 0.07 lb/yr HAP emissions would relocate to the proposed facility. For NDI, a portion of the existing 510 lb/yr VOC emissions would relocate to the proposed facility.

A boiler would be installed in the proposed facility, rated at 300 horsepower or less. The proposed primary fuel for the boiler would be natural gas. Using the conversion factor of 2,547 British Thermal Units (BTU) of energy per horsepower-hour, approximately 6.694 x 10^9 BTU per year would be consumed, which equates to 6.492 x 10^6 cubic feet of natural gas consumption. Based on emissions data supplied by CH2M HILL, Inc. (CH2M HILL 2005) for the natural-gas fired central steam plant at Hill AFB, air emissions due to the proposed boiler were calculated as 12 pounds per year HAPs and 48 pounds per year VOCs.

For construction projects under 6 months in duration, no applicability analysis or conformity determination is required. For operating the proposed armament overhaul and test facility, Hill AFB air quality managers would submit a notification of intent (NOI) to DAQ related to any activities for which a permit modification or modification to an approval order would be required. Hill AFB would not be allowed to operate the new facilities until DAQ concurs that federal and state requirements are being met. Following this existing Hill AFB process would ensure conformity with the Clean Air Act (CAA) by virtue of complying with Utah's state implementation plan (SIP).

4.1.2 Impacts of the No Action Alternative

There would be no construction-related air quality impacts associated with the no action alternative. With respect to ongoing air emissions, current conditions would continue under the no action alternative (see Section 3.1).

4.1.3 Cumulative Impacts

Construction-related air emissions would be temporary. There are no cumulative impacts to air quality associated with operation of the proposed action. There are no cumulative air quality impacts associated with operation of the no action alternative.

4.2 Solid and Hazardous Wastes

4.2.1 Impacts of the Proposed Action

During the proposed construction activities, no solid wastes would be generated except for minor amounts of construction debris that would be treated as uncontaminated trash. It is possible that equipment failure or a spill of fuel, lubricants, or construction-related chemicals could generate solid or hazardous wastes. For any spill of a regulated

substance, the organization creating the spill would comply with all federal, state, and local spill reporting requirements.

In such a case, or if excavated soils exhibit suspicious odors or appearance, the following procedures would apply on Hill AFB. Hill AFB personnel have specified procedures for handling construction-related solid and hazardous wastes in their engineering construction specifications. The procedures are stated in *Section 01000, General Requirements, Part 1, General, Section 1.24, Environmental Protection.* All solid non-hazardous waste is collected and disposed on a routine basis. Samples from suspect wastes are analyzed for hazardous vs. non-hazardous determination. The suspect waste is safely stored while analytical results are pending. Hazardous wastes are stored at sites operated in accordance with the requirements of 40 CFR 265. The regulations require the generator to characterize hazardous wastes with analyses or process knowledge. Hazardous wastes are eventually labeled, transported, treated, and disposed in accordance with federal and state regulations.

The proposed armament overhaul and testing activities would produce waste streams almost identical in type and quantity to the known waste streams discussed in Section 3.2. A description of each waste stream and the type of waste created is presented in Table 3.

Table 3: Proposed Armament Overhaul and Testing Waste Streams

Process	Solid	Liquid
Degreasing with Stoddard solvent PD 680. Expected quantity of about 150 gallons per year (75 gallons twice).	A few wipes would be generated, and disposed as hazardous waste. The still bottom material would be tested and sent for appropriate disposal.	Could be hazardous due to flash point (ignitability) or due to metals content (cadmium or chromium). Otherwise, would be a regulated petroleum waste. Would be tested prior to disposal. Recycling by distillation is possible.
Bead blasting to remove phosphates from gun surfaces using either glass beads or garnet beads. Expected quantity is about 300 pounds per year (150 pounds twice).	Blast media would be recycled and would not be a waste (used to make concrete blocks for building construction). Glove box filters would be disposed as hazardous waste.	None.
Phosphating tanks. Contents include manganese phosphate and dilute chromic acid.	A few wipes would be generated and disposed as hazardous waste. Any scale or sludge would be accepted by the IWTP.	Small quantities of liquids would be generated, at peak times reaching several hundred gallons per week. These liquids would be drummed and sent to the IWTP.

Process	Solid	Liquid
Temper etching tanks. Contents include hydrochloric acid, nitric acid, and sodium carbonate.	A few wipes would be generated and disposed as hazardous waste. Any scale or sludge would be accepted by the IWTP.	Very small quantities of liquids would be generated; they would be drummed and sent to the IWTP.
Milling and lathing using a water-based lubricant/coolant. Expected quantity about 110 gallons per year (55 gallons twice).	A few wipes would be generated and disposed as hazardous waste.	Liquids would be drummed and sent to the IWTP.
Welding.	No solid waste.	No liquid waste.
Electric tempering oven.	No solid waste.	No liquid waste.
Magnetic particle NDI using an oil-based penetrant.	A few wipes would be generated and disposed as hazardous waste.	The oil would be re-used, on base, as fuel oil.
Annealing process with cooling water.	No solid waste.	The only water used would be clean, non-contact cooling water, which would be routed to a sanitary sewer.
Reverse osmosis.	None.	Reverse osmosis effluent would be routed to a sanitary sewer. For every nine gallons, 5 gallons would pass the membrane as usable water, and 4 gallons would be back flushed into the sanitary sewer.
Boiler.	Any scale or sludge would be tested and sent for appropriate disposal	Boiler blowdown would be routed to a sanitary sewer.
Dry lube graphite spraying.	Filters would be disposed as solid waste, non hazardous. A few wipes would be generated, and disposed as hazardous waste due to possible VOC content.	None.
Repack bearings.	A few wipes would be generated and disposed as hazardous waste.	None. For cleaning, see the comments above for PD 680.
Hydraulic system, closed loop except for possible leaks.	Any sorbent pads from leaks would be drummed and disposed as a regulated petroleum waste.	Any liquids from leaks would be drummed or collected in sorbent pads, and disposed as a regulated petroleum waste.

Process	Solid	Liquid
General spill cleanup materials.	Any sorbent pads or wipes would be tested and sent for appropriate disposal.	Any collected liquids would be tested and sent for appropriate disposal.
Bullet trap. Could be a recirculating waterfall; a water and sand mixture; recycled tires; or a metal funnel-shaped trap.	Non hazardous solid waste. No lead bullets are proposed.	None.

Sources: Personal communications and e-mails with Guy Whalen, Dean Roy, John Clark, Hal Olmstead, Jerry Yoneda, Blair Armstrong, Allan Cooley, Carolyn Chando, Richard Chinnock, Paul Betts (documented in the project administrative record).

The proposed facility would provide proper secondary containment and security controls for chemical storage areas; waste accumulation points; ammunition storage areas; and any areas where hazardous liquids would be present (e.g., surrounding the phosphating and temper etching tanks).

4.2.2 Impacts of the No Action Alternative

With respect to solid and hazardous wastes, current conditions would continue under the no action alternative (see Section 3.2).

4.2.3 Cumulative Impacts

Proper handling of solid and hazardous wastes eliminates releases of contaminants to the environment. There are no cumulative solid or hazardous waste impacts associated with the proposed action. There are no cumulative solid or hazardous waste impacts associated with the no action alternative.

4.3 Physical Environment (Surface Soils)

4.3.1 Impacts of the Proposed Action

Near surface soils may be compacted by construction vehicles during the proposed action. Annual winter frost heave activity (from the freezing of normal soil moisture) would later counteract the compaction process.

Construction projects can increase soil erosion. Most of the area of proposed construction is relatively flat and the potential for erosion is therefore small. Hill AFB construction specifications would mitigate any erosion potential that does exist by requiring the contractor to restore the land to its original condition. The area disturbed by excavation would be backfilled and subsequently re-planted, re-seeded, or sodded to

prevent soil erosion. Preventing soil erosion during construction activities is also required to comply with stormwater pollution prevention rules. If the proposed action would in fact disturb at least one acre, a stormwater pollution prevention plan would be prepared and implemented prior to initiating any site-disturbing activities.

The proposed action is not expected to impact or be impacted by former landfill LF001, former landfill LF002, or the nearby lead-contaminated soil. Prior to construction, Hill AFB environmental managers would collect shallow soil samples in the area of the proposed facility and any utility corridors (e-mail communication from Shannon Smith). If contamination were to be identified in the on-site shallow soils, the procedures described above in Section 4.2.1 would be followed.

4.3.2 Impacts of the No Action Alternative

With respect to surface soils, the no action alternative has no impacts.

4.3.3 Cumulative Impacts

There are no cumulative impacts to surface soils associated with the proposed action or with the no action alternative.

4.4 Biological Resources

4.4.1 Impacts of the Proposed Action

As stated in Section 3.4, no plant or animal species listed as endangered, threatened, or sensitive by state or federal agencies are known or likely to occur on or in the vicinity of the proposed action. The proposed action would not affect any endangered, threatened, or sensitive species.

During construction and operation of the proposed action, one acre of vegetation would be damaged and/or removed, and any animals present would be displaced from the parcel. The loss of habitat would not be significant, as the site consists of habitat that is already heavily impacted by human activities and is in poor condition. Consequently, the proposed project action would have little impact on wildlife in the vicinity.

4.4.2 Impacts of the No Action Alternative

With respect to biological resources, the no action alternative has no impacts.

4.4.3 Cumulative Impacts

There are no cumulative impacts to biological resources associated with the proposed action or the no action alternative. Under the proposed action, loss of weedy vegetation,

which is already impacted by human activities, would have little impact upon the suitability of the surrounding areas as habitat for species that may use the area.

4.5 Summary of Impacts

The proposed action and the no action alternative were both considered in detail. Following the construction phase, backfill, paving, and revegetation operations would prevent erosion of the site. If contaminated soils exist, they would be properly handled during the construction process.

The proposed action could be implemented with minor air emissions of both short term and long term duration. A natural gas-fired boiler would produce minor ongoing air emissions. The facility's operational air emissions and solid and hazardous waste streams would not be newly created; they would be relocating from other on-base locations.

There would be no impacts to biological resources.

No long-term environmental impacts are expected from either the proposed action or the no action alternative.

Table 4: Summary Comparison of Alternatives

Issue	Proposed Action Construct the Armament Overhaul and Test Facility	No Action Do Not Construct the Armament Overhaul and Test Facility
Air Quality	Temporary construction-related emissions. Other than minor emissions from a natural-gas fired boiler, no new air emissions would be created. A portion of existing base emissions would be relocated to the new facility.	Current conditions would continue.
Solid and Hazardous Wastes	Existing waste streams (almost identical in type and quantity) would be relocated to the new facility.	Current conditions would continue.
Surface Soils	Construction-related erosion control measures may be required. If contaminated soils exist, they would be properly handled during the construction process.	No impact.
Biological Resources	No impact. The site contains poor quality habitat.	No impact.

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Hill AFB 2005c: *Restoration (Web Page)*
http://www.em.hill.af.mil/restoration/map02/ou1.html

UAC: *Utah Administrative Code*, State of Utah, (various sections and dates).