

REPORT DOCUMENTATION PAGE					Form Approved OMB No. 0704-0188	
The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.						
PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.						
1. REPORT DATE (DD-MM-YYYY) 01-02-2011		2. REPORT TYPE N/A		3. DATES COVERED (From - To) -		
4. TITLE AND SUBTITLE Environmental Assessment (EA): Proposed Consolidated Warehouse, Hill Air Force Base, Utah				5a. CONTRACT NUMBER FA8201-09-D-0006		
				5b. GRANT NUMBER		
				5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) Klein, Randal Johnson, Sam				5d. PROJECT NUMBER		
				5e. TASK NUMBER		
				5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Streamline Consulting, LLC 1713 N. Sweetwater Lane Farmington, Utah 84025				8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Hill Air Force Base 7274 Wardleigh Road Hill AFB UT 84056				10. SPONSOR/MONITOR'S ACRONYM(S) 75 CEG/CEVP		
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited.						
13. SUPPLEMENTARY NOTES The original document contains color images.						
14. ABSTRACT Hill Air Force Base (AFB) proposes to adequate warehouse facilities in which to store equipment for worldwide United States Air Force (USAF) operations; furniture for the services branch; building materials for the civil engineering group; and cable maintenance equipment and supplies, small computers, and records for the communications and information directorate. The findings of this EA indicate that the proposed action would not have significant adverse effects on the human environment or any of the environmental resources as described in the EA. Therefore, it is concluded that a Finding of No Significant Impact is justified.						
15. SUBJECT TERMS Environmental Assessment Hill Air Force Base						
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 57	19a. NAME OF RESPONSIBLE PERSON Randal B. Klein - rbklein@streamlineut.com	
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			19b. TELEPHONE NUMBER (Include area code) (801) 451-7872	



Hill Air Force Base, Utah

Final

**Environmental Assessment:
Proposed Consolidated Warehouse,
Hill Air Force Base, Utah**

February 1, 2011

Final
**Environmental Assessment (EA):
Proposed Consolidated Warehouse,
Hill Air Force Base, Utah**

**Contract No. FA8201-09-D-0006
Delivery Order No. 0021**

**Department of the Air Force
Air Force Materiel Command
Hill Air Force Base, Utah 84056**

February 1, 2011

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 provide adequate warehouse facilities in which to store equipment for worldwide United States Air Force (USAF) operations; furniture for the services branch; building materials for the civil engineering group; and cable maintenance equipment and supplies, small computers, and records for the communications and information directorate.

The existing warehouse facilities have been severely degraded since their construction sixty years ago, and have become a serious safety hazard. Every warehouse bay has numerous trusses with failed structural members, and/or cracks or separations cutting through half or more of structural members.

Selection Criteria

The warehouse facilities on Hill AFB should:

- be located in a warehousing and office area in accordance with the Hill AFB general plan;
- provide 200,000 square feet (ft²) of military compliant structures, plus driveways and parking;
- comply with USAF real property policies;
- not encroach upon existing facilities;
- not encroach upon other previously approved construction perimeters for upcoming base facilities; and
- be adjacent to existing utilities.

Scope of Review

The issues that were identified for detailed consideration are: air quality, solid and hazardous wastes (including liquid waste streams), and water quality.

Alternatives Considered in Detail

Alternative A (Proposed Action - Construct a Consolidated Warehouse East of Dulce Avenue on Hill AFB) - The proposed action would include:

- footings foundations, and a floor slab supporting a structural steel shell (200,000 ft² of building space);
- all utilities including mechanical and electrical systems;
- approximately 60,000 ft² of parking, concrete sidewalks, and landscaping;
- connections to adjacent buried utilities consisting of water, electricity, natural gas, telephone/data, sanitary sewer, and storm drains; and
- demolition of Building 827.

Alternative B (No Action Alternative) - Under the no action alternative, a new consolidated warehouse would not be constructed, and adequate facilities would not be provided. The existing facilities, with deficiencies, would operate as they currently exist.

Results of the Environmental Assessment

Alternatives A and B were considered in detail. The results of the environmental assessment are summarized in the following table.

Summary of Predicted Environmental Effects

Issue	Alternative A Proposed Action	Alternative B No Action
Air Quality	Qualified asbestos abatement contractors would prevent impacts to air quality associated with asbestos abatement activities. Construction equipment would create temporary emissions. Fugitive dust emissions would be controlled. Air emissions from the natural gas fired furnace would be less than 0.2 tons per year for each criteria pollutant and for hazardous air pollutants (HAPs). Conformity with the Clean Air Act was demonstrated.	The existing facility has air emissions from space heating. Existing air emissions are 2.7 tons per year or less of each criteria pollutant, and 100 pounds of HAPs.
Solid and Hazardous Waste	If contaminated building materials, soils or pavements are identified, they would be properly handled during the demolition and construction process. Operational activities would generate the same types of waste as the existing facility.	Office and break room trash is not contaminated. Computers and related items are reused, recycled, or properly disposed.
Water Quality	During construction and operations, water quality would be protected by implementing stormwater management practices. Precipitation from the 95th percentile, 24 hour storm event would be retained on site. Drinking water sources would be protected by incorporating good housekeeping measures and other best management practices into facility design and operations.	No effects.

Identification of the Preferred Alternative

Hill AFB prefers Alternative A (the proposed action).

TABLE OF CONTENTS

1	Purpose of and Need for Action.....	1
1.1	Introduction.....	1
1.2	Purpose of the Action.....	2
1.3	Need for the Action.....	2
1.4	Alternative Selection Criteria	2
1.5	Relevant Plans, EISs, EAs, Laws, Regulations, and Other Documents	3
1.6	Decisions That Must Be Made.....	5
1.7	Scope of this Environmental Analysis.....	5
1.7.1	History of the Planning and Scoping Process	5
1.7.2	Issues Studied in Detail.....	6
1.7.3	Issues Eliminated From Further Study	7
1.8	Applicable Permits, Licenses, and Other Coordination Requirements.....	9
2.0	Alternatives, Including the Proposed Action.....	10
2.1	Introduction.....	10
2.2	Process Used to Develop the Alternatives	10
2.3	Description of Alternatives Considered in Detail.....	10
2.3.1	Alternative A: Proposed Action - Construct a Consolidated Warehouse	10
2.3.2	Alternative B: No Action	13
2.4	Alternatives Eliminated From Detailed Study	13
2.4.1	Alternative C: Renovating Existing Facilities	13
2.4.2	Alternative D: Other Nearby Locations	13
2.4.3	Alternative E: Other Locations on Base	13
2.5	Summary Comparison of the Alternatives and Predicted Achievement of the Project Objectives	13
2.5.1	Summary Comparison of Project Alternatives	13
2.5.2	Predicted Achievement of Project Objectives	14
2.6	Identification of the Preferred Alternative.....	14
3.0	Affected Environment	15
3.1	Introduction.....	15
3.2	Description of Relevant Facilities and Operations	15
3.3	Description of Relevant Affected Issues.....	15
3.3.1	Air Quality	15
3.3.2	Solid and Hazardous Wastes.....	20
3.3.3	Water Quality.....	20
3.4	Description of Relevant Pre-Existing Environmental Factors.....	20
3.5	Description of Areas Related to Cumulative Effects.....	21

4.0	Environmental Consequences.....	22
4.1	Introduction.....	22
4.2	Predicted Effects to Relevant Affected Resources	22
4.2.1	Predicted Effects to Air Quality.....	22
4.2.1.1	Alternative A (Proposed Action): Construct a Consolidated Warehouse.....	22
4.2.1.2	Alternative B: No Action	26
4.2.2	Predicted Effects to Solid and Hazardous Waste.....	26
4.2.2.1	Alternative A (Proposed Action): Construct a Consolidated Warehouse.....	26
4.2.2.2	Alternative B: No Action	28
4.2.3	Predicted Effects to Water Quality	28
4.2.3.1	Alternative A (Proposed Action): Construct a Consolidated Warehouse.....	28
4.2.3.2	Alternative B: No Action	29
4.3	Summary Comparison of Predicted Environmental Effects.....	30
5.0	List of Preparers	31
6.0	List of Persons and Agencies Consulted	32
7.0	References.....	33

LIST OF FIGURES

Figure 1: Location of the Proposed Action on Hill AFB.....	1
Figure 2: Location of the 72 Acre Parcel.....	11
Figure 3: Proposed Action and Nearby Alternate Location.....	12
Figure 4: State of Utah Areas of Non-Attainment for PM-2.5	16
Figure 5: State of Utah Areas of Maintenance for Ozone	17
Figure 6: State of Utah Recommended Areas of Non-Attainment for Ozone	18

LIST OF TABLES

Table 1: Predicted Achievement of Project Objectives	14
Table 2: Baseline Criteria Pollutants and HAPs (tons/year).....	19
Table 3: Existing Operational Air Emissions Due to Heating.....	19
Table 4: Calculated Heavy Equipment Emissions for New Construction.....	23
Table 5: Calculated Heavy Equipment Emissions for Demolition.....	24
Table 6: Operational Air Emissions for the Proposed Action	25
Table 7: Summary Comparison of Predicted Environmental Effects.....	30

LIST OF APPENDICES

Appendix A: Cultural Resources Finding of No Adverse Effect	
---	--

LIST OF ACRONYMS AND CHEMICAL TERMS

AFB	Air Force Base
AFOSH	Air Force Occupational Safety and Health
AICUZ	Air Installation Compatible Use Zone
ALC	Air Logistics Center
bgs	Below Ground Surface
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	Division of Air Quality (Utah)
DRMO	Defense Reutilization and Marketing Office
DWSP	Drinking Water Source Protection
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EPA	Environmental Protection Agency (United States)
FONSI	Finding of No Significant Impact
ft ²	Square Feet
HAP	Hazardous Air Pollutant
hr	Hour
lb	Pound
MBTA	Migratory Bird Treaty Act
MILCON	Military Construction
MS4	Municipal Separate Storm Sewer System
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO _x	Oxides of Nitrogen
O ₃	Ozone

OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PM-10	Particulates Smaller Than 10 Microns in Diameter
PM-2.5	Particulates Smaller Than 2.5 Microns in Diameter
ppm	Parts Per Million
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
SO _x	Oxides of Sulfur
SWPPP	Stormwater Pollution Prevention Plan
UAC	Utah Administrative Code
UGS	Utah Geological Survey
USAF	United States Air Force
USC	United States Code
VOC	Volatile Organic Compound
WFRC	Wasatch Front Regional Council

1 PURPOSE OF AND NEED FOR ACTION

1.1 Introduction

Hill Air Force Base (AFB) is located approximately 25 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.

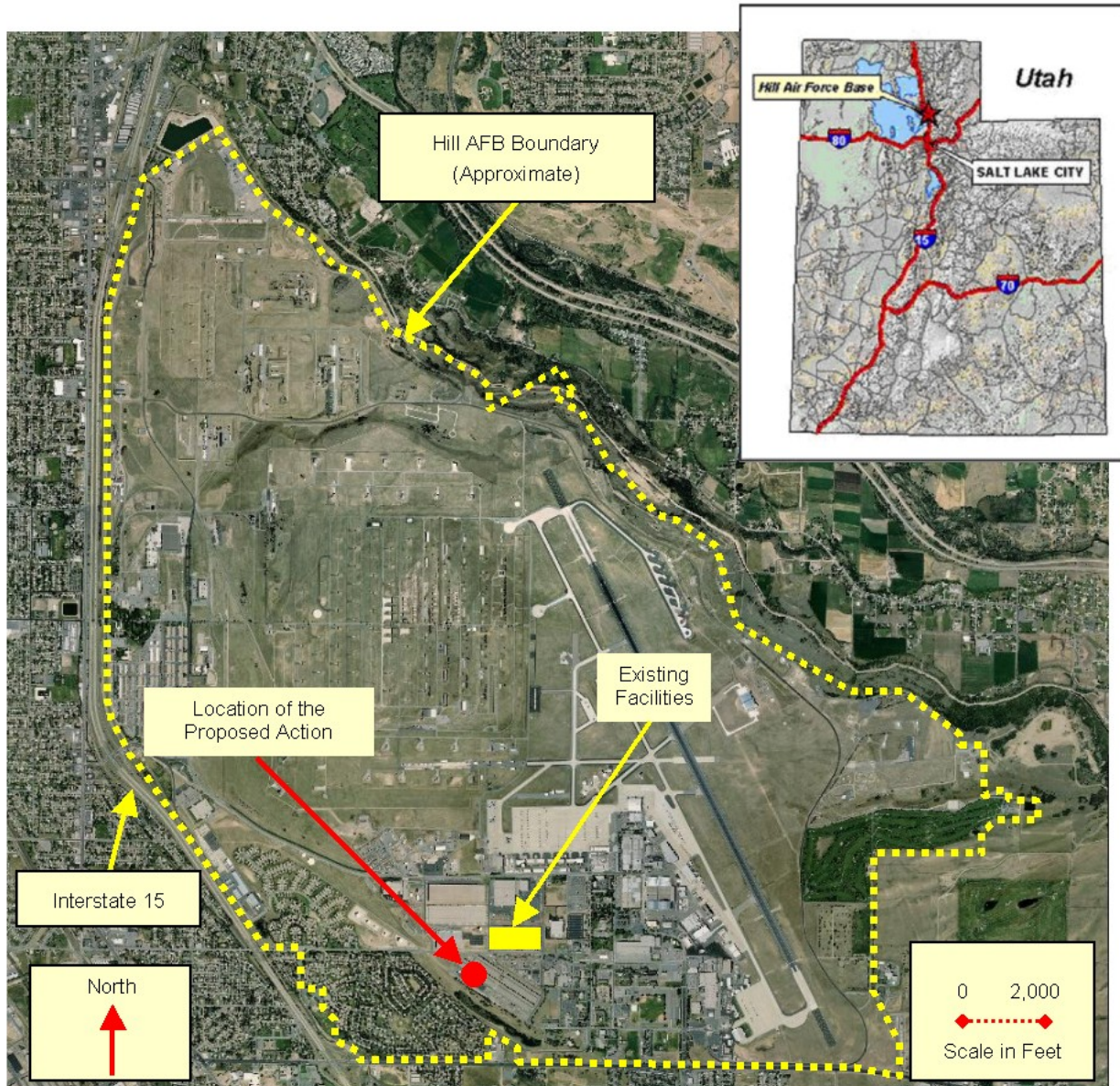


Figure 1: Location of the Proposed Action on Hill AFB

Hill AFB is an Air Logistics Center (ALC) 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-22 Raptor, F-35 Joint Strike Fighter, F-16 Fighting Falcon, and A-10 Thunderbolt aircraft. Hill AFB also accomplishes depot repair, modification, and maintenance of the F-16, A-10 Thunderbolt, and C-130 Hercules aircraft. Additional activities include maintaining aircraft 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.

To support Hill AFB missions, warehouses store equipment for worldwide USAF operations; furniture for the services branch; building materials for the civil engineering group; and cable maintenance equipment and supplies, small computers, and records for the communications and information directorate.

1.2 Purpose of the Action

The purpose of the proposed action is to provide adequate warehouse facilities in which to store the items mentioned above.

1.3 Need for the Action

According to a Hill AFB internal report (Hill 2008) and discussions with the responsible Hill AFB military construction (MILCON) project programmer, the existing warehouse facilities have been severely degraded since their construction sixty years ago, and have become a serious safety hazard. Every warehouse bay has numerous trusses with failed structural members, and/or cracks or separations cutting through half or more of structural members.

1.4 Alternative Selection Criteria

Due to the considerations presented in the preceding sections and Air Force planning process considerations, the following selection criteria were established. The warehouse facilities on Hill AFB related to the items mentioned in Section 1.1 should:

- Be located in a warehousing and office area in accordance with the Hill AFB general plan.

The Hill AFB general plan dictates development zones applicable to maintaining facilities and building new structures on the base. The warehousing and office area contains structures that store military assets and house other non-industrial, non-residential uses such as offices and training facilities. Segregating these land uses into a warehousing and office zone prevents conflicts with industrial uses, explosive clear zones, and residences. It promotes the safety of military personnel and their children, civilian employees, contractors, and base visitors.

- Provide 200,000 square feet (ft²) of military compliant structures, plus driveways and parking.

A Hill AFB internal report (Hill 2008) documents the need for a 200,000 ft² facility.

- Comply with USAF real property policies.

The estimated cost for renovation (fixing the failed structural members and completing additional upgrades to these World War II era structures) would exceed 70 percent of the real property value of the existing facilities. Pursuing renovation would violate current USAF real property policies.

- Not encroach upon existing facilities.

Force protection requirements state a 25 meter buffer zone is required for structures on base. This buffer zone must be considered when proposing new facilities on base.

- Not encroach upon other previously approved construction perimeters for upcoming base facilities.

Vacant sites on Hill AFB are not necessarily available sites. The Hill AFB facilities board approves locations for new structures. Such approvals cannot subsequently be changed without jeopardizing the previously approved and/or funded project.

- Be adjacent to existing utilities.

The MILCON funding approval for this project was based on utilities being present at the site boundary.

1.5 Relevant Plans, EISs, EAs, Laws, Regulations, and Other Documents

Demolition of Buildings 830 and 840 (warehouses being replace by the proposed action) was fully addressed in a previous environmental assessment (EA - Hill 2005a). Therefore, planned demolition of these warehouses was not included in this document.

During the scoping process, no other relevant plans, environmental impact statements (EISs), or EAs were identified.

The following federal, state, and local laws and regulations would apply to the proposed action:

- The National Environmental Policy Act (NEPA), Title 42 of the United States Code (USC) Section 4321 *et seq.*
- Council on Environmental Quality regulations, Title 40 of the Code of Federal Regulations (CFR) Parts 1500-1508.
- USAF-specific requirements contained in 32 CFR Part 989, Environmental Impact Analysis Process (EIAP).
- Safety guidelines of the Occupational Safety and Health Administration (OSHA).

- Relevant Air Force Occupational Safety and Health (AFOSH) standards.
- Utah's fugitive emissions and fugitive dust rules (Utah Administrative Code [UAC] Section R307-309).
- Utah's State Implementation Plan (UAC Section R307-110), which complies with the General Conformity Rule of the Clean Air Act (CAA), Section 176 (c).
- Determining Conformity of Federal Actions to State or Federal Implementation Plans, 40 CFR Part 93.154.
- *USAF Conformity Guide*, 1995.
- Utah Asbestos Rules, UAC, Section R307-801.
- The Resource Conservation and Recovery Act (RCRA), 42 USC Chapter 82, and regulations promulgated thereunder, 40 CFR Part 260 *et seq.*
- Federal facility agreement dated April 10, 1991, under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 42 USC Section 9601 *et seq.*
- Utah hazardous waste management regulations contained in UAC Section R315, and the Hill AFB *Hazardous Waste Management Plan* dated May, 2001, and subsequent versions.
- The Clean Water Act (CWA), 33 USC Section 1251 *et seq.*, and Utah statutes and regulations promulgated thereunder.
- The Energy Independence and Security Act (EISA) of 2007, Public Law No. 110-140, Sec. 438, Stormwater Runoff Requirements for Federal Development Projects.
- The Hill AFB *Stormwater Management Plan - Municipal Stormwater Permit*, dated April, 2007, and subsequent versions.
- The Hill AFB *Updated Drinking Water Source Protection (DWSP) Plan*, Hill Air Force Base Well 5, dated May, 2008, and subsequent versions.
- Migratory Bird Treaty Act (MBTA), 16 USC Sections 703-712 *et seq.*
- Bald and Golden Eagle Protection Act, 16 USC Sections 668-668c *et seq.*
- The Hill AFB *Integrated Natural Resources Management Plan*, dated August, 2007, and subsequent versions.
- The Hill AFB *Integrated Cultural Resources Management Plan*, dated January, 2007, and subsequent versions.

- The National Historic Preservation Act (NHPA) of 1966, as amended 16 USC Section 470 *et seq.*

During the scoping process, no other documents were identified as being relevant to the proposed action.

1.6 Decisions That Must Be Made

Hill AFB must decide whether to:

- Provide a new consolidated warehouse, or
- Not provide a new consolidated warehouse (no action).
- If the decision is to construct a new consolidated warehouse, then a decision must be made as to where the facility will be located.

If Hill AFB decides to construct a new consolidated warehouse, the proponent and environmental managers would comply with the best management practices indicated in this EA. Further, if any situations are identified that do not comply with environmental rules or regulations, the proponent and environmental managers would then decide what additional plans and measures, if any, should be implemented.

If Hill AFB decides to construct a new consolidated warehouse, the base would then decide if the selected alternative would or would not be a major federal action significantly affecting the quality of the human environment. If judged as not significantly affecting the quality of the human environment, then a finding of no significant impact (FONSI) would be prepared and signed, and the project would proceed. If judged as significantly affecting the quality of the human environment, then an EIS and a record of decision (ROD) would have to be prepared and signed before the project could proceed.

1.7 Scope of this Environmental Analysis

The scope of the current environmental analysis is to explore environmental issues related to the proposed action (construct a new consolidated warehouse on Hill AFB) and the reasonable alternatives identified within this document.

1.7.1 History of the Planning and Scoping Process

Scoping discussions were held: to identify potential environmental concerns; to facilitate an efficient environmental analysis process; to identify issues and alternatives that would be considered in detail while devoting less attention and time to issues that were not relevant; and to save time in the overall process by helping to ensure that draft documents would adequately address relevant issues, thereby reducing the time required to proceed to a final document.

On August 4, 2010, an initial scoping meeting was conducted in the Jim Vining Conference Room in Building 5, Hill AFB. Attendees included proponents of the proposed action, managers

of Hill AFB's NEPA program, other environmental project managers (the Hill AFB interdisciplinary team), and the authors of this document.

During this meeting and subsequent scoping interaction, the following environmental issues were addressed:

- air quality;
- solid and hazardous wastes (including liquid waste streams);
- biological resources;
- geology and surface soils;
- water quality;
- cultural resources;
- occupational safety and health;
- air installation compatible use zone (AICUZ); and
- socioeconomic resources.

1.7.2 Issues Studied in Detail

The issues that have been identified for detailed consideration and are therefore presented in Sections 3 and 4 are:

Air Quality (attainment status, emissions, Utah's state implementation plan [SIP])

Building 827, which may contain asbestos, would be demolished as part of the proposed action. For the purposes of this document, if the word construction is used by itself, any potential demolition activities are included.

Air emissions would be produced by construction equipment. Operating the proposed action would create air emissions. Air quality effects are discussed in Section 4 of this document.

Solid and Hazardous Wastes (materials to be used, stored, recycled, or disposed, including liquid waste streams; existing asbestos, lead-based paint, mercury, and polychlorinated biphenyls [PCBs])

During construction activities, solid wastes would be generated, and other hazardous wastes might be generated that would require proper treatment and/or disposal. Additional hazardous wastes could be generated if a spill of fuel, lubricants, or construction-related chemicals were to occur.

Operating the proposed action would be expected to create solid and hazardous wastes. Effects related to solid and hazardous wastes are discussed in Section 4 of this document.

Water Quality (surface water, groundwater, water quantity, wellhead protection zones)

Based on information provided by Hill AFB, the land area to be disturbed would be approximately six acres in size. The proposed action would be subject to stormwater permit and compliance requirements both during the construction period and during operations.

Depth to groundwater is approximately 100 feet below the ground surface (bgs) in the vicinity of the proposed action. The proposed action would not require excavations deeper than approximately ten feet bgs (for footings, foundations, and on-site utilities).

The scoping discussions did not identify any issues related to quantity of water. The proposed action would be located within a DWSP zone related to Hill AFB Well 5.

Effects related to water quality are discussed in Section 4 of this document.

Liquid waste streams created during construction and from operating the proposed action are included in the discussions related to solid and hazardous wastes (Section 4 of this document).

1.7.3 Issues Eliminated From Further Study

The issues that were not carried forward for detailed consideration in Sections 3 and 4 are:

Biological Resources (flora and fauna including threatened, endangered, sensitive species; wetlands; floodplains)

Approximately six acres of previously disturbed land would be re-developed by the proposed action. The site is essentially devoid of flora and fauna.

The scoping discussions did not identify any issues related to wetlands or floodplains.

Geology and Surface Soils (seismicity, topography, minerals, geothermal resources, land disturbance, known pre-existing contamination)

The scoping discussions did not identify any issues related to seismicity, topography, minerals, or geothermal resources.

Excavations would be necessary to install: footings; foundations; and buried utilities consisting of water, electricity, natural gas, telephone/data, sanitary sewer, and storm drains. Discussions related to preventing soil erosion (stormwater pollution prevention) are addressed under water quality effects (Section 4 of this document).

Contamination of shallow soil is not known to exist in the vicinity of the proposed action. Potential discovery of suspicious soils during excavation is addressed under solid and hazardous wastes (Section 4 of this document).

Cultural Resources (archaeological, architectural, traditional cultural properties)

The proposed action is located where Buildings 800 and 820 formerly existed and Building 827 still stands. Building 827, constructed in 1951 and used as a mess hall and a warehouse, is ineligible for historic preservation due to lack of architectural integrity (Geo-Marine 2002). Buildings 800 and 820 were large wooden World War II era warehouses constructed in 1943 and determined eligible for the National Register of Historic Places. Prior to demolishing Buildings 800 and 820, a memorandum of agreement was signed between Hill AFB and the Utah State Historic Preservation Office (SHPO) to mitigate the adverse effect caused by the demolition (Hill 2005b, see Appendix A). The mitigation included public outreach (update of the Hill AFB website historic buildings interactive map), photographs and drawings, intensive level surveys, and documentation of the affected buildings.

Given the lack of previous findings and the extensive development and disturbance of Hill AFB, the potential for historic properties is extremely low. However, if any such properties are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB cultural resources program manager will be notified, and unanticipated discovery of archaeological deposits procedures will be implemented with direction from the Hill AFB cultural resources program manager in accordance with Standard Operating Procedure 5 in the Hill AFB *Integrated Cultural Resources Management Plan* (Hill 2007a).

The Utah SHPO concurred with a finding of no adverse effect after reviewing the proposed action (Appendix A).

Hill AFB has determined formal consultation with American Indian Tribes is not warranted given the absence of resources that may be reasonably construed as being of interest to them.

Occupational Safety and Health (physical and chemical hazards, radiation, explosives, bird and wildlife hazards to aircraft)

Throughout the construction phase of the project, Hill AFB contractors would follow OSHA safety guidelines as presented in the CFR. Hazardous materials that could be used during construction are included in the discussions related to solid and hazardous wastes (Section 4 of this document).

Related to Hill AFB military personnel and civilian employees, the Bio-environmental Engineering Flight (75 AMDS/SGPB) is responsible for implementing AFOSH standards. The AFOSH program addresses (partial list): hazard abatement, hazard communication, training, personal protective equipment and other controls to ensure that occupational exposures to hazardous agents do not adversely affect health and safety, and acquisition of new systems.

The scoping discussions did not identify any issues related to occupational safety and health that would not be routinely addressed by OSHA rules and/or the Bio-engineering Flight.

AICUZ (noise, accident potential, airfield encroachment)

The scoping discussions did not identify any issues related to noise, aircraft accident potential, or airfield encroachment.

Socioeconomic Resources (local fiscal effects including employment, population projections, and schools)

Opportunities would exist for local construction workers if the proposed action is constructed. Operating the proposed action would not be expected to create additional jobs at Hill AFB. The scoping discussions did not identify any issues related to population projections or schools.

1.8 Applicable Permits, Licenses, and Other Coordination Requirements

Obtaining, modifying, and/or complying with the following permits would be required to implement the proposed action.

- The Hill AFB Title V Operating Permit (Permit Number: 1100007001, and subsequent versions). See Section 4.2.1 for additional details.
- Utah's Stormwater General Permit for Construction Activities permit number UTR300000, dated July 1, 2008, and subsequent versions. See Section 4.2.3 for additional details.
- Utah's General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) permit number UTR090000, dated August 1, 2010, and subsequent versions. See Section 4.2.3 for additional details.
- Utah's Multi Sector General Permit for Industrial Facilities permit number UTR000444, dated January, 2008, and subsequent versions. See Section 4.2.3 for additional details.
- The Hill AFB *Stormwater Management Plan - Municipal Stormwater Permit*, dated April, 2007, and subsequent versions. See Section 4.2.3 for additional details.

The proponents would coordinate with the Hill AFB hazardous materials program manager (75 CEG/CEVC) to discuss hazardous materials brought on base to construct the proposed action. See Section 4.2.2 for additional details.

2.0 ALTERNATIVES, INCLUDING THE PROPOSED ACTION

2.1 Introduction

This section discusses the process used to develop the alternatives, describes the alternatives, and compares (in a brief summary fashion) the alternatives and their expected effects. Finally, this section states the Air Force's preferred alternative.

2.2 Process Used to Develop the Alternatives

As discussed in Sections 1.3 and 1.4 of this document, Hill AFB proposes to provide a new consolidated warehouse. The proposed facility would address the needs discussed in Section 1.3 and the criteria stated in Section 1.4 of this document.

Hill AFB planners and engineers investigated financial feasibility of renovating the existing warehouse facilities (see Section 2.4.1). Other potential locations for siting the facility (see Sections 2.4.2 and 2.4.3) were considered by the Hill AFB Facility Working Group. The option to take no action was also considered.

2.3 Description of Alternatives Considered in Detail

2.3.1 Alternative A: Proposed Action - Construct a Consolidated Warehouse

The proposed action is to construct a new consolidated warehouse within the 72-acre parcel that is shown in Figure 2, in the south-central portion of Hill AFB. Of the potential alternate locations within the 72-acre parcel, the proposed location south of 6th Street and east of Dulce Avenue (Figure 3) was selected to provide a buffer between the consolidated warehouse and future locations of a training complex and an automotive/arts and crafts skills center.

MILCON project data indicate the proposed action would consist of:

- Footings, foundations, and a floor slab supporting a structural steel shell (200,000 ft² of building space).
- All utilities including mechanical and electrical systems.
- Approximately 60,000 ft² of parking, concrete sidewalks, and landscaping.
- Connections to adjacent buried utilities consisting of water, electricity, natural gas, telephone/data, sanitary sewer, and storm drains.
- Demolition of Building 827, which has outlived its usefulness, to make room for the proposed consolidated warehouse and parking areas.



Figure 2: Location of the 72 Acre Parcel



Figure 3: Proposed Action and Nearby Alternate Location

2.3.2 Alternative B: No Action

Under the no action alternative, a new consolidated warehouse would not be constructed, and adequate facilities would not be provided. The existing facilities would operate as they currently exist. The deficiencies discussed in Section 1.3 would continue to exist.

2.4 Alternatives Eliminated From Detailed Study

2.4.1 Alternative C: Renovating Existing Facilities

The estimated cost for renovation (fixing the failed structural members and completing additional upgrades to these World War II era structures) would exceed 70 percent of the real property value of the existing facilities. Pursuing renovation would violate current USAF real property policies.

2.4.2 Alternative D: Other Nearby Locations

Of the potential alternate locations within the 72-acre parcel shown in Figure 2, the proposed location was selected to provide a buffer between the consolidated warehouse and future locations of a training complex and an automotive/arts and crafts skills center (see Figure 3).

2.4.3 Alternative E: Other Locations on Base

Hill AFB planners and engineers considered other potential locations for the new consolidated warehouse. No potential site outside the warehousing and office area shown in Figure 2 was identified that could meet the selection criteria presented in Section 1.4.

2.5 Summary Comparison of the Alternatives and Predicted Achievement of the Project Objectives

2.5.1 Summary Comparison of Project Alternatives

The no action alternative (Alternative B) would be to continue current operations using the existing facilities. The deficiencies discussed in Section 1.3 would continue to exist.

Under Alternative A, C, D, or E, a modern consolidated warehouse would be provided. Only Alternative A (the proposed action) would fully satisfy the needs discussed in Section 1.3 and the criteria stated in Section 1.4 of this document.

2.5.2 Predicted Achievement of Project Objectives

Alternative	A Proposed Action	B No Action	C Renovating Existing Facilities	D Other Nearby Locations	E Other Locations on Base
Description of the Project Objective					
Be located in a warehousing and office area in accordance with the Hill AFB general plan	Yes	Yes	Yes	Yes	No
Provide 200,000 ft ² of military compliant structures, plus driveways and parking	Yes	No	Yes	Yes	Yes
Comply with USAF real property policies	Yes	Yes	No	Yes	Yes
Not encroach upon existing facilities	Yes	Yes	Yes	Yes	Yes
Not encroach upon other previously approved construction perimeters for upcoming base facilities	Yes	Yes	Yes	No	Yes
Be adjacent to existing utilities	Yes	Yes	Yes	Yes	Yes

Table 1: Predicted Achievement of Project Objectives

2.6 Identification of the Preferred Alternative

Hill AFB prefers Alternative A (the proposed action).

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

Section 3 of this document discusses the existing conditions of the potentially affected environment, establishing a resource baseline against which the effects of the various alternatives can be evaluated. It presents relevant facilities and operations, environmental issues, pre-existing environmental factors, and existing cumulative effects due to human activities in the vicinity of the proposed action or the alternative locations.

Issues discussed during scoping meetings, but eliminated from detailed consideration (see Section 1.7.3) include:

- biological resources (flora and fauna including threatened, endangered, sensitive species; wetlands; floodplains);
- geology and surface soils (seismicity, topography, minerals, geothermal resources, land disturbance, known pre-existing contamination);
- cultural resources (archaeological, architectural, traditional cultural properties);
- occupational safety and health (physical and chemical hazards, radiation, explosives, bird and wildlife hazards to aircraft);
- AICUZ (noise, accident potential, airfield encroachment); and
- socioeconomic resources (local fiscal effects including employment, population projections, and schools).

3.2 Description of Relevant Facilities and Operations

As stated above, the existing facilities do not comply with the criterion to provide 200,000 ft² of military compliant structures. No other relevant facilities or operations were identified.

3.3 Description of Relevant Affected Issues

3.3.1 Air Quality

Hill AFB is located in Davis and Weber Counties, Utah. The Utah Division of Air Quality (DAQ) reports neither county is in complete attainment status with federal clean air standards (DAQ 2010a, see Figures 4 and 5). Non-attainment 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 (SO₂), ozone (O₃), particulates less than 10 microns in diameter (PM-10), particulates less than 2.5 microns in diameter (PM-2.5), carbon monoxide (CO), and lead. Davis County (in which the proposed action lies) is designated as a non-attainment area for PM-2.5 and is a maintenance area for ozone. Davis County is awaiting a non-attainment designation for ozone (DAQ 2007, see Figure 6). Hill AFB will be required to obtain offsets for emission

increases due to any major modification in accordance with Appendix S to 40 CFR Part 51, Emission Offset Interpretative Ruling.

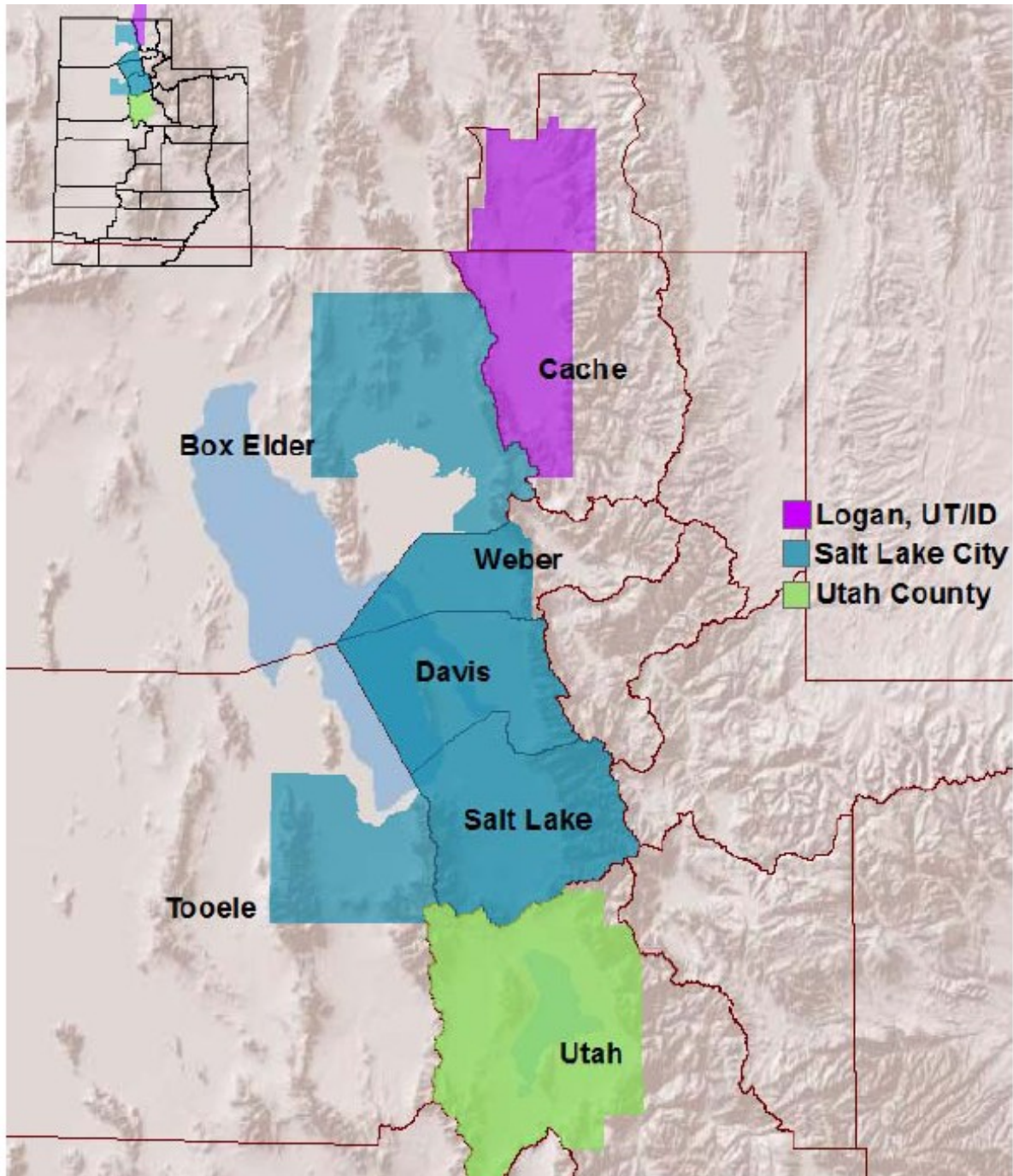


Figure 4: State of Utah Areas of Non-Attainment for PM-2.5

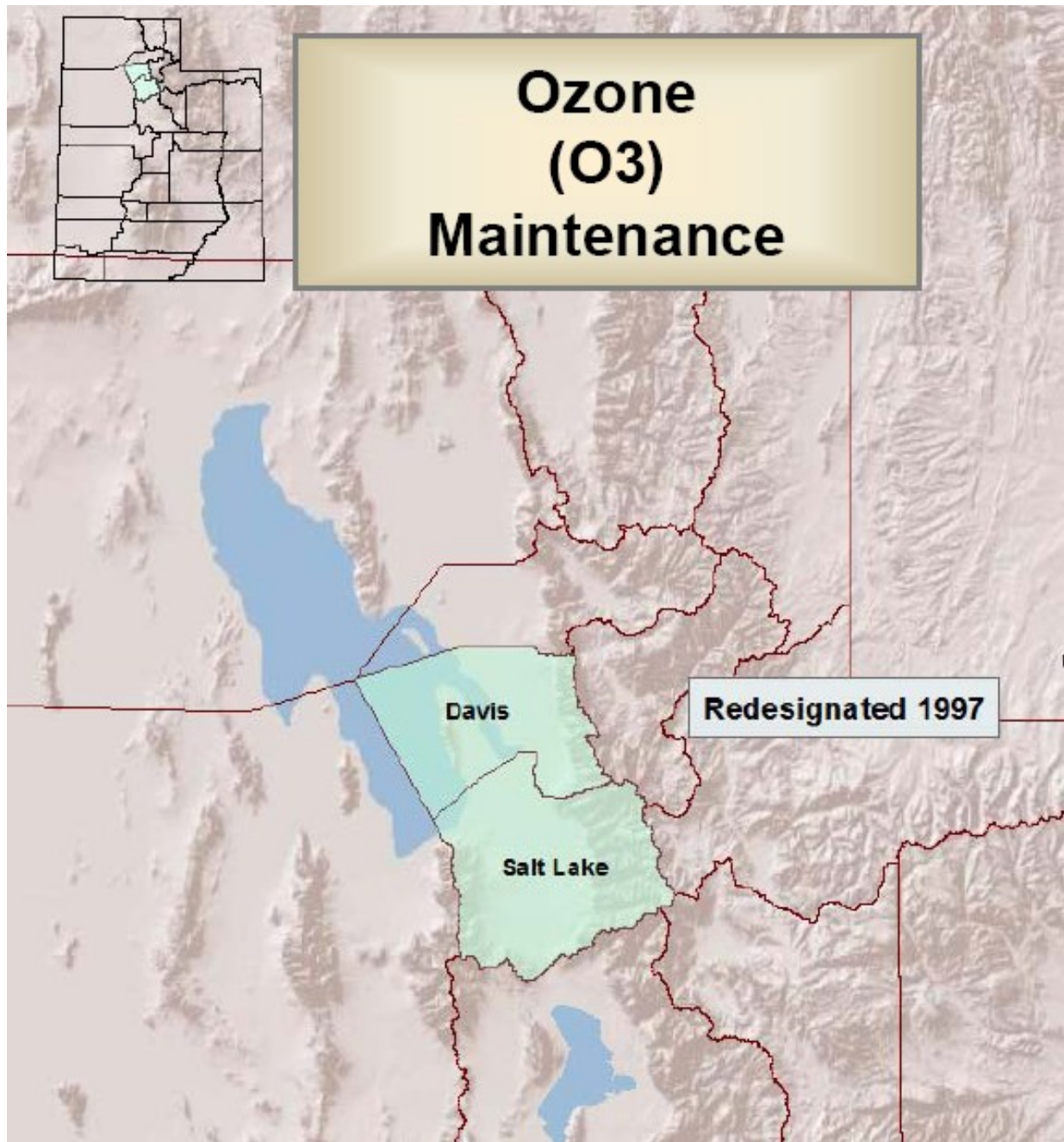


Figure 5: State of Utah Areas of Maintenance for Ozone

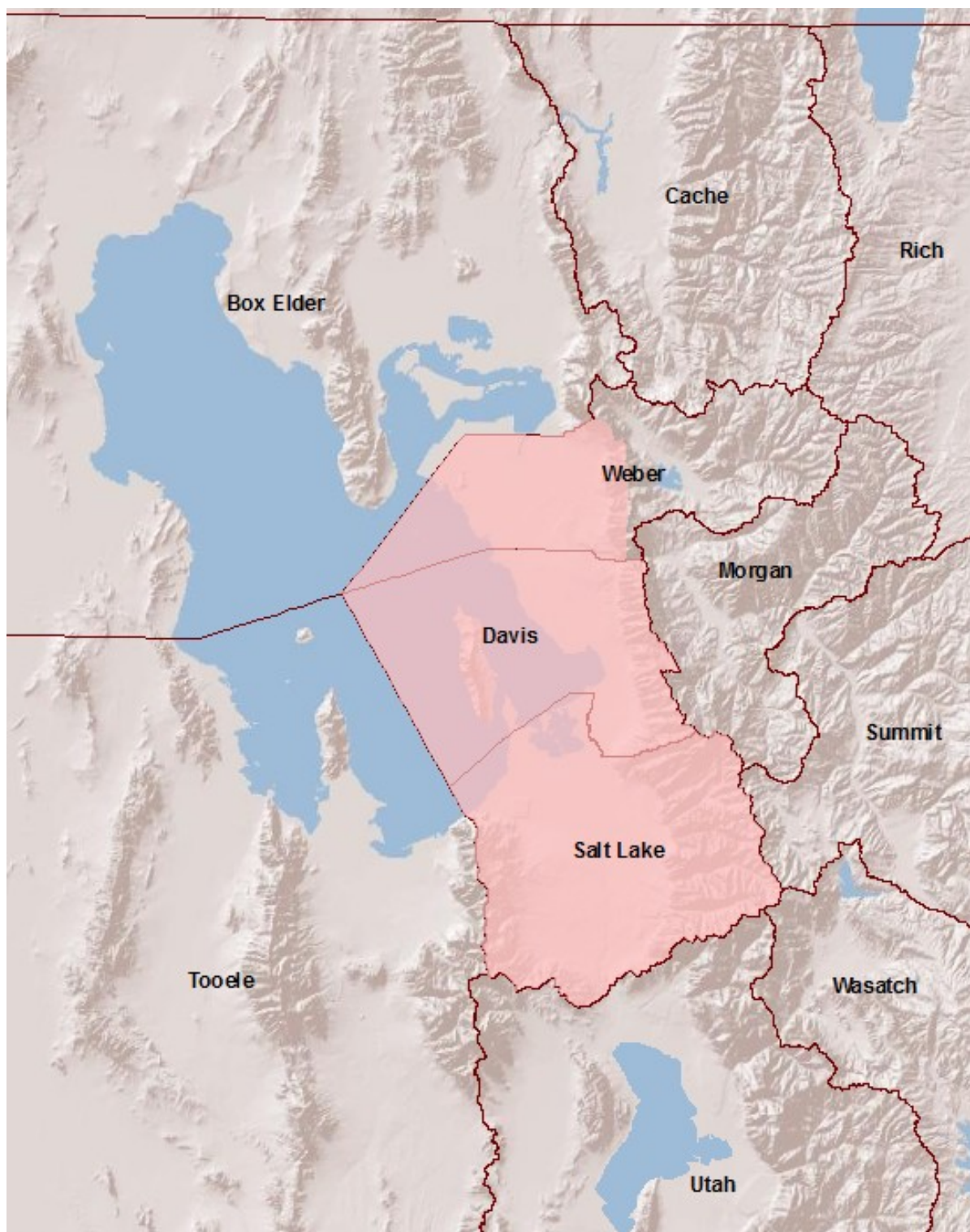


Figure 6: State of Utah Recommended Areas of Non-Attainment for Ozone

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), 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).

Emission estimates are available for criteria air pollutants and hazardous air pollutants (HAPs) for Hill AFB (Hill 2010) and for Davis and Weber Counties (DAQ 2010b, United States Environmental Protection Agency [EPA] 2010). The estimates, shown below in Table 2, were based on data from calendar year 2009 for Hill AFB, and for calendar year 2005 (still the most recent data available) for Davis and Weber Counties. The county HAP emissions were obtained from EPA, and calendar year 2002 was the most recent year available.

Location	VOC	CO	NOx	PM-10	PM-2.5	HAP	SOx
Hill AFB	267	283	255	57	28	86	5
Davis County	18,082	65,138	10,741	3,863	1,224	2,533	3,483
Weber County	15,592	48,943	6,880	3,011	940	1,951	240

Table 2: Baseline Criteria Pollutants and HAPs (tons/year)

The only air emissions from the existing warehouses (Buildings 830 and 840) are due to space heating during the winter months. These two buildings are connected to the Hill AFB central steam heating system. The calendar year 2009 air emissions (CH2M 2010) are shown in Table 3.

Heated Area	VOC	CO	NOx	PM-10	PM-2.5	HAP	SOx
3,707,253 ft ²	1.2	18.0	21.5	1.6	1.6	0.4	0.1
Buildings 830 and 840 (469,000 ft ²)	0.1	2.3	2.7	0.2	0.2	0.05	0.02

Notes:

The central steam plant provides heat for 3,707,253 ft² of Hill AFB facilities.

Buildings 830 and 840 account for 469,000 ft² of the heated area.

Based on summer versus winter month emissions, heating related emissions were prorated as 86 percent of total emissions from the central steam plant.

Table 3: Existing Operational Air Emissions Due to Heating

3.3.2 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.

Potentially hazardous and 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 Division and the Defense Reutilization and Marketing Office (DRMO). Hazardous wastes at Hill AFB are properly stored during characterization, and then manifested and transported off site for treatment and/or disposal.

Non-regulated wastes created within the existing warehouses consist of office and break room trash.

In Building 830, the Hill AFB Communications Directorate manages wastes that are either regulated or have the potential to be regulated. The directorate receives desktop computers, laptop computers, and peripherals that are no longer compatible with Air Force missions. Computer hard drives are erased, and useful items may be donated to local school districts. Used batteries are recycled by Hill AFB. All other items are delivered to DRMO for recycling and/or proper disposal.

Wastewater from restrooms and break rooms flows to a sanitary sewer system. No other liquid waste streams were identified.

3.3.3 Water Quality

In areas of Hill AFB that are not heavily developed, runoff is allowed to infiltrate into the ground through overland flow or surface ditches, discharging to large unoccupied areas. In developed areas, stormwater is typically conveyed to 14 retention or detention ponds within Hill AFB boundaries.

No surface water bodies are present within the area occupied by the exiting warehouses or the area proposed for constructing the new facility. Based on a review of the *Hill AFB Stormwater Management Plan - Municipal Stormwater Permit* (Stantec 2007), storm drains convey surface runoff from this area of Hill AFB to Pond 3, a wet detention pond that discharges to Kay's Creek. Best management practices for Pond 3 are surface contaminant collection booms, aerators to prevent the water from becoming stagnant, and a trash rack at the outlet to collect litter and debris (Stantec 2007).

The proposed action would be located within DWSP Zone 3 related to Hill AFB Well 5 (Stantec 2008).

3.4 Description of Relevant Pre-Existing Environmental Factors

The Wasatch Front Regional Council (WFRC 2003) assessed earthquake hazards for Davis County, Utah, including the portion of Hill AFB that includes the alternatives discussed in this document. The Davis County liquefaction potential map shows this area of Hill AFB to be in the

zone labeled as very low risk. The Davis County earthquake hazard map shows this area of Hill AFB to be outside of known fault zones. The Davis County landslide hazard map shows this area of Hill AFB to be outside of known landslide risk zones.

During scoping discussions and subsequent analysis, no other pre-existing environmental factors (e.g., hurricanes, tornados, floods, droughts) were identified for the proposed action.

3.5 Description of Areas Related to Cumulative Effects

For air quality, the area related to cumulative effects would include Hill AFB, Davis County, and Weber County.

For solid and hazardous wastes, the area related to cumulative effects would include Hill AFB.

For water quality, the area related to cumulative effects would include Hill AFB and waters downstream from the Hill AFB stormwater detention ponds.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

This section discusses effects to the resources that were identified for detailed analysis in Section 1.7.2, and for which existing conditions were presented in Section 3.3. For each of these resources, the following analyses are presented:

- direct, indirect, and cumulative effects of the proposed action (Alternative A); and
- direct, indirect, and cumulative effects of no action (Alternative B).

4.2 Predicted Effects to Relevant Affected Resources

4.2.1 Predicted Effects to Air Quality

4.2.1.1 Alternative A (Proposed Action): Construct a Consolidated Warehouse

Direct Effects Due to Construction

Fugitive Dust: Fugitive emissions from construction activities would be controlled according to UAC Section R307-205, *Emission Standards: Fugitive Emissions and Fugitive Dust* and the Hill AFB *Fugitive Dust Plan*. Good housekeeping practices would be used to maintain construction opacity at less than 20 percent. Haul roads would be kept wet. Any soil that is deposited on nearby paved roads by construction vehicles would be removed from the roads and either returned to the site or placed in an appropriate on-base disposal facility.

Heavy Equipment: The internal combustion engines of heavy equipment would generate emissions of VOCs, CO, NO_x, particulates, HAPs, and oxides of sulfur (SO_x). Assumptions and estimated emissions for the construction period are listed in Table 4. Additional emissions from heavy equipment used to demolish Building 827 are presented in Table 5.

Asbestos: Prior to demolition of any structures, a detailed asbestos survey would be performed by Hill AFB employees and the results incorporated into specifications for the demolition contracts. Each asbestos abatement contractor would be verified by the Hill AFB asbestos shop as qualified to perform regulated asbestos abatement projects, and both the company and individual workers would possess all required certifications to perform the assigned tasks. Prior to beginning any asbestos abatement efforts, a notification of at least 10 working days would be provided to DAQ if required. Because all work would be performed in accordance with standards set by EPA and DAQ, there would be no impacts to air quality associated with asbestos abatement.

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 Consolidated Warehouse							
EQUIPMENT TYPE	HOURS OF OPERATION	Diesel Emissions (lbs)					
		VOC	CO	NOx	PM10	HAPs	SOx
Asphalt Paver	380	106.4	471.2	1124.8	91.2	19.0	95.0
Bobcat Loader	100	14.0	67.0	100.0	10.0	1.0	8.0
Cable Plow	20	11.8	75.0	89.8	11.8	1.6	7.6
Compressor (boring)	12	3.0	19.4	23.3	3.0	0.5	1.9
Concrete Truck	180	144.0	639.0	1530.0	124.2	27.0	129.6
Crane	200	428.0	1392.0	3416.0	478.0	66.0	308.0
Dump Truck	40	25.2	81.6	279.2	23.2	6.4	26.0
Flat Bed Truck	40	19.2	61.6	211.6	17.6	4.8	19.6
Fork Lift	20	8.4	49.4	39.6	8.0	1.0	4.6
Generator	100	2.0	10.0	12.0	2.0	0.0	1.0
Loader/Backhoe	340	295.8	1400.8	2080.8	217.6	20.4	176.8
Motored Grader	160	132.8	321.6	812.8	84.8	9.6	73.6
Scraper	50	16.5	115.5	201.5	29.0	6.5	21.0
Track Hoe	220	200.2	1463.0	3025.0	404.8	57.2	261.8
Vibratory Compactor	20	7.6	28.8	86.2	7.2	1.8	9.2
Water Truck	16	17.6	57.3	196.5	16.3	4.5	18.2
Wheeled Dozer	16	7.4	23.7	81.3	5.6	1.3	7.8
TOTAL ESTIMATED EMISSIONS (lbs)		1439.9	6276.9	13310.3	1534.3	228.5	1169.8
TOTAL ESTIMATED EMISSIONS (tons)		0.72	3.14	6.66	0.77	0.11	0.58

Hours of use based on estimates from Steve Weed, Hill AFB Engineering

Table 4: Calculated Heavy Equipment Emissions for New Construction

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							
Demolish Building 827							
EQUIPMENT TYPE	HOURS OF OPERATION	Diesel Emissions (lbs)					
		VOC	CO	NOx	PM10	HAPs	SOx
Asphalt Paver	0	0.0	0.0	0.0	0.0	0.0	0.0
Bobcat Loader	2	0.3	1.3	2.0	0.2	0.0	0.2
Cable Plow	0	0.0	0.0	0.0	0.0	0.0	0.0
Compressor (boring)	0	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Truck	0	0.0	0.0	0.0	0.0	0.0	0.0
Crane	0	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	8	5.0	16.3	55.8	4.6	1.3	5.2
Flat Bed Truck	0	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	0.0
Generator	0	0.0	0.0	0.0	0.0	0.0	0.0
Loader/Backhoe	8	7.0	33.0	49.0	5.1	0.5	4.2
Motored Grader	2	1.7	4.0	10.2	1.1	0.1	0.9
Scraper	0	0.0	0.0	0.0	0.0	0.0	0.0
Track Hoe	0	0.0	0.0	0.0	0.0	0.0	0.0
Vibratory Compactor	0	0.0	0.0	0.0	0.0	0.0	0.0
Water Truck	2	2.2	7.2	24.6	2.0	0.6	2.3
Wheeled Dozer	0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL ESTIMATED EMISSIONS (lbs)		16.1	61.8	141.5	13.1	2.5	12.7
TOTAL ESTIMATED EMISSIONS (tons)		0.01	0.03	0.07	0.01	0.00	0.01

Hours of use based on estimates from Steve Weed, Hill AFB Engineering

Table 5: Calculated Heavy Equipment Emissions for Demolition

Direct Effects Due to Operations

Based on information received during the scoping meeting held on August 4, 2010 and subsequent discussions with MILCON project programmer, the only air emissions due to operating the proposed action would be due to space heating during the winter months. A natural gas fired heating system would be provided. Calculated air emissions are shown in Table 6.

Data Assumptions						
Equipment Type	Natural Gas Emission Factor (pounds/MMSCF)					
	VOC	CO	NOx	PM10	HAPs	SOx
Natural Gas Furnace	5.5	40.0	94.0	7.6	0.01	0.6
Conversion Factors						
	Calculate Annual Fuel Consumption					
	35,700	35,700	35,700	35,700	35,700	35,700
Square Feet	35,700	35,700	35,700	35,700	35,700	35,700
BTU per hour per square foot	19	19	19	19	19	19
Heating hours per year	5,000	5,000	5,000	5,000	5,000	5,000
Million BTU per year	3,392	3,392	3,392	3,392	3,392	3,392
MMSCF per year	3.3	3.3	3.3	3.3	3.3	3.3
Operate Consolidated Warehouse						
Equipment Type	Natural Gas Emissions (pounds)					
	VOC	CO	NOx	PM10	HAPs	SOx
Natural Gas Furnace	18	132	310	25	0.0	2
TOTAL ESTIMATED EMISSIONS (pounds/year)	18	132	310	25	0.0	2
TOTAL ESTIMATED EMISSIONS (tons/year)	0.01	0.07	0.16	0.01	0.00	0.00

Notes:

MMSCF = Million Standard Cubic Feet, and BTU = British Thermal Unit

1 cubic foot natural gas = 1,028 BTU

Source: http://www.eia.doe.gov/kids/energyfacts/science/energy_calculator.html#natgascalc

Office Space (as opposed to warehouse space): 15-45 BTU per hour per square foot

There are approximately 5,000 heating hours in an average year

Source: Dale R. Scott, P.E., SAIN Engineering Associates, Inc., 75 CES/CEOSEE, Hill AFB, UT

Assume 30 BTU per hour per square foot for new construction, offices

Warehouses use approx. 63 percent compared to offices, = 19 BTU per hour per square foot

<http://www.eia.doe.gov/emeu/consumptionbriefs/cbecs/pbawebbsite/summarytable.htm>

Emission factors: EPA values for residential furnaces

For natural gas, SOx assumed equal to SO2

Table 6: Operational Air Emissions for the Proposed Action

If required, prior to operating the proposed action, Hill AFB air quality managers would submit notices of intent, seven day notifications, and modification requests to DAQ. Hill AFB would not be allowed to operate the facilities until DAQ concurs that federal and state requirements are being met.

Conformity Applicability Determination

Due to local non-attainment status, a conformity applicability determination (compliant with 40 CFR 93.153 and UAC R-307-115) was completed for the proposed action. The proposed action would be required to demonstrate conformity with the CAA unless an applicability determination shows that it is exempt from conformity, in this case, due to having annual emissions below the thresholds established in 40 CFR 93.153(b)(1) and (b)(2). Predicted air emissions due to construction and due to operations were all much less than the established threshold values.

Indirect Effects

During scoping and the detailed analysis, no indirect effects related to air quality were identified for the proposed action.

Cumulative Effects

Construction: Construction-related air emissions would be limited to a duration of several months. Comparing the magnitude of predicted construction-related air emissions (Tables 4 and 5) to existing emissions for Hill AFB, Davis and Weber Counties (Table 2), there would not be significant cumulative effects to air quality associated with constructing the proposed action.

Operations: Hill AFB air quality managers would ensure that long-term operation of the proposed action complies with the Hill AFB Title V Permit, any relevant approval orders, EPA regulations, and the Utah SIP. Any required air quality control devices would be installed and tested prior to allowing newly installed equipment to begin operating. Comparing the magnitude of predicted operational air emissions (Table 6) to existing emissions in Hill AFB, Davis and Weber Counties (Table 2), no significant cumulative effects to air quality were identified for operating the proposed action.

4.2.1.2 Alternative B: No Action

Existing air emissions as explained in Section 3.3.1 would continue. The no action alternative would have no other direct effects, no indirect effects, and no cumulative effects.

4.2.2 Predicted Effects to Solid and Hazardous Waste

4.2.2.1 Alternative A (Proposed Action): Construct a Consolidated Warehouse

Direct Effects Due to Construction

Waste Generation: During the proposed construction activities, solid wastes expected to be generated would be construction debris consisting mainly of concrete, metal, and building materials. These items would be treated as uncontaminated trash and recycled when feasible. Any paint on pavements being removed would be tested for lead-based paint content. (see waste management below). It is possible that equipment failure or a spill of fuel, lubricants, or construction-related chemicals could generate solid or hazardous wastes. In the event of a spill of regulated materials, Hill AFB environmental managers and their contractors would comply with all federal, state, and local spill reporting and cleanup requirements.

Demolition Debris: Any asbestos detected during the detailed asbestos survey and subsequently removed during an abatement action would be disposed in accordance with permit requirements at a disposal facility that is approved to accept both friable and non-friable asbestos. Loose flakes of lead-based paint (confirmed to contain lead by on-site inspections using a portable X-ray fluorescence analyzer) would be scraped, collected, and properly disposed at a permitted hazardous waste disposal facility. Dielectric fluid from any transformers or light ballasts suspected of containing PCBs would be tested, and the equipment would be properly disposed as

either a regulated waste (PCB content of 50 parts per million [ppm] or more) or as uncontaminated trash (PCB content less than 50 ppm).

The uncontaminated demolition debris and lead-based paint that is still affixed to surfaces would all be disposed off base at a local construction debris (Class VI) landfill. Class VI landfills are allowed to accept construction and demolition waste, including: lead-based paint that is still affixed to surfaces and a quantity of 10 PCB-containing light ballasts per structure.

Thermostats that contain mercury switches would be collected by technicians from the Hill AFB facility systems flight (75 CES/CEOFSH) prior to demolition activities. Any thermostats not saved for local reuse would be delivered to DRMO, which has an office on Hill AFB. DRMO would send the thermostats to be recycled, and a waste stream would not be created.

Any asphalt pavements surrounding the structures would be removed, collected, and would either be recycled, or stored and made available for reuse during future Hill AFB construction projects.

Waste Management: 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 or recycled on a routine basis. 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. Suspect waste is labeled as hazardous waste and is safely stored while analytical results are pending or until sufficient generator knowledge is obtained. Hazardous wastes are eventually labeled, transported, treated, and disposed in accordance with federal and state regulations.

Excavated Soils: There is no known soil contamination at the location of the proposed action. However, excavations could potentially encounter contaminated soil. If unusual odors or soil discoloration were to be observed during any excavation or trenching necessary to complete the proposed action, the soil would be stored on plastic sheeting and the Hill AFB Environmental Restoration Branch (75 CEG/CEVR) would be notified. Any excess clean soil would either be used as fill for another on-site project or placed in the Hill AFB landfill. Any soil determined to be hazardous would be eventually labeled, transported, treated, and disposed in accordance with federal and state regulations. No soil would be taken off base without prior 75 CEG/CEVR written approval.

Direct Effects Due to Operations

Based on information received during the scoping meeting held on August 4, 2010 and subsequent discussions with the proponent, the types of solid and hazardous wastes to be generated due to operating the proposed action would be the same as for the existing facility.

Indirect Effects

During scoping and the detailed analysis, no indirect effects related to solid and hazardous waste were identified for the proposed action.

Cumulative Effects

Proper handling of solid and hazardous waste eliminates releases of contaminants to the environment or reduces such releases in conformity with legal limits. There would be no significant cumulative solid or hazardous waste effects associated with the proposed action.

4.2.2.2 Alternative B: No Action

Under the no action alternative, the wastes discussed in Section 3.3.2 would continue to be generated. With respect to solid and hazardous waste, the no action alternative would have no other direct effects, no indirect effects, and no cumulative effects.

4.2.3 Predicted Effects to Water Quality

4.2.3.1 Alternative A (Proposed Action): Construct a Consolidated Warehouse

Direct Effects Due to Construction

Based on information provided by Hill AFB engineers, the land area to be disturbed by the proposed facility would be approximately six acres in size. The proposed action 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 (SWPPP). The SWPPP would specify measures to prevent soil from leaving the construction site on the wheels of construction vehicles, thereby controlling the addition of sediments to the storm drain system. The proponents would coordinate with the Hill AFB water quality manager (75CEG/CEVC) prior to submitting an application for a Utah construction stormwater permit.

Design engineers would ensure that components of the existing stormwater collection system would not be damaged, by avoiding or relocating the relevant structures. Hill AFB construction specifications would require the contractor to restore the land to a non-erosive condition. All areas disturbed by excavation would be backfilled, and then either be covered by pavements, gravel, or re-planted, re-seeded, or sodded to prevent soil erosion.

Since the proposed action would convert a small area occupied by open land to impermeable surfaces, some increased stormwater runoff volume would be expected unless runoff controls were to be created during construction of the facility. EISA Section 438 specifies stormwater runoff requirements for federal development projects. The sponsor of any development or redevelopment project involving a federal facility with a footprint that exceeds 5,000 ft² must ensure that all precipitation from the 95th percentile, 24-hour storm event is retained on site (for Hill AFB, this storm depth is 0.8 inches [Zautner 2010]). Compliance with this requirement (by designing and constructing detention and/or retention structures) would eliminate downstream effects due to creating impermeable surfaces.

Direct Effects Due to Operations

The proposed facility would be subject to Utah's multi-sector general permit for industrial facilities. The *Hill AFB Stormwater Management Plan - Municipal Stormwater Permit*

establishes good housekeeping measures and other best management practices to prevent contamination of runoff.

Depth to groundwater is approximately 100 feet bgs in the vicinity of the proposed action. Since the proposed action would not require excavations deeper than approximately ten feet bgs (for footings, foundations, and on-site utilities), no direct groundwater effects were identified for the proposed action.

Indirect Effects

As discussed in Section 3.3.3, the proposed action would be located within DWSP Zone 3 related to Hill AFB Well 5. The proposed action would be subject to the *Updated Drinking Water Source Protection Plan, Hill Air Force Base Well 5* (Stantec 2008). Potential contamination sources such as oil and grease from vehicles, and agricultural chemicals from landscaped areas must be adequately controlled. Facility design and operating standards would be based on good housekeeping measures such as street sweeping and controlling litter, and other best management practices such as cleaning, inspecting, and maintaining the stormwater collection system.

Cumulative Effects

Water quality would be protected during and after construction activities. There would be no significant cumulative water quality effects associated with the proposed action.

4.2.3.2 Alternative B: No Action

With respect to water quality, the no action alternative would have no direct effects, no indirect effects, and no cumulative effects.

4.3 Summary Comparison of Predicted Environmental Effects

This section only applies to the alternatives considered in detail.

Issue	Alternative A Proposed Action	Alternative B No Action
Air Quality	Qualified asbestos abatement contractors would prevent impacts to air quality associated with asbestos abatement activities. Construction equipment would create temporary emissions. Fugitive dust emissions would be controlled. Air emissions from the natural gas fired furnace would be less than 0.2 tons per year for each criteria pollutant and for HAPs. Conformity with the Clean Air Act was demonstrated.	The existing facility has air emissions from space heating. Existing air emissions are 2.7 tons per year or less of each criteria pollutant, and 100 pounds of HAPs.
Solid and Hazardous Waste	If contaminated building materials, soils or pavements are identified, they would be properly handled during the demolition and construction process. Operational activities would generate the same types of waste as the existing facility.	Office and break room trash is not contaminated. Computers and related items are reused, recycled, or properly disposed.
Water Quality	During construction and operations, water quality would be protected by implementing stormwater management practices. Precipitation from the 95th percentile, 24 hour storm event would be retained on site. Drinking water sources would be protected by incorporating good housekeeping measures and other best management practices into facility design and operations.	No effects.

Table 7: Summary Comparison of Predicted Environmental Effects

5.0 LIST OF PREPARERS

Streamline Consulting, LLC

1713 N. Sweetwater Lane, Farmington UT 84025

Randal B. Klein, P.E., Project Manager, (801) 451-7872

Civil Engineer Group, Environmental Division, 75 CEG/CEV

7274 Wardleigh Road, Hill AFB UT 84056

Sam Johnson, EIAP Manager, (801) 775-3653

EMAssist, Inc.

7274 Wardleigh Road, Hill AFB UT 84056

Mark Kaschmitter, Air Regulatory Analysis, (801) 775-2359

CH2M HILL, Inc.

7274 Wardleigh Road, Hill AFB UT 84056

Sara Van Klooster, Air Emissions Reporting, (801) 775-5173

6.0 LIST OF PERSONS AND AGENCIES CONSULTED

Civil Engineer Group, Environmental Division, 75 CEG/CEV

7274 Wardleigh Road, Hill AFB UT 84056

Sam Johnson, EIAP Manager, (801) 775-3653

Jaynie Hirschi, Archaeologist, (801) 775-6920

Russ Lawrence, Natural Resources Manager, (801) 777-6972

Mike Petersen, Water Quality Manager, (801) 775-6904

Glenn Palmer, Air Quality Manager, (801) 775-6918

Erik Dettenmaier, Ph.D., IRP Project Manager, (801) 777-3804

Civil Engineer Organizations, 75 CEG and 75 CES

5713 Lahm Lane, Building 593N, Hill AFB UT 84056

Steven Weed, MILCON Project Programmer, (801) 777-2580

Troye Davis, Asbestos Shop Supervisor, (801) 586-7094

Jeff Meyer, Electrical Superintendent, (801) 586-6557

Communications Directorate, 75 ABW/SC

7879 Wardleigh Road, Hill AFB UT 84056

Rose Rees, Communications Project Manager, (801) 777-6400

Select Engineering Services

7274 Wardleigh Road, Hill AFB UT 84056

Michelle Fellows, Historic Building Status, (801) 586-2464

7.0 REFERENCES

CFR: *Code of Federal Regulations*, US Government Printing Office, Office of the Federal Register (various sections and dates).

CH2M 2010: Spreadsheet provided by Hill AFB contractor CH2M HILL, September, 2010.

DAQ 2007: *Utah's Area Designation Recommendation for the 2006 PM_{2.5} NAAQS*, Utah Division of Air Quality, December, 2007.

DAQ 2010a: *State of Utah National Ambient Air Quality Standards, Areas of Non-Attainment and Maintenance (Updated March 2010)*, Utah Division of Air Quality Website, March, 2010.

DAQ 2010b: *Division of Air Quality Annual Report for 2009*, Utah Division of Air Quality, January, 2010.

EPA 1991: *Nonroad Engine and Vehicle Emission Study - Report*, Table 2-07a, US Environmental Protection Agency, 1991.

EPA 2010: *County Emissions Report - Hazardous Air Pollutants*, EPA, June, 2010.

Geo-Marine 2002: *Historic Site Form*, Utah Office of Preservation, Geo-Marine, Inc., December, 2002.

Hill AFB: *Construction Specifications, Section 01000, General Requirements, Part 1, General, Section 1.24, Environmental Protection*, Hill AFB, UT, current version.

Hill 2005a: *Final Environmental Assessment (EA): Proposed Demolition of 12 Structures, Hill Air Force Base, Utah*, August, 2005.

Hill 2005b: *Memorandum of Agreement Between the United States Air Force and the Utah State Historic Preservation Officer Pursuant to 36 CFR Section 800 Regarding the Demolition of Five 800-Zone Historic Buildings, Hill Air Force Base, Utah*, March, 2005.

Hill 2007a: *Integrated Cultural Resources Management Plan*, Hill AFB, 2007.

Hill 2007b: *Integrated Natural Resources Management Plan*, Hill AFB, 2007.

Hill 2008: *Consolidated OO-ALC Warehouse, Hill AFB, Executive Summary*, Hill AFB, March, 2008.

Hill 2010: *2009 Annual Criteria and Toxic Pollutant Emission Inventory*, Hill AFB, prepared by CH2M HILL, April, 2010.

Stantec 2007: *Hill AFB Stormwater Management Plan - Municipal Stormwater Permit*, Stantec Consulting, April, 2007.

Stantec 2008: *Updated Drinking Water Source Protection Plan, Hill Air Force Base Well 5*, Stantec Consulting, May, 2008.

UGS 1994a: *Earthquake Ground Shaking in Utah*, Utah Geological Survey, 1994.

UGS 1994b: *Liquefaction Potential for a Part of Weber County, Utah*, Utah Geological Survey, 1994.

UGS 2009: *Earthquake Fault Map of a Portion of Weber County, Utah*, Utah Geological Survey, current on website as of March, 2009.

WFRC 2003: *Natural Hazard Pre-Disaster Mitigation Plan, Utah's Wasatch Front*, Wasatch Front Regional Council, December, 2003.

Zautner 2004: *Hill AFB 95th Percentile 24-hour Precipitation Amount*, Jeffrey H. Zautner, Meteorologist, Air Force Combat Climatology Center, June 10, 2010.

APPENDIX A
CULTURAL RESOURCES FINDING OF NO ADVERSE EFFECT





State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of Community and Culture

MICHAEL HANSEN
Acting Executive Director

State History

PHILIP F. NOTARIANNI
Division Director

December 2, 2010

Mr. Robert T. Elliott
Chief, Environmental Management Division
75th CED/CEV
7274 Wardleigh Road
Hill Air Force Base, Utah 84056-5137

RE: Demolition of Buildings 827, 830, 840

In reply please refer to Case No. 10-1843

Dear Mr. Elliott:

The Utah State Historic Preservation Office received information and your request for our comment on the above-referenced project on November 17, 2010. We offer the follow comments:

Based on the information provided to our office, we concur with the finding of No Adverse Effect for the proposed undertaking. We do note that although historic buildings (buildings 830 and 840) will be affected by the action, we have previously consulted, mitigated, and resolved them through a memorandum of agreement (Five 800-Zone Historic Buildings MOA) as indicated in your letter.

This information is provided to assist with Section 106 responsibilities as per §36CFR800. If you have any questions, please contact me at clhansen@utah.gov or (801) 533-3561.

Regards,

Chris Hansen
Preservation Planner

UTAH STATE
HISTORY

UTAH STATE HISTORICAL SOCIETY
ANTIQUITIES
HISTORIC PRESERVATION
RESEARCH CENTER & COLLECTIONS

300 S. RIO GRANDE STREET, SALT LAKE CITY, UT 84101-1182 · TELEPHONE 801 533-3500 · FACSIMILE 801 533-3503 · HISTORY.UTAH.GOV



DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

10 November 2010

Mr. Robert T. Elliott
Chief, Environmental Management Division
75th CEG/CEV
7274 Wardleigh Road
Hill Air Force Base, Utah 84056-5137

Mr. Chris Hansen
State Historic Preservation Office
300 Rio Grande
Salt Lake City, UT 84101

Dear Mr. Hansen

Hill Air Force Base (AFB) is currently proposing to construct a consolidated warehouse. The proposed action is needed to provide adequate warehouse facilities in which to store equipment for worldwide United States Air Force operations. The existing warehouse facilities, buildings 830 and 840, were built over sixty years ago and require continuous maintenance and repair. The Area of Potential Effect (APE) is approximately 72 acres (Attachment 1). The proposed action would require demolition of building 827, 830, and 840. Building 827, constructed in 1951 and used as a mess hall and a warehouse, has been determined ineligible for listing in the National Register of Historic Places (NRHP) due to lack of architectural integrity (SHPO Case No. 08-0579, Hill AFB Evaluations and Inventories 2008). Buildings 830 and 840 were previously mitigated for demolition through a Memorandum of Agreement (MOA) with your office (Attachment 2).

Within Hill AFB, three previous inventories have comprised cultural resources survey of 840 acres (U-91-WC-687m, U-95-WC-280p, and U-01-HL-0164m). Results from these projects include the recordation of one historic refuse dump (42Dv51) and two prehistoric isolates, all determined ineligible for listing in the NRHP. Inventory efforts have resulted in the survey of 12.5 percent of the total area of Hill AFB. None of the previous inventories fall within the APE of the current proposed project.

Building construction and associated infrastructure will encompass the entire APE of the current project. Given the lack of previous findings and the extensive development and disturbance of Hill AFB, the potential for archaeological historic properties is extremely low. However, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 3).

Hill AFB has determined the proposed project will have no adverse effect to historic properties [36 CFR §800.4(d)(1)]. I request your concurrence in these determinations as specified in 36 CFR §800.

An Environmental Assessment has been prepared for the proposed consolidated warehouse construction. If you would like a copy of this document to review, or should you or your staff have any questions about the project, please contact our archaeologist, Ms. Jaynie Hirschi, 75th CEG/CEVP, at (801) 775-6920 or at jaynie.hirschi@hill.af.mil.

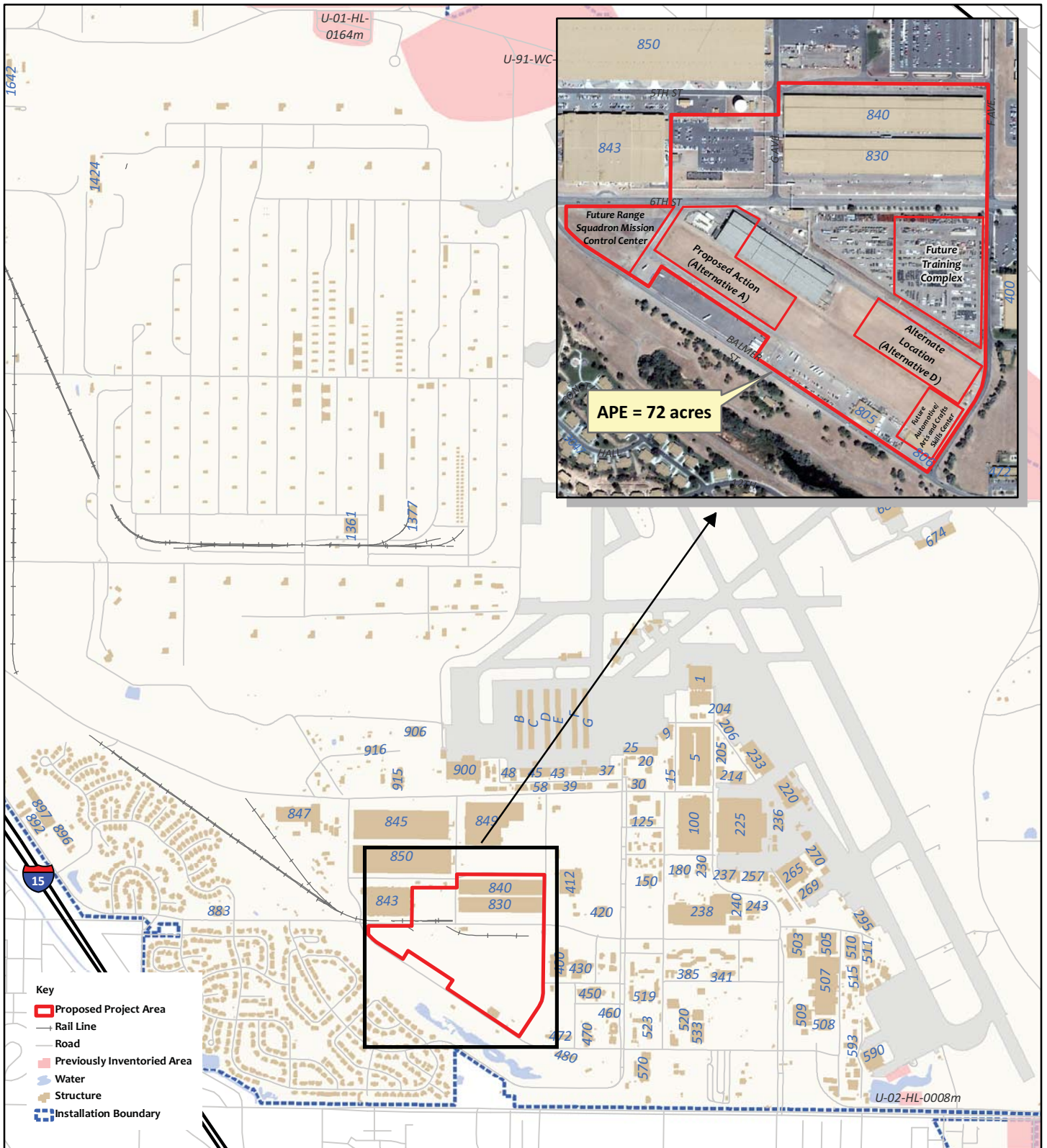
Sincerely

A handwritten signature in black ink, reading "Robert Elliott". The signature is fluid and cursive, with the first name "Robert" and last name "Elliott" clearly distinguishable.

ROBERT T. ELLIOTT, P.E., GS-14, DAF
Chief, Environmental Management Division
75th Civil Engineer Group

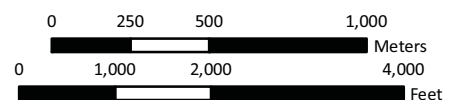
Attachments:

1. Area of Potential Effect for Proposed Consolidated Warehouse, Hill Air Force Base, Utah
2. Demolition of Five 800-Zone Buildings MOA-Hill AFB, UT
3. Unanticipated Discovery of Archaeological Deposits



Area of Potential Effects for the Proposed Consolidated Warehouse Hill Air Force Base, Utah

1: 24,000



N



**MEMORANDUM OF AGREEMENT
BETWEEN
THE UNITED STATES AIR FORCE
AND THE UTAH STATE HISTORIC PRESERVATION OFFICER
PURSUANT TO 36 CFR § 800
REGARDING THE DEMOLITION OF FIVE 800-ZONE HISTORIC BUILDINGS,
HILL AIR FORCE BASE, UTAH**

WHEREAS, Hill Air Force Base (AFB) has determined that the proposed demolition of five historic buildings (Appendix A) is a necessary action that constitutes an undertaking that will have an adverse effect on properties that are eligible for inclusion in the National Register of Historic Places (NRHP); and

WHEREAS, Hill AFB has consulted with the Utah State Historic Preservation Office (SHPO) in accordance with Section 106 of the National Historic Preservation Act, 16 U.S.C. §470, and its implementing regulations (36 CFR § 800); and

WHEREAS, Hill AFB, in consultation with the Utah SHPO, and after consideration of Hill AFB requirements as well as public benefit, has determined an appropriate mitigation that will be pursued; and

NOW THEREFORE, Hill AFB and the Utah SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to mitigate the adverse effect caused by the undertaking.

STIPULATIONS

- 1. PUBLIC OUTREACH:** The Hill AFB Cultural Resources Public Outreach Web Site (Web Site) will be updated and major improvements will be made to better facilitate the public's access to information regarding historic structures on Hill AFB managed lands. New information will be added to the interactive building map, including updated NRHP eligibility status, and the map will be completed so that every eligible building on Hill AFB managed lands will be linked to detailed information and pictures. In addition, the Hill AFB interactive building map will be modified so that it is more user-friendly and the public will be able to better navigate the map. After these updates are implemented Hill AFB will continue to maintain the website.
- 2. PHOTOGRAPHS/DRAWINGS:** Photographs are required of representative types of the buildings cited for demolition in Appendix A. It will be confirmed that an adequate number of professional quality black and white negative photographs, in archival stable protective storage pages, along with associated as-built drawings, architectural elevations, and Historic American Engineering Record (HAER) documentation have been submitted to the Utah SHPO. It will be ensured that photographs are numbered and labeled with the address and the date that the photograph was taken, and that these photographs are keyed to a floor plan and site map. It shall be noted that if additional documentation is necessary, the photographs, as-built drawings, and architectural elevations will first be screened by Hill AFB Security personnel, and any particular information will not be publicly released if doing so would create an unreasonable

security risk or violates any valid Federal security law or regulation. It is anticipated that no restrictions will be imposed if additional documentation is needed.

Additionally, an adequate number of high quality digital photographs and their associated as-built drawings, architectural elevations, and HAER documentation detailing all areas to be impacted by the undertaking shall be posted to the Hill AFB Cultural Resources Public Outreach Web Site. Photographs, as-built drawings, architectural elevations, and HAER documentation shall be inserted into a slide show situated on a map of Hill AFB to show context. Photographs, as-built drawings, architectural elevations, and HAER documentation proposed for inclusion in the Web Site will first be screened by Hill AFB Security personnel and any particular information will not be publicly released if doing so would create an unreasonable security risk or violates any valid Federal security law or regulation. Classified or national security sensitive information, if any, regarding building design or function shall not be posted in violation of Federal law. Any information posted to the Web Site is subject to future removal if valid Federal security laws or regulations change in the future and such law or regulation prohibits such posting. It is anticipated that no restrictions will be imposed if additional documentation is needed.

3. INTENSIVE LEVEL SURVEY (ILS) FORM: It will be confirmed that an ILS form has been completed according to basic survey standards for a representative type of each building and submitted to the Utah SHPO.

Additionally, portions of the Utah State Historic Site form shall be posted with the corresponding photographs, as-built drawings, architectural elevations, or HAER documentation on the Web Site. While the entire site form will not be posted, the most relevant portions of the site form, Parts 4 and 5, Architectural Description and History, will be posted together with photographs as-built drawings, architectural elevations, or HAER documentation subject to the security restrictions cited above in Section 3.

4. DISPUTE RESOLUTION: Should the Utah SHPO or Hill AFB object within thirty (30) days to any actions proposed pursuant to this MOA, Hill AFB shall consult with the Utah SHPO to resolve the objection. If Hill AFB determines that the objection cannot be resolved, Hill AFB shall request the comments of the Advisory Council on Historic Preservation (Council) pursuant to 36 CFR § 800.7. Any Council comment provided in response to such a request will be taken into account by Hill AFB in accordance with 36 CFR § 800.7(c)(4) with reference only to the subject of the dispute; Hill AFB's responsibility to carry out all actions under this MOA that are not the subject of this dispute will remain unchanged.

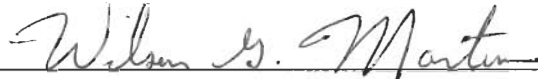
5. EFFECTIVE DATE and DURATION: This MOA shall become effective upon execution by both parties. If, after three (3) years, any of the stipulations of this MOA have not been fulfilled, Hill AFB will notify the Utah SHPO and determine whether the MOA needs to be revised.

Execution of this MOA by Hill AFB and the Utah SHPO, and implementation of its terms, evidence that Hill AFB has taken into account the effects of the proposed demolitions on historic properties and mitigated the adverse effect.

DEPARTMENT OF THE AIR FORCE

By:  Date: 28 Feb 05
SHARON K. G. DUNBAR, Colonel, USAF
Commander, 75th Air Base Wing

UTAH STATE HISTORIC PRESERVATION OFFICER

By:  Date: 3/29/05
Utah State Historic Preservation Officer

APPENDIX A – BUILDINGS PROPOSED FOR DEMOLITION

Installation	Building Number	Building Name	Year	Eligibility	Justification
Hill	800	Warehouse Supply & Equipment Depot	1943	Eligible	WW II Significance
Hill	810	Warehouse Supply & Equipment Depot	1943	Eligible	WW II Significance
Hill	820	Warehouse, Form & Pub Base	1943	Eligible	WW II Significance
Hill	830	Warehouse Supply & Equipment Depot	1943	Eligible	WW II Significance
Hill	840	Warehouse Supply & Equipment Depot	1943	Eligible	WW II Significance

Standard Operating Procedure

UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS

APPLICABLE LAWS AND REGULATIONS

- ◆ National Historic Preservation Act
- ◆ National Environmental Policy Act
- ◆ Native American Graves Protection and Repatriation Act
- ◆ AFI 32-7065 (June 2004), *Cultural Resources Management Program*

OVERVIEW

All undertakings that disturb the ground surface have the potential to discover buried and previously unknown archaeological deposits. The accidental discoveries of archaeological deposits during an undertaking can include but are not limited to:

- ◆ Undiscovered/undocumented structural and engineering features; and
- ◆ Undiscovered/undocumented archaeological resources such as foundation remains, burials, artifacts, or other evidence of human occupation.

POLICY

When cultural resources are discovered during the construction of any undertaking or ground-disturbing activities, Hill AFB shall:

- ◆ Evaluate such deposits for NRHP eligibility.
- ◆ Treat the site as potentially eligible and avoid the site insofar as possible until an NRHP eligibility determination is made.
- ◆ Make reasonable efforts to minimize harm to the property until the Section 106 process is completed.
- ◆ **The BHPO will ensure that the provisions of NAGPRA are implemented first if any unanticipated discovery includes human remains, funerary objects, or American Indian sacred objects (see SOP #6).**

PROCEDURE

Step 1: Work shall cease in the area of the discovery (Figure 5-5). Work may continue in other areas.

- ◆ The property is to be treated as eligible and avoided until an eligibility determination is made. Hill AFB will continue to make reasonable efforts to avoid or minimize harm to

Further construction activities in the vicinity of the site will be suspended until an agreed-upon testing strategy has been carried out and sufficient data have been gathered to allow a determination of eligibility. The size of the area in which work should be stopped shall be determined in consultation with the **BHPO**.

the property until the Section 106 process is completed.

Step 2: Immediately following the discovery, the **Project Manager** shall notify the installation **BHPO**.

Step 3: The **BHPO** or a professional archaeologist shall make a field evaluation of the context of the deposit and its probable age and significance, record the findings in writing, and document with appropriate photographs and drawings.

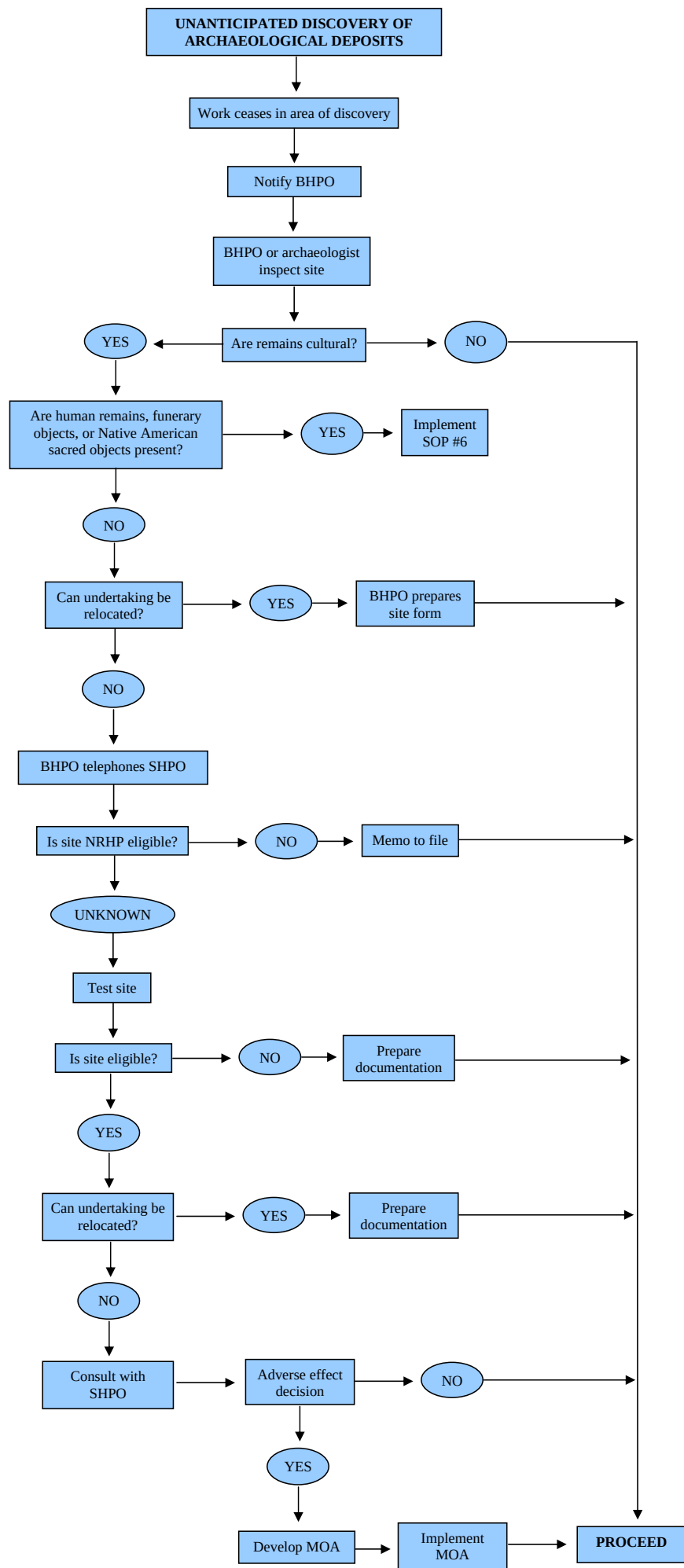
- ◆ If disturbance of the deposits is minimal and the excavation can be relocated to avoid the site, the **BHPO** will file appropriate site forms in a routine manner.
- ◆ If the excavation cannot be relocated, the **BHPO** shall notify the office of the **SHPO** to report the discovery and to initiate an expedited consultation.

The Section 106 review process is initiated at this point.

- ◆ If the deposits are determined to be ineligible for inclusion in the NRHP, then Hill AFB **BHPO** will prepare a memorandum for record and the construction may proceed.
- ◆ If the existing information is inadequate for an NRHP eligibility determination, Hill AFB **BHPO** shall develop an emergency testing plan in coordination with the SHPO.

Step 4: Hill AFB shall have qualified personnel conduct test excavations of the deposits to determine NRHP eligibility.

- ◆ Hill AFB BHPO, in consultation with the SHPO, will determine appropriate methodology for NRHP eligibility determination.
- ◆ If the SHPO and Hill AFB agree that the deposits are ineligible for inclusion in the NRHP, then work on the undertaking may proceed.
- ◆ If the deposits appear to be eligible, or Hill AFB and the SHPO cannot agree on the question of eligibility, then Hill AFB shall implement alternative actions, depending on the urgency of the proposed action.
 - Hill AFB may relocate the project to avoid the adverse effect.
 - Hill AFB may request the Keeper of the National Register to provide a determination.
 - Hill AFB may proceed with a data recovery plan under a MOA developed in coordination with the SHPO and possibly the ACHP and interested parties.
 - **Hill AFB may request comments from the ACHP and may develop and implement actions that take into account the effects of the undertaking on the property to the extent feasible and the comments of the SHPO, ACHP, and interested parties. Interim comments must be provided to Hill AFB within 48 hours; final comments must be provided within 30 days.**



FINDING OF NO SIGNIFICANT IMPACT

1. **NAME OF ACTION:** Proposed Consolidated Warehouse, Hill Air Force Base, Utah.

2. **DESCRIPTION OF THE PROPOSED ACTION:** Hill Air Force Base (AFB) proposes to construct a new warehouse to accommodate current mission requirements. The warehouse would store equipment, furniture, building materials, cable maintenance equipment and supplies, small computers, and records.

3. **SELECTION CRITERIA:** The following criteria were used to assemble alternatives.

The warehouse facilities on Hill AFB should:

- be located in a warehousing and office area in accordance with the Hill AFB general plan;
- provide 200,000 square feet (ft²) of military compliant structures, plus driveways and parking;
- comply with United States Air Force (USAF) real property policies;
- not encroach upon existing facilities;
- not encroach upon other previously approved construction perimeters for upcoming base facilities; and
- be adjacent to existing utilities.

4. **ALTERNATIVES CONSIDERED:**

Alternative A: Proposed Action

Construct a consolidated warehouse. The new facility would meet all of the selection criteria.

Alternative B: No Action

A new warehouse would not be constructed.

Alternative C: Renovating Existing Facilities

Renovation costs would exceed 70 percent of the real property value of the existing facilities and would violate current USAF real property policies. This alternative was not considered in further detail in the document.

Alternative D: Other Nearby Locations

This alternative did not meet the criteria for encroachment on existing and future base facilities. This alternative was not considered in further detail in the document.

Alternative E: Other Locations on Base

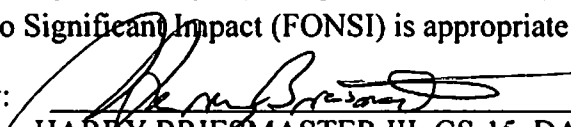
This alternative did not meet the criterion for being located in a warehousing and office area in accordance with the Hill AFB general plan. This alternative was not considered in further detail in the document.

5. SUMMARY OF ANTICIPATED ENVIRONMENTAL EFFECTS:

Issue	Alternative A Proposed Action	Alternative B No Action
Air Quality	Qualified asbestos abatement contractors would prevent impacts to air quality associated with asbestos abatement activities. Construction equipment would create temporary emissions. Fugitive dust emissions would be controlled. Air emissions from the natural gas fired furnace would be less than 0.2 tons per year for each criteria pollutant and for hazardous air pollutants (HAPs). Conformity with the Clean Air Act was demonstrated.	The existing facility has air emissions from space heating. Existing air emissions are 2.7 tons per year or less of each criteria pollutant, and 100 pounds of HAPs.
Solid and Hazardous Waste	If contaminated building materials, soils or pavements are identified, they would be properly handled during the demolition and construction process. Operational activities would generate the same types of waste as the existing facility.	Office and break room trash is not contaminated. Computers and related items are reused, recycled, or properly disposed.
Water Quality	During construction and operations, water quality would be protected by implementing stormwater management practices. Precipitation from the 95th percentile, 24 hour storm event would be retained on site. Drinking water sources would be protected by incorporating good housekeeping measures and other best management practices into facility design and operations.	No effects.

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:


HARRY BRIESMASTER III, GS-15, DAF
Director, 75th Civil Engineer Group

Date:

1/26/11