May 1997

An Archaeological Curation-Needs Assessment for Headquarters Air Combat Command

Volume 2

United States Air Force
Air Combat Command

Global Power for America

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

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 this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	1997	Final Report

4. TITLE AND SUBTITLE
Archaeological Curation-Needs Assessment for Headquarters Air Combat Command

5. FUNDING NUMBERS

6. AUTHOR(S)
Eugene A. Marino (Michael K. Trimble and Christopher B. Pulliam, Series Editors)

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
U.S. Army Corps of Engineers, St. Louis District
1222 Spruce Street (CELMS-PD-C)
St. Louis, Missouri 63103-2833

8. PERFORMING ORGANIZATION REPORT NUMBER
Archaeological Curation-Needs Assessment Technical Report No.10. Volume 2

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Headquarters Air Combat Command, Langley Air Force Base, Virginia

10. SPONSORING / MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES
Available from the U.S. Army Corps of Engineers, St. Louis District (CELMS-PD-C)

12a. DISTRIBUTION / AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

Between October 1995 and January 1996, the U.S. Army Corps of Engineers, St. Louis District's Mandatory Center of Expertise for the Curation and Management of Archaeological Collections conducted a survey of archaeological collections and associated documentation generated from archaeological investigations conducted on 20 U.S. Air Force, Air Combat Command (ACC) installations. This volume addresses collections from the following installations: Little Rock Air Force Base and Black Jack Air Force Range, Arkansas; Moody Air Force Base and Grand Bay Air Force Range, Georgia; Mountain Home Air Force Base and Saylor Creek Air Force Range, Idaho; Whiteman Air Force Base and Whiteman Missile Range, Missouri; Offut Air Force Base, Nebraska; Nellis Air Force Base and Nellis Air Force Range, Nevada; Seymour Johnson Air Force Base, Dare County Air Force Range, and Pope Air Force Base, North Carolina; Minot Air Force Base and Minot Air Force Range, North Dakota; Ellsworth Air Force Base, Ellsworth Missile Range, and Badlands Air Force Range, South Dakota; and Dyess Air Force Base,Texas. In total, approximately 32 cubic feet of artifacts in 12 distinct collections and approximately 22 linear feet of records and 63 reports from ACC collections are being curated by 23 repositories in 13 states. All collections require at least partial rehabilitation to comply with federal regulations.

14. SUBJECT TERMS
Archaeology, curation, collections management, 36 CFR Part 79, NAGPRA (P.L.101-601)

15. NUMBER OF PAGES
130

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	UL

An Archaeological Curation-Needs Assessment for Headquarters Air Combat Command

Headquarters Air Combat Command
May 1997

Contents

List of Figures v
List of Tables vii

Executive Summary . . . . . **ix**

1. Introduction **1**
Methods 2
Chapter Synopsis 3

2. Arkansas **5**
Repository 1: Little Rock AFB 5
Repository 2: Geo-Marine 6

3. Georgia **11**
Repository 1: Moody AFB 11
Repository 2: Panamerican Consultants, Inc. 13

4. Idaho **17**
Repository 1: Mountain Home AFB 17
Repository 2: Idaho State Historical Society 18
Repository 3: Archaeological Survey of Idaho 22
Repository 4: Science Applications International Corporation 24

5. Missouri **27**
Repository 1: Whiteman AFB 27
Repository 2: Historic Preservation Associates 28

6. Nevada **33**
Repository 1: Nellis AFB 33
Repository 2: Dames & Moore 35
Repository 3: Desert Research Institute (Headquarters) 37
Repository 4: Desert Research Institute (Las Vegas Repository) 38
Repository 5: Desert Research Institute, Reno 41
Repository 6: TRC Environmental Solutions, Inc. 44
Repository 7: Harry Reid Center for Environmental Studies, University of Nevada, Las Vegas 46

7. North Carolina **51**
Repository 1: Fort Bragg 51
Repository 2: Panamerican Consultants, Inc. 53

8. South Dakota **55**
South Dakota Archaeological Research Center 55

9. Texas **61**
Repository 1: Dyess AFB 61
Repository 2: Texas Archaeological Research Laboratory 65
Repository 3: 3D International Environmental Group 70

10. Findings Summary for 20 ACC Installations **75**
Infrastructure Controls 75
Status of Artifacts 77
Human Skeletal Remains 79
Records Management 79
Collections-Management Standards 79

11. Recommendations **83**
Develop a Plan of Action 83
Develop a Formal Archives-Management Program 83
Inventory and Rehabilitate Existing Artifact Collections 84
Bring Together Collections 84
Develop Cooperative Agreements 84
Dedicate Space for Storage of Collections 84
Develop Security, Fire-Detection and -Suppression, and Maintenance Measures 85
Hire a Full-Time Collections Manager 85

Appendixes

Appendix 1: Annotated Bibliography for Dyess AFB, Texas 87
Appendix 2: Annotated Bibliography for Ellsworth AFB, South Dakota 89
Appendix 3: Annotated Bibliography for Little Rock AFB, Arkansas 91
Appendix 4: Annotated Bibliography for Minot AFB, North Dakota 93
Appendix 5: Annotated Bibliography for Moody AFB, Georgia 95
Appendix 6: Annotated Bibliography for Mountain Home AFB, Idaho 97
Appendix 7: Annotated Bibliography for Nellis AFB, Nevada 99
Appendix 8: Annotated Bibliography for Offut AFB, Nebraska 103
Appendix 9: Annotated Bibliography for Pope AFB, North Carolina 105
Appendix 10: Annotated Bibliography for Seymour Johnson AFB, North Carolina 107
Appendix 11: Annotated Bibliography for Whiteman AFB, Missouri 109

List of Figures

Figure 1. Primary documentation container, Little Rock AFB 6
Figure 2. Primary containers for artifact storage on wooden shelving units at G-M 8
Figure 3. Secondary containers within a primary container at G-M 8
Figure 4. Documentation vault at G-M 9
Figure 5. Close-up of documentation in hanging files at G-M 9
Figure 6. Associated documentation held by Moody AFB 12
Figure 7. Exterior of PCI building 13
Figure 8. Extent of artifacts from Moody AFB held by PCI 15
Figure 9. Extent of associated documentation stored in the Environmental Office, Mountain Home AFB 18
Figure 10. Exterior of ISHS 19
Figure 11. Main entrance, exit, and intrusion alarm, ISHS 20
Figure 12. Plastic boxes used as primary containers, ISHS 20
Figure 13. Closed, plastic primary container, ISHS 21
Figure 14. Exterior of ASI 22
Figure 15. Fireproof filing cabinet, ASI 23
Figure 16. Close-up of documentation stored at SAIC 25
Figure 17. Extent of associated documentation stored at Whiteman AFB 28
Figure 18. Exterior of HPA's facilities 29
Figure 19. South basement windows and detail of stone walls, HPA facilities 30
Figure 20. Associated documentation stored at HPA 31
Figure 21. Primary documentation container, HPA 31
Figure 22. Extent of associated documentation at Nellis AFB 34
Figure 23. File cabinet storing paper records at Nellis AFB 34
Figure 24. Primary storage containers at D&M 36
Figure 25. Primary collections storage area at DRI, LV 40
Figure 26. Exterior of the Maxey Science Center, location of DRI, Reno 41
Figure 27. Primary containers on metal shelving units at DRI, Reno 42
Figure 28. Primary container with telescoping lid at DRI, Reno 43
Figure 29. Extent of Nellis AFB associated documentation stored at DRI, Reno 43
Figure 30. Harry Reid Center for Environmental Studies, UNLV 47

Figure 31. Collections storage area at UNLV 48
Figure 32. Extent of associated documentation from Seymour Johnson AFB stored at PCI 53
Figure 33. Space-saver shelving at SDARC 57
Figure 34. Primary container for Ellsworth AFB artifact stored at SDARC 57
Figure 35. Exterior of equipment shed, Dyess AFB 62
Figure 36. Dyess AFB collections stored in equipment shed 63
Figure 37. Close-up of label information and primary container with compression damage 64
Figure 38. Main entrance to TARL 66
Figure 39. Building exterior, TARL 66
Figure 40. Overview of storage and lighting conditions, TARL 67
Figure 41. Primary-container storage on wooden shelving units at TARL 68
Figure 42. Records storage at TARL 69
Figure 43. Exterior of 3D building 71
Figure 44. File drawer containing Dyess AFB paper records at 3D 72

List of Tables

Table 1. Summary of ACC Collections xii
Table 2. Summary of Rehabilitation Necessary for Compliance with 36CFR Part 79 xvi
Table 3. Infrastructure Controls Present in Evaluated Repositories 76
Table 4. Summary of Primary and Secondary Containers Used at Evaluated Facilities 78
Table 5. Volume of Material Classes Present in ACC Collections at Evaluated Facilities 80
Table 6. Documentation Types Present in ACC Collections at Evaluated Facilities 81

Executive Summary

Problem

Federal archaeological collections are a significant and nonrenewable national cultural resource. Curation of these materials, however, has been largely substandard or ignored for over 50 years. The result has been a steady deterioration of these resources, which include many unique prehistoric and historical-period objects. A significant number of these irreplaceable collections have been abandoned in the attics, basements, and closets of countless storage facilities across the United States. The improper care and subsequent deterioration of these collections not only violates the laws under which they were recovered but also prevent educational and scientific use. Unfortunately, many valuable collections relating to North American prehistory and history have been lost, and the considerable financial investment of the public in archaeological recovery squandered. A substantial portion of these national cultural resources, however, still exists. Given proper housing and care, these nonrenewable resources can be saved for future generations. The U.S. Air Force (AF) Air Combat Command's (ACC) preservation ethic is characteristic of the AF's long-term interest in archaeological collections management.

Background

Department of Defense (DoD) installations are responsible for the management of archaeological and historical resources that are located on and recovered from their properties. As mandated by federal law, installations are required to ensure that archaeological materials and their associated records are properly curated in perpetuity. Unfortunately, funding shortfalls, lack of consistent national policy, and a misunderstanding of the magnitude of the problem have prevented compliance.

Collections recovered from DoD installations are public property, the result of many years of archaeological research and the expenditure of millions of federal dollars. A federally sponsored mitigation program usually provides for the recovery of materials from archaeological sites, the analysis of recovered items, the publication and circulation of a final report, and the placement of collections in storage facilities

for preservation, display, or future study. In the past, federal agencies paid little attention to the maintenance of collections once salvage programs were completed. Through the years, most collections have been stored free of charge by universities and museums. Inadequate funding and failing facilities now seriously hinder these institutions' ability to adequately care for archaeological collections and associated records.

At the request of Headquarters Air Combat Command (HQ ACC), the U.S. Army Corps of Engineers, St. Louis District, performed a curation-needs assessment of installations under ACC jurisdiction (see below). Project funding was provided by ACC with Dr. Paul Green, of HQ ACC, serving as project manager. Work was performed during FY95, and the findings of the St. Louis District are summarized in this report. This report is a continuation of earlier work conducted by the St. Louis District on ACC installations during FY 94 and FY95 and focuses on the following installations, which are listed by state.

1. Little Rock Air Force Base (AFB), Arkansas
2. Black Jack Air Force Range (AFR), Arkansas
3. Moody AFB, Georgia
4. Grand Bay AFR, Georgia
5. Mountain Home AFB, Idaho
6. Saylor Creek AFR, Idaho
7. Whiteman AFB, Missouri
8. Whiteman Missile Range, Missouri
9. Offut AFB, Nebraska
10. Nellis AFB, Nevada
11. Nellis AFR, Nevada
12. Seymour Johnson AFB, North Carolina
13. Dare County AFR, North Carolina
14. Pope AFB, North Carolina
15. Minot AFB, North Dakota
16. Minot AFR, North Dakota
17. Ellsworth AFB, South Dakota
18. Ellsworth Missile Range, South Dakota
19. Badlands AFR, South Dakota
20. Dyess AFB, Texas

The condition of archaeological collections from these 20 installations are reviewed in this report. These bases were contacted at the onset of the FY94 and FY95 project, but had archaeological surveys in progress and therefore were not included among the first-year evaluations.

Research presented here identified 31.84 ft^3 of artifacts and 21.84 linear feet of documentation from archaeological investigations on 20 ACC installations (Table 1). Collections of material remains and associated documentation are curated at 23 repositories (installations, curation facilities, contractors' offices) located throughout the United States. "Collections" are materials recovered during an archaeological investigation or any records assembled or generated during the recovery process. Even if no material remains are recovered, a collection of associated documentation is created. Often the documentation is separated from the accompanying material remains and curated by a different repository or repositories, thus resulting in two distinct collections for the same archaeological investigation.

Not all facilities that were evaluated curated both material remains and associated documentation (see Table 1). If a repository was not fully evaluated, or if certain categories of questions were not applicable, these were not included when the final percentages were calculated. Of the 23 facilities visited, 12 curate material remains from ACC installations. All but one (ISHS) hold some associated records (in some cases copies only) from archaeological investigations conducted on ACC installations.

Nine facilities were not given a full evaluation because they fell into one of the following categories.

1. They held materials that did not fall within the definition of an archaeological collection (e.g., self-adhesive notes with phone numbers, internally generated minutes from meetings regarding a project). Four facilities (Little Rock AFB office, Moody AFB office, Nellis AFB office, Whiteman AFB office) fall into this category. These offices were visited by St. Louis District personnel, and collections information was recorded.

2. They reported no archaeological collections during the initial telephone conversations conducted by St. Louis District personnel. Three installations fall into this category (Ellsworth AFB, Seymour Johnson AFB, and Offut AFB). None of these installations was visited. However, if collections from these installations were located at any repositories that were visited, those findings are presented in this report (see Table 1).

3. They reported no collections or were unable to locate collections they were supposed to have, and never recontacted the St. Louis District point of contact with additional information. Two facilities fall into this category (Pope AFB and Minot AFB). These facilities were not visited. None of these installations was visited. However, if collections from these installations were located at any repositories that were visited, those findings are presented in this report (see Table 1).

A condensed evaluation was conducted for the Fort Bragg environmental office, which houses collections from Pope AFB. These

Table 1.
Summary of ACC Collections

Installation/Repository	Volume of Artifacts (ft^3)	Documentation (linear feet)[a]	Archaeological Context
Dyess AFB	4.2	0.06	prehistoric
3D International Environmental Group (3D)	—	0.10	
Texas Archaeological Research Laboratory (TARL)	2.58	0.08	prehistoric
Ellsworth AFB[b], Ellsworth Missile Range[b], & Badlands AFR[b]			
South Dakota Archaeological Research Center (SDARC)	(1 artifact)	0.10	prehistoric
Little Rock AFB[c] & Black Jack AFR[d]	—	0.35	
Geo-Marine (G-M)	0.99	1.5	prehistoric & historical period
Minot AFB[b] & Minot AFR[b]			
Tellus Consultants (Tellus)	—	0.35	
University of North Dakota (UND)	0.25	0.08	prehistoric & historical period
Moody AFB[c] & Grand Bay AFR[d]	—	0.13	
Panamerican Consultants, Inc. (PCI)	1.5	1.32	prehistoric & historical period
Mountain Home AFB[c] & Saylor Creek AFR[d]	—	0.42	
Idaho State Historical Society (ISHS)	0.84	—	prehistoric & historical period
Archaeological Survey of Idaho (ASI)	—	0.04	
Science Applications International Corporation (SAIC)	—	0.82	
Nellis AFB[c] & Nellis AFR[d]	—	1.09	
Harry Reid Center, University of Nevada–Las Vegas (UNLV)	2.02	0.16	prehistoric
Desert Research Institute, Las Vegas (DRI, LV)	1.0	0.21	prehistoric & historical period
Desert Research Institute, Reno (DRI, Reno)	16.18	1.44	prehistoric & historical period
Dames & Moore (D&M)	1.51	0.24	prehistoric & historical period
TRC Environmental Solutions, Inc. (TRC ESI)	—	11.34	
Offut AFB[b,d]			
Pope AFB[b]			
Fort Bragg[e]	0.76	0.28	prehistoric & historical period
Seymour Johnson AFB[b] & Dare County AFR[d]	—	—	
Panamerican Consultants, Inc. (PCI)	—	0.83	
Whiteman AFB[c] & Whiteman Missile Range[d]	—	0.31	
Historic Preservation Associates (HPA)	—	0.59	
Total	31.84	21.84	

[a] Linear feet is the standard unit of measure for associated records. Measurements for reports pertaining to Minot AFB, Offut AFB, Pope AFB, and Seymour Johnson AFB are not included in this table; see Appendixes 4, 8, 9, and 10 for bibliographic information on archaeological work conducted at these bases.

[b] Facility not visited because no pertinent materials were present.

[c] Facility did not receive a full structural evaluation because few archaeological materials were present.

[d] Facility not visited, but associated documentation pertinent to these installations has been (1) included in this report either in the totals for the installation from that state that was visited, (2) recorded in the appendix for the installation from that state that was visited, or (3) both.

[e] Facility given a condensed evaluation because materials present scheduled to be transferred soon.

collections are scheduled to be transferred to another repository in the near future. Nonetheless, all materials were examined and evaluated by St. Louis District personnel. Findings for these collections are included in this report (see Table 1).

In addition, one installation (Moody AFB) had collections stored at Valdosta State College. The collections (2.5 ft^3 of prehistoric and historical-period materials) were not located prior to the evaluation of Moody AFB by St. Louis District personnel. This material remains unaccounted for (See Chapter 3 for more information).

A final issue discovered during the course of fieldwork aspect pertains to some confusion surrounding those portions of Nellis AFB leased to the Department of Energy (TTR property). Responsibility for materials recovered from TTR property is not clear and should be addressed by ACC. If ACC does, in fact, own the land, theirs would be the ultimate responsibility unless other arrangements were made with the Department of Energy.

All evaluations were conducted in accordance with protocols established by the St. Louis District and guided by 36 CFR Part 79, Curation of Federally-Owned and Administered Archaeological Collections, a 1991 federal regulation that establishes minimum professional standards for the management and care of all federal archaeological collections. Inspections produced evidence documenting the widespread deterioration and neglect of ACC archaeological collections.

Findings

Status of Physical Facilities

Repository Adequacy

ACC collections of material remains and/or associated documentation are currently curated at 23 repositories in 13 states (see Table 1). All of these repositories were visited, inspected, and are described below. None fulfills all standards mandated by 36 CFR Part 79. Of the 23 facilities, infrastructure-control data were collected on 16 curation facilities and/or contractors' offices. One of these, TARL, had two separate artifact-storage locations; therefore, 17 was the total number used to calculate percentages.

Repository Maintenance

All but one of the facilities inspected receive some measure of maintenance, though on an irregular basis. Of the remaining facilities, 69 percent are cleaned by professional companies, while 31 percent

are cleaned by curatorial staff. These percentages hold true for both repository and collections storage areas.

Environmental Controls

All of the facilities inspected possess some environmental controls. Fifty-nine percent of the repositories have dust filters present on furnace and/or air-conditioning vents. All of the facilities have heating, and 77 percent are air-conditioned. Fifteen repositories monitor humidity.

Security

None of the repositories meets all federal guidelines for security. Forty-seven percent are equipped with intrusion alarms, 24 percent make use of a guard or patrol service, 30 percent have motion detectors, and all possess locks on interior and exterior doors and on all windows. Forty-one percent have limited-access-areas open only to selected staff. None of the repositories has reported major cases of unauthorized entry that resulted in the removal of collections. The potential for such a loss exists at most of the repositories, especially those that are not equipped with intrusion-alarm systems.

Fire Detection and Suppression

Sixty-five percent of the repositories have smoke detectors, 29 percent are equipped with heat sensors, and all but 2 have regularly inspected fire extinguishers at key locations in both the repository and collections areas. Only 35 percent have sprinkler systems in place, and only 12 percent use fireproof containers for materials. Only 2 repositories meet all federal requirements for safeguarding federal archaeological collections from fire hazards, which include the installation of smoke detectors, heat sensors, alarms wired into the local fire department, an overhead sprinkler system, and fire extinguishers. Of the remaining 15 facilities, 4 meet 80 percent of the standards, 4 meet 60 percent, and 7 meet 40 percent or less.

Pest Management

A professional pest-management program is crucial to the long-term survival of many archaeological collections and all associated records. Fifteen of the 17 facilities use professional pest-management services. In most instances, pest control takes place on a monthly basis. Most facilities reported only pest control, with limited monitoring.

Status of Artifacts

Archaeological collections from the ACC installations discussed in this report consist of approximately 32 ft^3 of material in 12 distinct collections. Eight of the collections consist of both prehistoric and historical-period elements; four collections contain only prehistoric artifacts. At the present time, only two artifact collections fully meet existing federal requirements for archaeological curation. Other collections identified in this study will require at least partial rehabilitation to meet current federal standards (Table 2).

All of the secondary containers, the largest receptacles within the primary containers, are 2-mil and 4-mil, plastic, zip-lock bags. However, in some instances the plastic bags are contained within paper bags, but in only one instance does a paper bag serve as the sole secondary container. Secondary container labels consist of directly-applied labels and labels written on acidic and acid-free paper inserts. Acidic-paper inserts are inappropriate labels for long-term curation purposes; all labels should be made of acid-free paper and label information should be consistent.

Status of Human Skeletal Remains

No human skeletal remains were recovered from any of the 20 ACC installations discussed in this report.

Status of Documentation

ACC records encompass approximately 22 linear feet and include 63 reports. Field records include background, survey/excavation/analysis records, photographic records, maps, and reports. Administrative records include correspondence, scopes of work, proposals, and internal documents. In some instances, analysis records or museum catalog sheets were the only documentation available for a particular collection. It is apparent that all collections do not contain the full range of each type of record and, because of this, do not contain as much information as possible.

In many instances, associated documentation was never submitted by the contracting archaeologist or agency, and the installations have not requested their transfer. This may be the single, most glaring problem occurring with ACC collections. If all significant records of a project are not curated, then the collection is incomplete. It is clear that collections managers and archaeologists have not always considered associated documentation to be a part of an archaeological collection and, therefore, worthy of curatorial care. The result is that records for some of the collections cannot be located, a problem that should be aggressively addressed.

Table 2.
Summary of Rehabilitation Necessary for Compliance with 36CFR Part 79

Installation/Repository	Artifact Collections	Documentation
Dyess AFB	complete	partial
3D		complete
TARL	partial	partial
Ellsworth AFB [a], Ellsworth Missile Range [a], & Badlands AFR [a]		
SDARC	partial	partial
Little Rock AFB & Black Jack AFR [a]		complete
G-M	partial	partial
Minot AFB [a] & Minot AFR [a]		
Tellus		complete
UND	complete	partial
Moody AFB & Grand Bay AFR [a]		complete
PCI	partial	complete
Mountain Home AFB & Saylor Creek AFR [a]		complete
ISHS	partial	
ASI		complete
SAIC		complete
Nellis AFB & Nellis AFR [a]		complete
UNLV	complete	partial
DRI, LV	partial	partial
DRI, Reno	partial	partial
D&M	partial	partial
TRC ESI		complete
Offut AFB [a]		
Pope AFB [a]		
Fort Bragg	complete	complete
Seymour Johnson AFB [a] & Dare County AFR [a]		
PCI		complete
Whiteman AFB & Whiteman Missile Range [a]		complete
HPA		complete

[a] Facility not visited because no pertinent materials were present.

None of the collections is managed according to professional, archival-quality practices. For the most part, the documents are still located with the contractor who, in most cases, is not equipped to provide the documents with the attention they require. Less than 20 percent of the paper records have been copied for security purposes and in only two cases are documents stored in fire-resistant cabinets. Photographs are stored with paper records. When present, labels for photographs are directly applied to acidic folders, a practice that is not recommended for long-term preservation of records. In sum, the records, which are an integral part of these collections, are receiving the worst treatment and are in the greatest danger. Action to correct this situation should be taken immediately.

Status of Repository Management Controls

All of the repositories possess limited management controls. Archaeological contracting firms currently house most of the ACC collections, and these firms do not possess curatorial controls. In most cases, they keep records and artifacts in order, and arrange them according to project, for ease of access. However, they do not have appropriate controls to adequately store collections for any length of time. Given this, it is clear that all collections are at great risk; at least 50 percent are not being cared for in accordance with the provisions of 36 CFR Part 79.

Corrective Actions

A number of corrective actions are necessary to bring ACC collections, and those facilities housing them, into compliance with 36 CFR Part 79. General recommendations include the following.

1. Bring together all collections from installations located within the same state at a single repository located in that state.

2. Develop and implement uniform inventory procedures.

3. Using the uniform system, identify and systematically inventory all archaeological collections and associated documentation recovered from ACC installations.

4. Rehabilitate and/or conserve artifact collections, and archivally preserve all documentation and reports.

5. Develop and implement formal archives-management programs.

If implemented, these corrective measures will permit ACC to meet the minimum federal requirements for the adequate long-term curation of archaeological collections. By adopting this approach, ACC has the opportunity to implement a curation program that will serve its needs well into the next century.

Conclusions

Attainment of each recommendation may not be possible immediately. However, because the collections are rapidly deteriorating in their current storage environments and there is no long-term, consistent management plan for the proper curation of archaeological collections and associated documentation, some action is necessary. These federal collections provide raw archaeological data, and if not properly cared for soon, they will lose their educational and research value and potential. Any progress will help ensure that these collections will be more adequately preserved than is currently the case, and that they will be useful to future generations.

Acknowledgments

Several members of the St. Louis District staff contributed in various ways to the completion of these curation-needs assessments. For assistance in the fieldwork aspect of this project I thank Natalie Drew, Sylvia Yu, Kelly Holland, and Kenneth L. Shingleton, Jr. Mr. Shingleton was also an invaluable resource and assisted in pre-fieldwork tasks and final report preparation. Thanks go to Marc Kodack and Jim Barnes for their editorial comments on earlier drafts of this report and to Lynn Murdoch for her assistance in completing the final draft. I also thank Dr. Paul Green of HQ ACC for his assistance and guidance regarding the project as a whole. Additionally, the following individuals provided great time and effort assisting St. Louis District personnel in the completion of their work. For their assistance and contributions to these curation-needs assessments, and to others not mentioned that may have assisted, we offer our whole-hearted gratitude.

Panamerican Consultants, Inc.

Terry Lolley, Jennifer Grover

Historic Preservation Associates

John Gray, Tim Klinger

Little Rock AFB

Jim Popham

Moody AFB

Bob Makowski

Idaho State Historical Society

Joe Toluse

Archaeological Survey of Idaho

Glenda King

Science Applications International

Jim Rudolph

Mountain Home AFB

Nathan Roland

Tellus Consultants

David Peterson

Whiteman AFB

Don Meuschke

University of Nevada, Las Vegas

Lynda Blair, Susan Murphy

Desert Research Institute, Las Vegas

Anne DuBarton

Desert Research Institute, Reno

Cher Walton, Anne DuBarton

Nellis AFB

Eric Watkins

Dames & Moore

W. Geoffrey Spaulding, Robin McMullen

TRC Environmental Solutions, Inc.

Bob Mason, Mike Glenn

Fort Bragg

Beverly Boyco

University of North Dakota

Dennis Toom, Fred Schneider

3D International Environmental Group

Don Miller

South Dakota Archaeological Research Center

Renee Boen

Texas Archaeological Research Laboratory

Darrell Creel

Dyess AFB

Don Pits

Geo-Marine

Dwayne Peters, Marianne Marek

1

Introduction

Installations under the command of HQ ACC are responsible for archaeological artifact collections and accompanying documentation (hereafter referred to as archaeological collections) recovered from their bases. This responsibility is mandated through numerous laws, including the Antiquities Act of 1906 (P.L. 59-209), the Historic Sites Act of 1935 (P.L. 74-292), the Reservoir Salvage Act of 1960 (P.L. 86-523), the National Historic Preservation Act (NHPA) of 1966 (P.L. 89-665), and the Archaeological Resources Protection Act of 1979 (P.L. 96-95). Executive Order 11593 (U.S. Code 1971) and amendments to the NHPA in 1980 provided additional protection for these resources. Preservation of federal archaeological collections is required by 36 CFR Part 79 (Curation of Federally-Owned and Administered Archaeological Collections). Additionally, the U.S. Army Corps of Engineers (USACE) is the only federal agency that possesses strict curation standards for archaeological materials under their care. USACE Regulation 1130-2-433, which was implemented in April 1991, serves as a standard for long-term archaeological curation.

In 1990, the Native American Graves Protection and Repatriation Act (NAGPRA; P.L. 101-601) was enacted (1) to identify federal archaeological collections that contain Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony; and (2) to form agreements between federal agencies and Native American Indian Tribes and Native Hawaiian organizations on the repatriation or disposition of these remains and objects. All federal agencies were required to meet mandated deadlines for compliance with NAGPRA. The deadline for preparing a summary of unassociated funerary objects, sacred objects, and objects of cultural patrimony was November 16, 1993. Additionally, the deadline for completing an inventory of human remains and associated funerary objects was November 16, 1995.

In January 1994, as the first step in complying with 36 CFR Part 79 and NAGPRA, Paul Green, HQ ACC cultural resource manager, contacted the USACE Mandatory Center of Expertise in Archaeological Curation and Collections Management (MCX-CMAC) at the St. Louis District to discuss an interagency agreement that would address these requirements. After a series of consultations with Michael K. Trimble, director of the MCX-CMAC, an approach was recommended that would identify and evaluate the collections from 20 ACC installations in accordance with the federal-curation requirements of 36 CFR Part 79. Data gathered by personnel from the St. Louis District would also provide HQ ACC with NAGPRA-compliance information. A memorandum of agreement was signed between the two parties that directed the St. Louis District to conduct curation-needs assessments at selected ACC installations. According to this agreement, the St. Louis District would provide HQ ACC with an inventory of their archaeological collections and an outline of their curation needs. Concurrently, collections managers would receive a plan addressing their specific curation needs and, when appropriate, the corrective actions required to bring each facility into compliance with 36 CFR Part 79.

In the interagency agreement, the St. Louis District agreed to provide:

1. professional and technical services to HQ ACC for the inspection and inventory of archaeological collections;

2. information that would enable HQ ACC to fulfill the summary requirements of NAGPRA;

3. a final report that would (a) detail the results of the inspection and evaluation; (b) address the physical description of all repository facilities, recovered artifact collections, and associated documentation collections, and (c) make recommendations for compliance with the requirements of 36 CFR Part 79; and

4. a master bibliography of reports associated with archaeological investigations performed on ACC properties.

As part of the curation-needs assessment, personnel from the St. Louis District would visit the HQ ACC or the base to examine any reports, records, or inventory data associated with federal collections and would develop an annotated bibliography of reports, which would include a list of the associated collections and their present locations.

Methods

Twenty-two facilities were visited during the course of FY95 fieldwork (see Executive Summary). All were evaluated in the course of the curation-needs assessment required for this project. The following schedule reflects the time allocated to information gathering at each facility.

- October 11, 1995, Whiteman AFB
- October 16, 1995, Little Rock AFB
- October 17, 1995, HPA
- October 19, 1995, G-M
- October 20, 1995, Dyess AFB
- October 23, 1995, TARL
- October 25, 1995, 3D
- November 7, 1995, ASI
- November 7, 1995, ISHS
- November 8, 1995, Mountain Home AFB
- November 14, 1995, Moody AFB
- November 15, 1995, PCI
- November 17, 1995, SAI
- December 4, 1995, UND
- December 5, 1995, Tellus
- December 6, 1995, SDARC
- December 8, 1995, Fort Bragg
- January 8, 1996, Nellis AFB
- January 9, 1996, UNLV
- January 9, 1996, DRI, LV
- January 9, 1996, DRI, Reno
- January 10, 1996, D&M
- January 12, 1996, TRC ESI

Pre-Fieldwork Investigation

Assessment of each facility's compliance with 36 CFR Part 79 included the following four items.

1. An NPS National Archeological Database (NADB) and a general records search were performed for each of the 20 ACC installations.

2. Each base or contractor was visited in order to examine all reports, records, and inventory data associated with ACC archaeological collections and to compile an annotated bibliography of reports, which would include a list of associated collections and their present locations.

3. Initial contacts were made with all personnel and agencies with knowledge of ACC archaeological collections.

4. From these initial contacts, a list was developed of all contractors and repositories associated with the recovery or curation of materials from ACC installations.

Field Inspection and Assessment of Repositories and Collections

Assessment of the archaeological collections and the repositories that house them involved the following four major tasks.

1. A survey questionnaire soliciting information on repositories, artifact collections, and associated documentation was completed for every facility involved with the curation of archaeological collections from a given installation.

2. A building-evaluation form, addressing structural adequacy, space utilization, environmental controls, security, fire detection and suppression, pest management, and utilities, was completed for every facility and satellite repository involved with the curation of archaeological collections recovered from ACC installations. These data, gathered both by observation and through discussion with collections managers, served as the basis for determining whether or not the facility was in compliance with the requirements for repositories as specified in 36 CFR Part 79.

3. All project and site reports, administrative files, field records, curation records, electronic media, and photographic records were examined to determine their presence or absence, the total linear feet of each type of documentation, the physical condition of the containers and the records, and the overall condition of the storage environment. The determination of whether or not the facility was in compliance with the archives-management requirements specified in 36 CFR Part 79 was based on this research.

4. An examination and evaluation of all artifact collections included an assessment of the (1) primary and secondary containers, (2) degree of container labeling, (3) extent of laboratory processing, (4) material classes included in each collection, and (5) condition of any human skeletal remains. Primary containers—e.g., acidic and acid-free cardboard boxes, cardboard, metal, and wooden trays, and wooden and metal drawers—are the receptacles that house an individual artifact or group of artifacts. Secondary containers—e.g., acidic-paper bags; plastic sandwich bags; plastic, zip-lock bags; glass jars; film vials; aluminum foil; and small acidic and acid-free cardboard boxes—are the largest receptacles for artifacts within the primary containers.

NAGPRA-Compliance Assessment

No human skeletal remains or sacred objects were identified in any of the ACC collections by the assessment teams. This information was forwarded to HQ ACC and used to fulfill NAGPRA inventory requirements.

Report Preparation

The present report constitutes Volume 2 of two volumes of a written report detailing the results of curation-needs assessments of the 22 facilities selected for evaluation. It includes descriptions of the facilities, estimates of the sizes of the collections, and assessments of their conditions. The St. Louis District also herein provides recommendations to HQ ACC for the rehabilitation of the facilities, the collections, or both, according to standards set forth in 36 CFR Part 79.

Chapter Synopsis

Chapters 2–9 detail the state of ACC archaeological collections evaluated during FY95 fieldwork and, in most cases, the conditions under which they are curated. The report is organized by state because many states encompass multiple ACC installations. Each chapter begins with a summary of the collections by ACC installation in that state. Subsequent discussion includes an examination of the installations and an analysis of all of the repositories (universities, research and other institutions, and contractors) curating collections from each specific installation. Chapter 10 is a detailed findings summary for the ACC installations evaluated by the St. Louis District for this project. Finally, Chapter 11 contains a list of recommendations presented to HQ ACC by the St. Louis District that takes into account the specific needs of the collections in question. Appendixes 1–11 are annotated bibliographies for reports identified during the research leading up to this report.

None of the repositories fulfills all of the standards mandated by 36 CFR Part 79 for curating federally owned archaeological collections.

Approximately 50 percent meet some of the stated regulations (e.g., proper environmental controls and security and fire-safety measures). Existing conditions at the repositories described in this report are, unfortunately, the standard for most archaeological-collections repositories in the United States. Funding shortfalls, lack of a consistent national policy, and the magnitude of the curation problem have prevented total compliance with federal regulations.

Editors' note: In regard to Volume 1 of this report, please note that recent changes in the *Louisiana Standards and Guidelines for Curation of Archaeological Collections* (1995) regarding artifact and record storage reflect greater compliance with 36 CFR Part 79 than noted during the first phase of fieldwork for the ACC project. Accordingly, the most current information concerning artifact and record handling should be obtained from the newest version of the Louisiana guidelines.

2

Arkansas

Little Rock AFB, Little Rock

Installation Summary for Little Rock AFB

Volume of Artifact Collections: 1 ft^3
On Base: None
Off Base: 1 ft^3 (G-M)
Compliance Status: Collection held by Geo-Marine (G-M) requires partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 1.85 linear feet
On Base: 0.35 linear feet
Off Base: 1.5 linear feet (G-M)
Compliance Status: Associated documentation at G-M requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards. Materials at Little Rock AFB require complete rehabilitation.

Human Skeletal Remains: None

Status of Curation Funding: Currently Little Rock AFB has no formal agreement for curation of its collections with any repository.

Recommended Curation Facility: Little Rock AFB should send all collections to the University of Arkansas, Fayetteville, for long-term curation and rehabilitation. A cooperative agreement should be made among the ACC, Little Rock AFB, and the University of Arkansas to provide adequate funding to the repository for curation of Little Rock AFB and Black Jack AFR associated documentation.

Repository 1: Little Rock AFB

Date of Visit: October 16, 1995

Point of Contact: Jim Popham

A total of 0.35 linear feet of associated documentation (Figure 1) from archaeological investigations on Little Rock AFB and Black Jack AFR is stored at Little Rock AFB. Because of the lack of any other materials pertaining to archaeological investigations at Little Rock AFB, only a partial curation-needs assessment was performed.

Assessment

Records Storage

Associated documentation is stored in the Environmental Office, Little Rock AFB.

Paper Records

Paper records from archaeological investigations on Little Rock AFB total 0.1 linear feet. These include administrative (0.08 linear feet) and survey/excavation/analysis (0.02 linear feet) records from an archaeological project carried out by G-M.

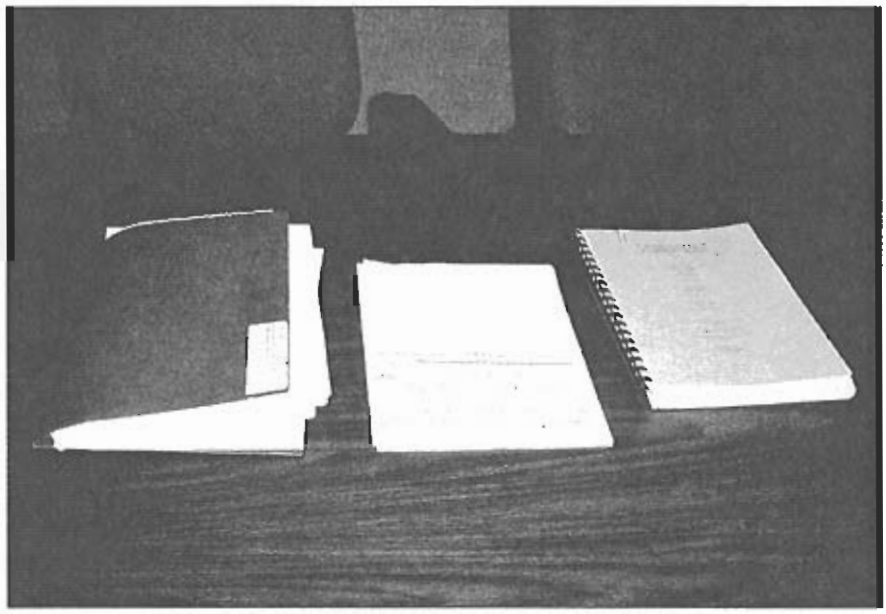

Figure 1. Primary documentation container, Little Rock AFB.

Reports

One bound draft report that measures 0.25 linear feet, generated by a G-M archaeological project, is stored on Little Rock AFB.

Collections-Management Standards

Little Rock AFB is a military installation that possesses neither curation facilities nor any curation and/or management standards. If materials (artifacts, paper records, or both) are generated as a result of archaeological investigations on the installation, Little Rock AFB is responsible for holding the materials until directed to transport them to a proper curation facility.

Comments

1. Little Rock AFB collections require complete rehabilitation to comply with federal-curation guidelines.

2. No human skeletal remains were recovered during archaeological investigations on Little Rock AFB.

3. Storage of associated records from Little Rock AFB does not meet modern archival standards.

Recommendations

1. Make a copy of all associated documentation currently held on base on acid-free paper, and place in an acid-free folder, for use by base personnel.

2. Create a duplicate, security copy, also on acid-free paper, and store in a separate, fireproof, secure location.

3. Transfer original documentation to a qualified repository, preferably the University of Arkansas, Fayetteville, for permanent, archival curation. Associated documentation should be stored at the repository that will curate the other archaeological materials.

Repository 2: Geo-Marine

Date of Visit: December 6, 1995

Point of Contact: Marianne Marek, Lab Director

Approximately 1 ft^3 of artifacts, and 38 manila and hanging folders and 3 field notebooks

comprising 1.5 linear feet of associated documentation from archaeological investigations on Little Rock AFB are stored at G-M facilities in Plano, Texas. The artifact collection includes prehistoric and historical-period materials. Of the total, prehistoric material classes include lithics (5%) and ^{14}C (10%), whereas historical-period material classes present include ceramics (14%), glass (50%), and metal (15%). Faunal remains (5%) are also present.

Assessment

Structural Adequacy

The exact age of the structure is unknown, but is thought to be between 11 and 20 years. The building, which formerly served as a savings-and-loan facility, is structurally sound and has undergone internal and external renovations for its current function. The repository encompasses approximately 16,314 ft^2, of which 69 ft^2 is dedicated to temporary artifact curation.

The structure has a concrete foundation with stucco exterior walls. The metal roof is original to the structure. No cracks in the foundation or leakage through the roof have been reported by staff. The building functions primarily as office, report-preparation, and study space. Areas are also allocated for temporary artifact storage and laboratory space. The two-level structure has undergone numerous internal renovations. These include the addition and removal of internal, plasterboard walls to facilitate current usage. All windows in the repository have shades or drapes and steel frames. According to staff, none of these windows has shown any evidence of air or water leakage. Most windows in the repository are original to the structure.

Heating, telephone lines, air-conditioning, and electrical systems are original to the structure.

Environmental Controls

The structure has air-conditioning and heating. Temperature is set to staff preferences. Humidity is not controlled, but is occasionally checked. Dust filters are present on the furnace ducts, and the building is maintained weekly by a contracted janitorial service.

Pest Management

Professional pest management occurs on an as-needed, semiannual basis; no infestation problems of any kind have been reported by G-M staff.

Security

All exterior doors are equipped with key locks, as are main doors for offices. All windows are sealed. Current security measures have served as useful deterrents; no incidents of unauthorized access have been reported.

Fire Detection and Suppression

The facility has a fire alarm that is wired into the local fire department, fire extinguishers, and a sprinkler system. Fire extinguishers were last inspected in November 1995. According to staff, no portions of the structure are considered fireproof.

Artifact Storage

A 69-ft^2 area of the building is devoted to temporary artifact storage. The collections storage area is structurally identical to the rest of the building and shares common environmental, utility, fire-detection and -suppression, and security systems. Maintenance and pest-management schedules are the same as for the other portions of the facility. All collections are archaeological in nature. Boxes are not overstacked, and clutter is kept to a minimum. Collections storage is at 70-percent capacity.

Storage Units

Collections are stored on wooden shelving units.

Primary Containers

The sole primary container for the Little Rock AFB artifacts is an 11-x-17-inch, acidic-cardboard box (Figure 2) that is directly labeled with the project number.

Secondary Containers

Within the primary container, artifacts are placed within plastic, zip-lock, similarly labeled bags (Figure 3).

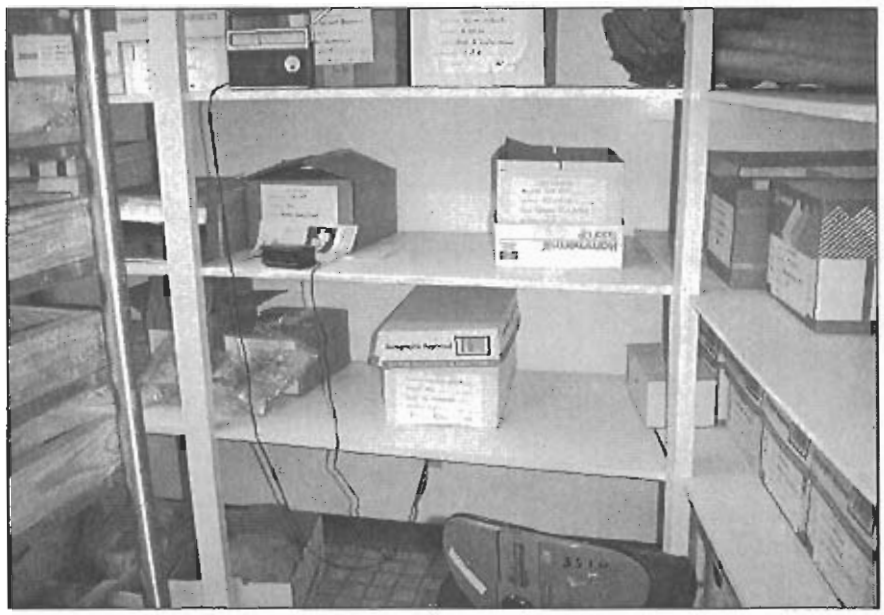

Figure 2. Primary containers for artifact storage on wooden shelving units at G-M.

Human Skeletal Remains

No human skeletal remains recovered from Little Rock AFB are curated at G-M.

Records Storage

Associated documentation from archaeological investigations on Little Rock AFB is stored in a vault that is roughly in the center of the structure (Figure 4). Documents are filed in a legal-size, metal filing cabinet, and are organized by project number. The 1.5 linear feet of documentation present is easily accessed.

Paper Records

Paper records, which total 1.2 linear feet, are stored in two types of primary containers. Most files are stored in manila folders within hanging

Figure 3. Secondary containers within a primary container at G-M.

folders. All folders have been directly labeled with project number (Figure 5). Paper records include administrative (0.2 linear feet), background (0.2 linear feet), and excavation (0.8 linear feet) records. Other paper records include field notebooks that are stored loose.

Photographic Records

Photographic records present measure 0.3 linear feet and consist mainly of slides, which are stored in binders.

Collections-Management Standards

G-M is a contract-archaeology firm that is not interested in serving as a long-term curation facility. Their primary responsibility toward materials is to analyze and hold collections until permanent housing can be located. They have no formal collections-management standards and are serving only as an interim-curation facility until permanent housing for the materials from Little Rock AFB is located.

Figure 4. Documentation vault at G-M.

Figure 5. Close-up of documentation in hanging files at G-M.

Comments

1. Environmental controls are in place throughout the repository.

2. Intrusion-detection and -deterrent measures for G-M do not meet the guidelines established in 36 CFR Part 79.

3. Little Rock AFB collections at G-M will require partial rehabilitation to comply with federal curation guidelines.

4. No human skeletal remains were recovered from archaeological investigations on Little Rock AFB.

5. Storage of all associated records from Little Rock AFB does not meet modern archival standards.

Recommendations

1. Replace secondary container labels with spunbonded, polyethylene paper (e.g., Nalgene polypaper), labeled in indelible ink, and inserted into the secondary containers.

2. Remove all contaminants (e.g., staples, paper clips, and rubber bands) from associated documentation.

3. Duplicate all paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place all folders in acid-free, cardboard boxes, and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

4. Arrange associated documentation according to modern archival procedures and create a finding aid for the documentation collection.

5. Make a duplicate of all associated documentation, on acid-free paper or microfilm, and store these in a separate, fireproof, secure location.

3

Georgia

Moody Air Force Base, Valdosta

Installation Summary for Moody AFB

Volume of Artifact Collections: 1.5 ft^3
On Base: None
Off Base: 1.5 ft^3 (PCI)
Compliance Status: Artifacts stored by Panamerican Consultants, Inc. (PCI) require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 1.45 linear feet
On Base: 0.13 linear feet
Off Base: 1.32 linear feet (PCI)
Compliance Status: Associated documentation requires complete rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Currently Moody AFB has no agreement for curation of its collections with any repository other than Valdosta State University. At the time of this evaluation, Moody AFB had no formal plan for curation funding.

Recommended Curation Facility: Valdosta State University is not an acceptable repository for federal collections. The curation facility on campus would require major rehabilitation to be considered suitable. ACC should transfer collections from PCI to the University of Alabama Museums, Moundville, Alabama, curation facility for long-term curation.

Comments: Collections from a 1985 survey of the Winnersville Range at Moody AFB were curated at Valdosta State University. At the time of this evaluation those collections were listed as lost by University staff. No further information is available concerning this collection, which contained approximately 2.5 ft^3 of material. Some of the associated documentation is from Grand Bay AFR, Georgia.

Repository 1: Moody AFB

Date of Visit: November 14, 1995

Point of Contact: Bob Makowski

Moody AFB holds 0.13 linear feet of associated documentation from archaeological investigations on the base.

Assessment

Because of the small amount of material related to archaeological investigations at Moody AFB, it was determined unnecessary to assess structural adequacy or the conditions present within the structure.

Artifact Storage

No artifacts are curated at Moody AFB

Human Skeletal Remains

No human skeletal remains are curated at Moody AFB.

Records Storage

A total of 0.13 feet of associated documentation is stored at Moody AFB. The records date from 1985 to 1995.

Paper Records

Paper records, which are stored in five manila file folders, include administrative records (0.08 linear feet), correspondence, copies of notes, and work plans pertaining to archaeological and architectural work that has been or is being done for Moody AFB (Figure 6).

Reports

The only report (0.05 linear feet) present is from work done by PCI.

Collections-Management Standards

Moody AFB is a military installation that possesses neither curation facilities nor any curation and/or management standards. If materials (artifacts, paper records, or both) are generated as a result of archaeological investigations on the installation, Moody AFB is responsible for holding the materials until directed to transport them to a proper curation facility.

Comments

1. Moody AFB collections will require complete rehabilitation to comply with federal curation guidelines.

2. No human skeletal remains were recovered during archaeological investigations on Moody AFB.

3. Storage of associated records from Moody AFB does not meet modern archival standards.

Recommendations

1. Duplicate all documentation on acid-free paper and place in acid-free folders for use by base personnel.

2. Create a duplicate, security copy, on acid-free paper or microfilm, and store in a separate, fireproof, secure location.

3. Send originals to a qualified repository, preferably the University of Alabama Museums facility

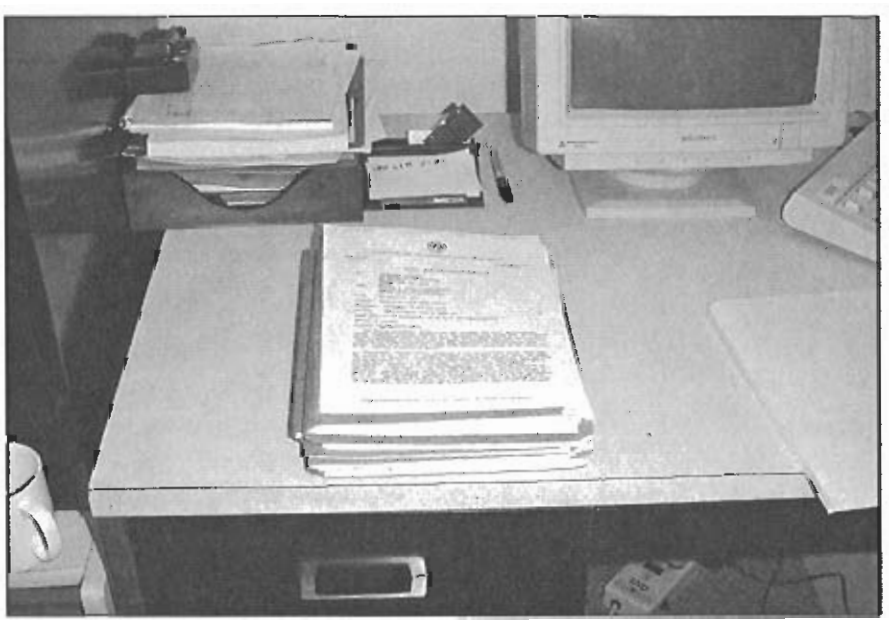

Figure 6. Associated documentation held by Moody AFB.

at Moundville, Alabama, for long-term archival curation.

Repository 2: Panamerican Consultants, Inc.

Date of Visit: November 15, 1995

Point of Contact: Jennifer Grover, Laboratory Director

Approximately 1.5 ft^3 of artifacts and 1.32 linear feet of associated documentation from archaeological investigations on Moody AFB and Grand Bay AFR are presently stored at PCI, located in Tuscaloosa, Alabama (Figure 7). The artifact collection includes materials from prehistoric and historical-period contexts. Of the total, prehistoric material classes present include lithics (60%) and ceramics (10%), whereas historical-period material classes include ceramics (10%), glass (10%), and metal (10%).

The single-story, 4,500-ft^2 structure has a large reception area immediately inside its front entrance. Offices for staff are located along both sides of the building, a laboratory and processing area is in the center of the building, and a collections storage area is located at the rear of the facility.

Because it is not a long-term curation facility, none of the collections generated by this project will be stored at PCI. However, materials will be housed here while analyses continue.

Assessment

Structural Adequacy

The structure housing PCI was constructed in the 1970s to serve as a post office. Since being purchased by PCI, the structure has undergone internal and external renovations to better serve its current functions; areas for office space, library storage, artifact processing and study, and report preparation are present. The building is structurally sound, but PCI has never been considered a long-term curation facility.

The structure has a concrete foundation and concrete-block exterior walls. The shingled roof is original to the structure, but eaves were added in the last five or six years for water-runoff purposes. The foundation and roof are structurally sound; no cracks or leakage have been reported by staff. Internal renovations include the addition of plasterboard walls to delineate office boundaries. None of the windows in the

Figure 7. Exterior of PCI building.

repository, all of which have aluminum frames, is equipped with shades. Most of the windows are original to the structure, but some are replacements. No leakage of air or water through the windows has been reported by PCI staff.

Utility systems present include heating, running water, rest rooms, telephone lines, air conditioning, and electricity. All utility systems are original to the structure. No evidence of water damage has been reported by PCI staff.

Environmental Controls

The structure is equipped with air-conditioning and heating systems. Temperature is set to staff preferences. Humidity is not controlled. Dust filters are present on the heating/air-conditioning ducts, and the building is maintained nightly by a contracted janitorial service. Because PCI operates a small laboratory on its premises, some quantity of acetone and hydrochloric acid is stored on site. According to the staff, no incidents or accidents with this material have ever occurred. Ventilation for the chemical fumes consists of opening windows to allow air circulation.

Pest Management

Pest-management procedures are performed by a certified company on a monthly basis. No infestations of any kind have ever been reported by PCI staff.

Security

The repository has an intrusion alarm that is tied into the local police department. They also use a contracted security company and have motion detectors throughout the building. Key locks are located on the front and back doors and on the fence that encircles the lot behind the building. All windows in the building are equipped with basic locks (latch only). According to staff, there have been no incidents of forced entry through any windows or doors. The most easily accessible door and windows are those located at the front of the building; as a precaution against forced entry, bars have been placed over the front door and the front windows.

Fire Detection and Suppression

Smoke detectors, heat sensors, and fire extinguishers are located throughout the facility. Fire extinguishers were last inspected in April 1995. According to staff, no portions of the structure are considered fireproof.

Artifact Storage

Approximately 1.5 ft^3 of prehistoric and historical-period materials from projects conducted at Moody AFB and Grand Bay AFR are currently housed at PCI. These artifacts are being analyzed and will require partial rehabilitation before permanent curation.

Storage Units

Materials are currently stored on the floor of the PCI laboratory area.

Primary Containers

Artifacts from Moody AFB and Grand Bay AFR are stored in one 12-x-15-inch box (Figure 8), one 9-x-10-inch envelope, and one 9-x-12-inch, acidic-paper bag.

Secondary Containers

Secondary containers are 4-mil, plastic, zip-lock bags, which are nested within one another in some instances.

Laboratory Processing and Labeling

Labeling is applied directly to the boxes and the bags within them. In addition, each bag contains a small slip of paper with identical labeling information. Label information consists of the name of the investigator, site number, project number, provenience, and date.

Records Storage

Approximately 1.32 linear feet of associated documentation from archaeological projects on Moody AFB are held by PCI. Associated documentation, like the artifacts, is stored on the floor of the PCI laboratory area and is easily accessed. Records are kept in two 12-x-15-inch, acidic-cardboard boxes and one 9-x-12-inch envelope. Secondary containers consist of manila folders. All other materials are loose. Documents are organized by project and date and are in good

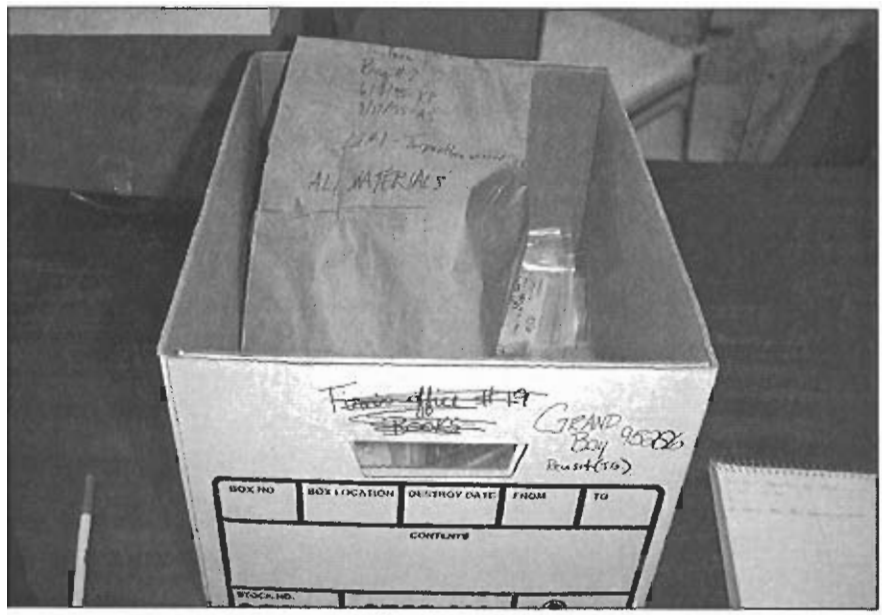

Figure 8. Extent of artifacts from Moody AFB held by PCI.

condition, but some contaminants (e.g., paper clips, staples, and rubber bands) are present.

Paper Records

Paper records from archaeological investigations on Moody AFB total 1.22 linear feet. These include administrative (0.06 linear feet), background (0.08 linear feet), survey/excavation records (1.08 linear feet), and field notes.

Photographic Records

Four rolls of photographic records were taken during the work, but were not available for examination because they had not been processed.

Maps and Oversized Documents

Maps associated with archaeological investigations on Moody AFB, measuring 0.08 linear feet, are stored at PCI.

Reports

Reports total 0.02 linear feet.

Collections-Management Standards

PCI is a contract-archaeology firm and is not interested in serving as a long-term curation facility. Their primary responsibility toward collections is to analyze and hold collections until permanent housing can be located. They have no formal curation or management standards and are serving only as an interim-curation facility until permanent housing for the materials from Moody AFB is located.

Comments

1. Artifact collections require partial rehabilitation to comply with federal guidelines for curation, while associated documentation requires complete rehabilitation.

2. No human skeletal remains were recovered during archaeological investigations on Moody AFB.

3. Storage of associated records from Moody AFB does not meet modern archival standards.

Recommendations

1. ACC should assist Moody AFB in selecting a permanent repository for the collections currently held by PCI.

2. Once a repository is selected (preferably the University of Alabama Museums facility at Moundville, Alabama), artifacts and associated documentation should be transferred there for complete rehabilitation.

3. Place associated documentation in acid-free folders for storage in an acid-free-cardboard record box or metal filing cabinet.

4. Remove all contaminants (e.g., paper clips and staples) from the records.

5. Duplicate all paper records onto acid-free paper and place them in acid-free folders labeled in indelible ink. Place all folders in acid-free cardboard boxes and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

6. Organize all records according to modern archival procedures and create a finding aid for the collection.

7. Duplicate all records on acid-free paper or microfilm and store these materials in a separate, fireproof, secure location.

Editors' note: Since this assessment was made, all materials held by PCI from Moody AFB have been returned to that installation.

4

Idaho

Mountain Home Air Force Base, Mountain Home

Installation Summary for Mountain Home AFB

Volume of Artifact Collections: 0.84 ft^3
On Base: None
Off Base: 0.84 ft^3 (Idaho State Historical Society)
Compliance Status: Artifacts held by the Idaho State Historical Society (ISHS) require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials.

Linear Feet of Records: 1.28 linear feet
On Base: 0.42 linear feet
Off Base: 0.04 linear feet (Archaeological Survey of Idaho [ASI]); 0.82 linear feet (Science Applications International Corporation [SAIC])
Compliance Status: All associated documentation requires complete rehabilitation to comply with federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Mountain Home AFB has no formal agreement for the curation of its documentation with any repository.

Recommended Curation Facility: Mountain Home AFB should send all associated documentation to ASI for rehabilitation and long-term curation. Artifact collections should remain at ISHS for permanent curation. A cooperative agreement should be made between Mountain Home AFB and ISHS, which includes ASI, to provide adequate funding for the curation of Mountain Home AFB archaeological collections.

Repository 1: Mountain Home AFB

Date of Visit: November 8, 1995

Point of Contact: Nathan Roland

A total of 0.42 linear feet of documentation from archaeological investigations on Mountain Home AFB and Saylor Creek AFR is stored at the Environmental Office, Mountain Home AFB. This material consists of seven hanging file folders containing Legacy FY94–96 project files that pertain to cultural resources and one folder containing correspondence regarding archaeological work on Mountain Home property (Figure 9). Because of the lack of any other materials pertaining to archaeological investigations at Mountain Home AFB, it was determined unnecessary to assess the structural adequacy of the building, collections-management standards, or storage practices.

Mountain Home AFB is a military installation that possesses neither curation facilities nor any curation and/or management standards. However, if materials (artifacts, paper records, or both) are generated as a result of archaeological

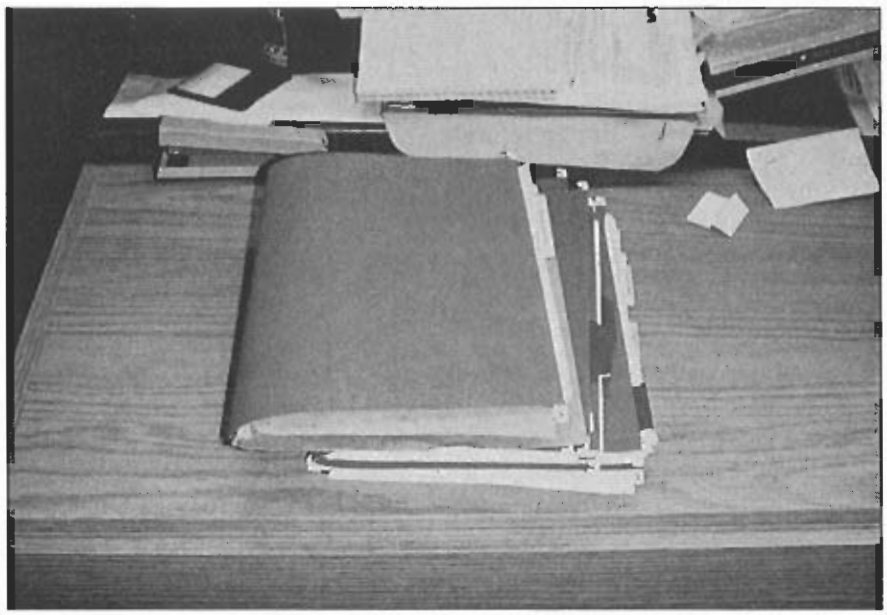

Figure 9. Extent of associated documentation stored in the Environmental Office, Mountain Home AFB.

investigations on the installation, Mountain Home AFB is responsible for holding the materials until directed to transport them to a proper curation facility.

Comments

1. Associated documentation at Mountain Home AFB will require complete rehabilitation to comply with federal curation guidelines.

2. No human skeletal remains were recovered during archaeological investigations on Mountain Home AFB.

3. Storage of associated records from Mountain Home AFB does not meet modern archival standards.

Recommendations

1. Duplicate all associated documentation currently held on base onto acid-free paper and place in an acid-free folder for use by base personnel.

2. Create a duplicate/security copy on acid-free paper and store in a separate, fireproof, secure location.

3. Send originals to a qualified repository, preferably ASI, for long-term, archival curation.

Repository 2: Idaho State Historical Society

Date of Visit: November 7, 1995

Point of Contact: Joe Toluse, Curator

Approximately 0.84 ft^3 of artifacts from a 1982 archaeological survey conducted by the Bureau of Land Management (BLM) are curated at the ISHS's Boise artifact-curation facility (Figure 10). The collection includes materials from prehistoric and historical-period contexts. Of the total, the sole prehistoric material class is lithics (60%), whereas historical-period material classes present consist of glass and metal (20% each). No formal agreement for funding between ACC and ISHS, beyond including curation costs in project budgets, exists for any future collections from Mountain Home AFB.

Figure 10. Exterior of ISHS.

Assessment

Structural Adequacy

This structure was specifically built for museum storage in 1970, and is structurally sound. The repository comprises approximately 24,000 ft^2, of which 18,000 ft^2 is dedicated to long-term artifact curation. The single-story structure contains staff offices, laboratories, and collections storage areas. Space is also allocated for artifact washing and processing. Offices for staff and processing laboratories occupy the same area, located near the entrance to the facility.

The structure has a concrete foundation with cinder-block exterior walls. The roof is built-up asphalt and had a "membrane" covering added to it in the early 1980s. There have been some small cracks in the foundation, but there have been no major leakage problems. The roof has leaked in the past, but no leakage has been reported by staff since the "membrane" was added. The facility serves mainly as a collections storage area; some laboratory space is also present. The structure has undergone numerous internal renovations in the past few years. These primarily consisted of the addition and removal of internal, plasterboard walls to facilitate current function. All windows in the repository are original to the structure, have aluminum frames, and are sealed with wooden boards. According to staff, none of these windows has shown any evidence of air or water leakage.

Building utility systems include heat, running water, rest-room facilities, telephones, and electricity. All utility systems are original to the structure. Lighting in the front portion of the structure is fluorescent, while mercury lamps are present in the collections storage area. The structure is adequate for the long-term curation of archaeological collections.

Environmental Controls

The structure is equipped with gas heaters, but no air-conditioning system is present. Temperature is set to staff preferences, and humidity is monitored electronically with a hygrothermagraph. No dust filters are present on the furnace ducts. The facility is maintained on a weekly basis by the curator.

Pest Management

Pest management occurs on an as-needed basis. No infestation problems of any kind have been reported by staff.

Security

Key locks and dead-bolt locks are present on the main doors, and the exterior door is also secured with a sliding, metal bar. The facility has an

Figure 11. Main entrance, exit, and intrusion alarm, ISHS.

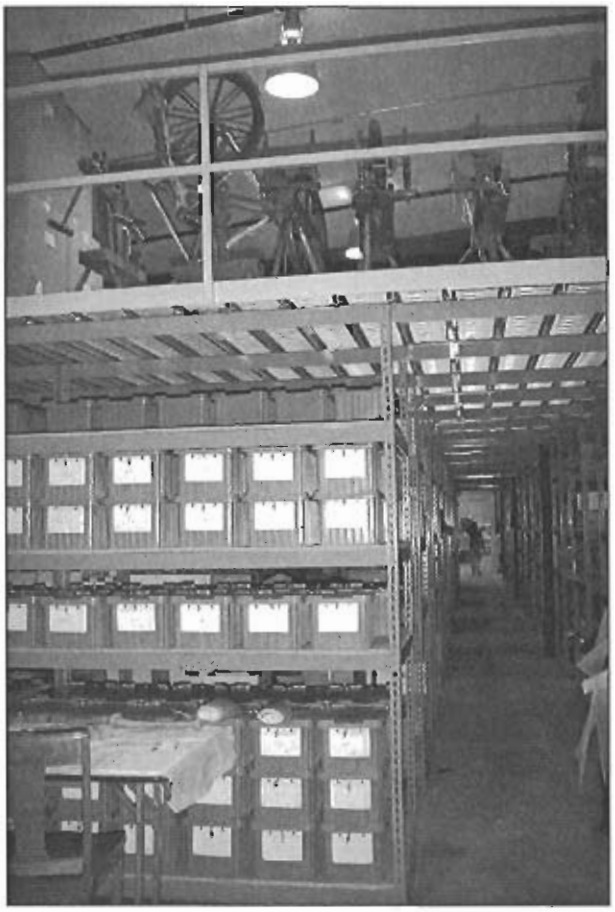

Figure 12. Plastic boxes used as primary containers, ISHS.

intrusion alarm (Figure 11) that is wired to a contracted security firm. All windows are locked and boarded and are 14 feet above the ground. In addition, the building has no exterior markings that might serve to attract undue attention. According to staff, there have been no incidents of unauthorized entry.

Fire Detection and Suppression

Smoke detectors, heat sensors, manual and remote fire alarms, fire extinguishers, and a sprinkler system are present throughout the facility. Fire extinguishers were last inspected in March 1995. According to staff, all of the structure except the roof is considered fireproof.

Artifact Storage

An area encompassing 18,000 ft^2 of the ISHS curation facility is devoted to the long-term curation of prehistoric and historical-period archaeological collections from throughout Idaho. Approximately 0.84 ft^3 of artifacts from Mountain Home AFB are currently stored at ISHS. The collections storage area is structurally identical to the rest of the repository and shares common environmental, utility, fire-safety, and security systems. Maintenance and pest-management schedules are also the same as those for the remainder of the facility. The majority (60%) of collections are prehistoric in nature, while historical-period materials comprise about 40 percent of the total.

Storage Units

Collections are stored on metal, mezzanine shelving units with chipboard shelves (Figure 12). There is no overstacking of boxes, and clutter is kept to a minimum. Currently, ISHS collections storage is at 90-percent capacity.

Primary Containers

Artifacts are stored in one plastic, 16.5-x-11-x-8-inch storage box that has a snap lid for security (Figure 13). The box is labeled with a number that relates to the owner of the collection, which can be used with the office database to recall information such as site number, provenience, investigator, and accession number. The label is inserted into a plastic sleeve that is attached (with adhesive) to the front of the box.

Secondary Containers

Within the primary container, the artifacts are inside a plastic, zip-lock bag that is labeled with site number, catalog number, description of enclosed materials, provenience, and accession number.

Laboratory Processing and Labeling

Space for artifact washing and processing is present in the structure, but it is conducted in Repository 3.

Human Skeletal Remains

No human skeletal remains recovered from Mountain Home AFB are curated at ISHS.

Collections-Management Standards

ISHS follows the same standards outlined by ASI in *The Archaeological Survey of Idaho Curatorial Standards and Guidelines* (1995). Information on collections-management standards is discussed below for both ISHS and ASI.

Curation Personnel

Joe Toluse supervises Repository 2 and is responsible for the nonarchaeological ISHS collections there. Teri DeYoung and Glenda King are responsible for the curation of ISHS archaeological collections, which include all federally owned collections.

Comments

1. Some environmental controls are in place at ISHS.

2. No human skeletal remains were recovered from archaeological investigations on Mountain Home AFB.

3. Mountain Home AFB artifact collections at ISHS require partial rehabilitation to comply with federal guidelines for curation.

Recommendations

1. Designate ISHS as the repository for all artifact collections from Mountain Home AFB.

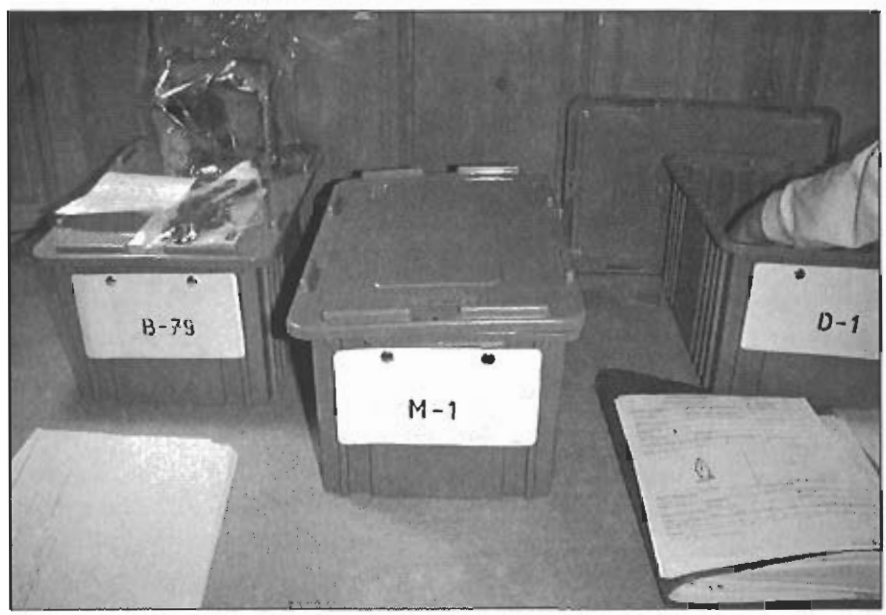

Figure 13. Closed, plastic primary container at ISHS.

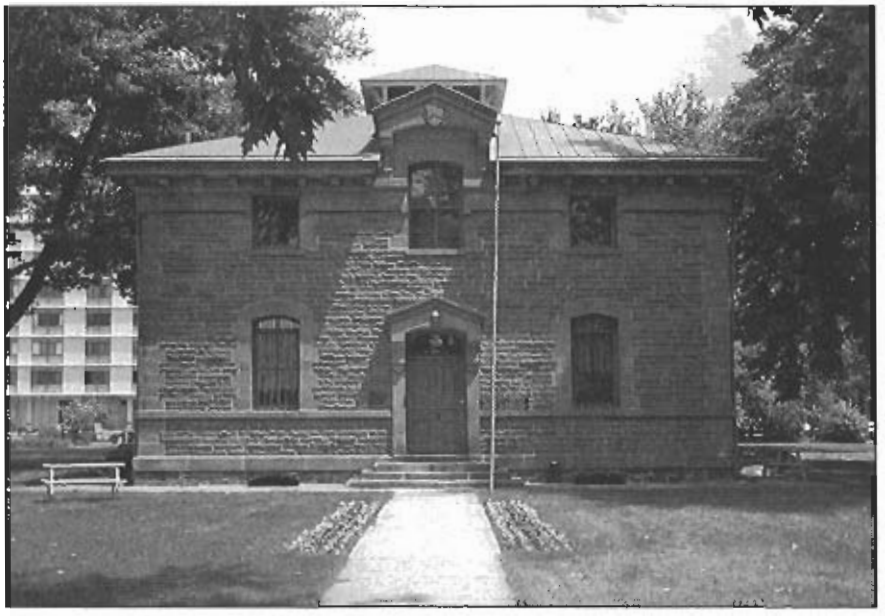

Figure 14. Exterior of ASI.

2. Install dust filters on all ductwork.

Repository 3: Archaeological Survey of Idaho

Date of Visit: November 7, 1995

Point of Contact: Glenda King, Curator of Archaeology

A total of 0.04 linear feet of associated documentation from archaeological investigations on Mountain Home AFB is presently stored at ASI.

Assessment

Structural Adequacy

This structure is a historic stone building, formerly a residence, which is located near downtown Boise (Figure 14). The foundation of the building is concrete, and the exterior walls are stone. Interior walls are plywood on sandstone, and ceilings are plaster.

Environmental Controls

Environmental controls present consist of air-conditioning and steam-heat systems. Temperature levels are maintained according to staff preferences, and humidity is monitored electronically.

Pest Management

The pest-management program for this repository is performed by staff, and includes monitoring on a weekly basis.

Security

Security measures include key locks on interior doors, dead-bolt locks on the front door, window locks, motion detectors, and intrusion alarms.

Fire Detection and Suppression

Selected files are stored in fireproof cabinets. This repository has recently inspected fire extinguishers on every floor.

Artifact Storage

No artifacts from Mountain Home AFB are curated at this repository. Refer to the section on Repository 2, above, for a discussion of artifact storage at ISHS.

Human Skeletal Remains

No human skeletal remains from Mountain Home AFB are curated at ASI.

Records Storage

Associated documentation from Mountain Home AFB is stored in an 80-ft^2 room in the basement of this repository. There is one window in the records room that is locked at all times and wired into the main intrusion-alarm system. Records storage is currently at 70-percent capacity.

Paper Records

Paper records consist of survey sheets from a 1982 BLM survey of Mountain Home AFB. These are stored in one file folder within a fireproof filing cabinet (Figure 15). All records are cross-indexed in a computer database and are arranged by accession number. Access to the records is provided to any researcher with a legitimate request, but permission must first be obtained from the curator.

Reports

Approximately 0.04 linear feet of report records are curated at ASI.

Figure 15. Fireproof filing cabinet, ASI.

Collections-Management Standards

All of the following standards are outlined by ASI in *The Archaeological Survey of Idaho Curatorial Standards and Guidelines* (1995). The basic policy for long-term curation that has been adopted by ASI is to curate only those objects that result from work undertaken with certified organizations, as indicated in memoranda of agreement. Curation of federally-owned collections is in accordance with the provisions of 36 CFR Part 79.

Below is information that pertains to (1) access to collections in the possession of ASI and ISHS, (2) curation costs, and (3) loans. Information included in the publication but not summarized here includes field treatment of artifacts, laboratory methods for records and artifacts, film processing, cataloging, and labeling. Detailed information on all these procedures can be found in the publication, which is available from ASI.

Loan Policy

Loans are commonly made for a period of six months. Evidence of study is required before extensions will be granted. If an extension is desired, a written request must be made prior to the end of the loan period.

Curation Personnel

Glenda King is responsible for the curation of associated documentation held by ASI.

Curation Financing

Costs are assessed based on person-hours spent to fully process a collection (i.e., inventory, inspect, store, enter data into a computer database, conserve, rehabilitate). Costs are also assessed for packaging and shipping costs. These costs are available from the curator.

Access to Collections

Collections are available for legitimate scientific, educational, and religious uses. The collections manager should be contacted prior to visits, and all collections are examined in areas of the repository that have been set aside for this purpose. Collections that need to be shipped will be accompanied with an invoice for processing and preparation costs.

Comments

1. Some environmental controls are in place at ASI.

2. No human skeletal remains were recovered from archaeological investigations on Mountain Home AFB.

3. Storage of associated records from Mountain Home AFB at ASI does not meet modern archival standards.

4. Mountain Home AFB associated records at ASI require complete rehabilitation.

Recommendations

1. Designate ASI as the repository for all associated documentation from Mountain Home AFB.

2. Remove all contaminants (e.g., staples, paper clips, and rubber bands) from associated documentation.

3. Duplicate all paper records onto acid-free paper and place in acid-free folders, labeled in indelible ink.

4. Organize associated documentation according to modern archival procedures and create a finding aid for the documentation collection.

5. Duplicate associated documentation on acid-free paper or microfilm, and store these materials in a separate, fireproof, secure location.

Repository 4: Science Applications International Corporation

Date of Visit: November 7, 1995

Point of Contact: Jim Rudolph, Staff Archaeologist

Approximately 0.82 linear feet of documentation from Mountain Home AFB are presently stored at the Boise office of SAIC.

Assessment

Structural Adequacy

This structure is a historic brick building built in 1903, which is located in downtown Boise. It has a concrete foundation and brick exterior walls. The interior of the structure underwent a period of major rehabilitation in the 1970s to make it usable. SAIC offices occupy the third floor of the corner building.

Environmental Controls

Environmental controls present consist of air-conditioning and heating systems. Temperature levels are maintained according to staff preferences. Janitorial maintenance is by a contracted company on a weekly basis.

Pest Management

Pest-management measures for this repository are performed by a contracted company on a monthly basis.

Security

Security measures include key locks on interior doors and the front door. Windows are also equipped with locks.

Fire Detection and Suppression

Selected files are stored in fireproof cabinets. Recently inspected fire extinguishers are located throughout the repository.

Figure 16. Close-up of documentation stored at SAIC.

Artifact Storage

No artifacts from Mountain Home AFB are curated at SAIC. Refer to the section on Repository 2, above, for a discussion of Mountain Home AFB artifacts.

Human Skeletal Remains

No human skeletal remains from Mountain Home AFB are curated at SAIC.

Records Storage

Associated documentation from Mountain Home AFB occupies two drawers in two filing cabinets (Figure 16). Documentation is organized by project and accessible to staff and qualified researchers.

Paper Records

Paper records total 0.70 linear feet. These include administrative (0.08 linear feet), background (0.04 linear feet), excavation (0.33 linear feet), and survey (0.25 linear feet) records. All are stored in acidic, hanging file folders that have been directly labeled with adhesive tags.

Photographic Records

Photographic records associated with archaeological projects on Mountain Home AFB, which total 0.08 linear feet, are stored in plastic sleeves within the folders that contain the other records.

Maps and Oversized Documents

Maps associated with archaeological work on Mountain Home AFB total 0.04 linear feet and are stored in the folders containing the other records.

Reports

Reports, associated with archaeological work on Mountain Home AFB, measuring 0.04 linear feet, are stored in the folders that contain the other records.

Collections-Management Standards

SAIC is a contract-archaeology firm that is not interested in serving as a long-term curation facility. Their primary responsibility toward materials is to analyze and hold collections until permanent housing can be located. They have no formal collections-management standards and are serving only as an interim-curation facility.

Comments

1. Some environmental controls are in place at SAIC.

2. Mountain Home AFB associated documentation at SAIC requires complete rehabilitation to comply with federal guidelines for curation.

3. Storage of associated records from Mountain Home AFB does not meet modern archival standards.

4. No human skeletal remains were recovered during archaeological investigations on Mountain Home AFB.

Recommendations

1. ACC should assist Mountain Home AFB in selecting a permanent repository for the associated documentation currently held by SAIC.

2. Once a repository is selected (preferably ASI), associated documentation should be sent there for complete rehabilitation.

5

Missouri

Whiteman Air Force Base, Knob Noster

Installation Summary for Whiteman AFB

Volume of Artifact Collections: None

Linear Feet of Records: 0.90 linear feet
On Base: 0.31 linear feet
Off Base: 0.59 linear feet (Historic Preservation Associates)
Compliance Status: All associated documentation stored at Whiteman AFB and Historic Preservation Associates (HPA) requires complete rehabilitation to comply with current federal regulations and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Whiteman AFB has no formal agreement for curation of its documentation with any repository other than the USACE Kansas City District office. At the time of this evaluation, Whiteman AFB was conducting a survey of its property. No formal plan for curation funding will be considered until this survey is completed.

Recommended Curation Facility: The USACE Kansas City District should complete its Whiteman AFB project. All project records should then be sent to the University of Missouri, Columbia (UMC), for rehabilitation and long-term curation. A cooperative agreement should be made among the Kansas City District, Whiteman AFB, and UMC to provide adequate funding to the repository for the curation of Whiteman AFB associated documentation.

Repository 1: Whiteman AFB

Date of Visit: October 11, 1995

Point of Contact: Don Meuschke

A total of 0.31 linear feet of associated documentation from archaeological projects conducted and in progress on Whiteman AFB and Missile Range is stored in the Environmental Office, Whiteman AFB. The material consists of one bound report (0.27 linear feet) written by Environmental Research Center for a 1989 Peacekeeper Rail Garrison project, and one manila folder containing 0.04 linear feet of correspondence and work plans for an ongoing project on Whiteman AFB (Figure 17). Because of the lack of any other materials pertaining to archaeological investigations at Whiteman AFB, it was determined unnecessary to assess the adequacy of the structure, collections-management standards, or storage conditions.

Whiteman AFB is a military installation that possesses neither curation facilities nor any curation and/or management standards. However, if

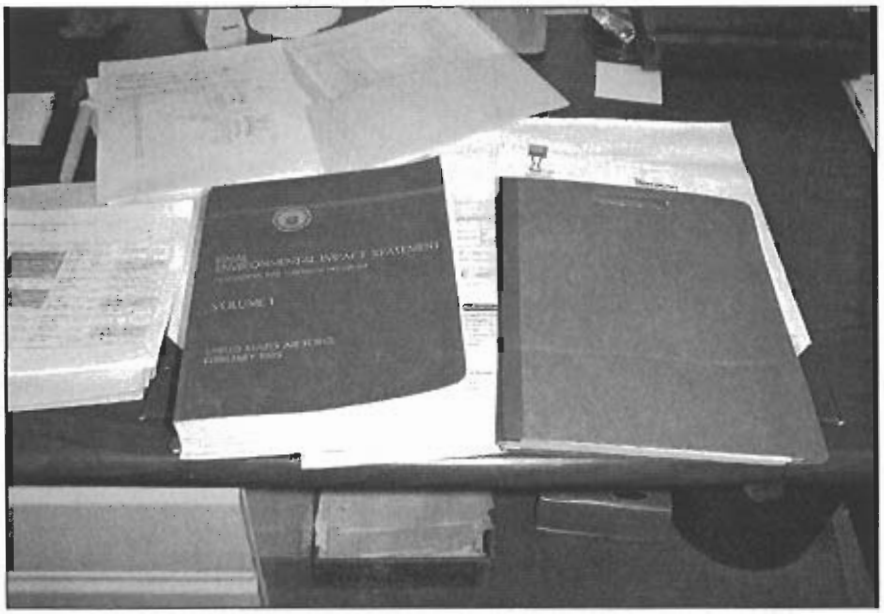

Figure 17. Extent of associated documentation stored at Whiteman AFB.

materials (artifacts, paper records, or both) are generated as a result of archaeological investigations on the installation, Whiteman AFB is responsible for holding the materials until directed to transport them to a proper curation facility.

Comments

1. Whiteman AFB associated documentation requires complete rehabilitation to comply with federal curation guidelines.

2. No human skeletal remains were recovered during archaeological investigations on Whiteman AFB.

3. Storage of associated records from Whiteman AFB does not meet modern archival standards.

Recommendations

1. Duplicate all associated documentation held on base onto acid-free paper and place in acid-free folders, labeled in indelible ink, for use by base personnel.

2. Create a duplicate, security copy of associated documentation on acid-free paper or microfilm and store these materials in a separate, fireproof, secure location.

3. Send originals of associated documentation to a repository meeting provisions outlined in 36 CFR Part 79, preferably to facilities located at UMC, for long-term, archival curation.

Repository 2: Historic Preservation Associates

Date of Visit: October 17, 1995

Points of Contact: Tim Klinger, Director, and John Gray, Staff Archaeologist

HPA is located in a historic section of downtown Fayetteville, Arkansas. Acquired by the company in April 1995, this structure is approximately 100 years old and formerly served as the Washington County Courthouse and jail. The structure contains areas for office space, library storage, artifact study, and report preparation.

Offices for staff are located on the first and second floors. In addition, report preparation and some artifact study are carried out on the second floor. The library is housed in the basement of

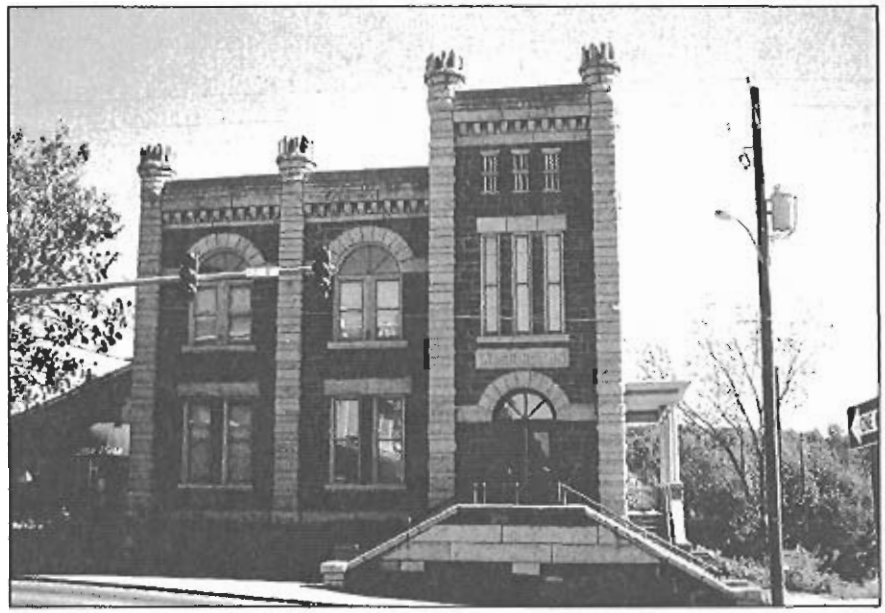

Figure 18. Exterior of HPA's facilities.

the structure. Most of the firm's activities are conducted at this facility; however, HPA also owns a warehouse where artifacts from projects are processed and temporarily stored.

HPA is currently in the process of completing an archaeological survey of parts of Whiteman AFB. Because it is not a long-term curation facility, none of the collections generated by this project will be stored at HPA. However, while the project is in progress, the firm houses approximately 0.59 linear feet of associated documentation.

Assessment

Structural Adequacy

The structure housing HPA dates to the 1890s. It is structurally sound and has undergone internal and external renovations for its current function; however, it has never been considered a long-term curation facility.

The 1,226-ft^2 structure has a concrete foundation and stone exterior walls (Figures 18 and 19). The roof, original to the structure, is flat. No cracks or leaks in the foundation or roof have been reported by staff. There are two floors aboveground and one below. The basement serves as the location of the library and of the room where the furnace and water heater are found. There have been numerous internal renovations to the facility since its purchase by HPA. All windows at HPA have shades and wooden frames. According to HPA staff, none of these windows has shown any evidence of air or water leakage, and most have been replaced within the last 10 years.

Building utility systems include heat, running water, rest rooms, telephone lines, air-conditioning, and electricity. The plumbing and electrical systems and the gas, forced-air heating system were last renovated approximately 10 years ago. No evidence of water damage has been reported by HPA personnel.

Environmental Controls

The structure is equipped with heating and air-conditioning systems. Temperature is set to staff preferences. Humidity is not controlled, but a dehumidifier has been ordered and will be placed in the basement. Dust filters are present on the furnace ducts, and the building is maintained nightly by a contracted janitorial service.

Pest Management

Pest-management procedures are performed by a certified company on a regular basis. No infestations have been reported by HPA staff.

Figure 19. South basement windows and detail of stone walls, HPA facilities.

Security

The structure has key and dead-bolt locks on all exterior doors. Main doors for offices also have key locks, and locks are present on all windows. According to HPA staff, there have been no incidents of unauthorized entry during the time they have used the structure. Only the basement windows, which are located close to the ground, can be considered easily accessible; however, they are small enough to deter anyone from attempting entry. In addition to the deterrents mentioned above, HPA staff limit the quantity of material stored at the office and the length of time that it is kept on the premises. Their objective is to analyze materials and then send them to a long-term curation repository as soon as possible.

Fire Detection and Suppression

Smoke detectors and fire extinguishers are present throughout the facility. Fire extinguishers were last inspected in April 1995. According to staff, no parts of the structure are considered fireproof.

Artifact Storage

No artifacts recovered from Whiteman AFB are stored at HPA.

Records Storage

Approximately 0.59 linear feet of associated documentation from an ongoing survey of Whiteman AFB are currently curated at HPA (Figure 20). Because of their active status and the fact that HPA is not a long-term curation facility, the records have not been archivally processed.

Associated documentation from the HPA project at Whiteman AFB is stored in one 11-x-17-inch, acidic-cardboard box (Figure 21), which is stored on an open, metal shelving unit that measures 3 x 2 feet (w x d). The box is stored in the project coordinator's office on the second floor of the structure. The box is in good condition, and its contents are directly labeled. Most of the records are loose in the box, but some are kept in an acidic-paper folder. Documents are loosely organized by date and are in good general condition, but contaminants (e.g., paper clips and staples) are present. Documentation comprises 0.59 linear feet and is easily accessible. Thus far, only limited information for the project is available on computer. As the project moves toward completion, more data will be generated and the requisite duplicates created. Any security copies that are made will be stored at HPA headquarters. As stated earlier, none of the records pertaining to Whiteman AFB is archivally stored at the present time.

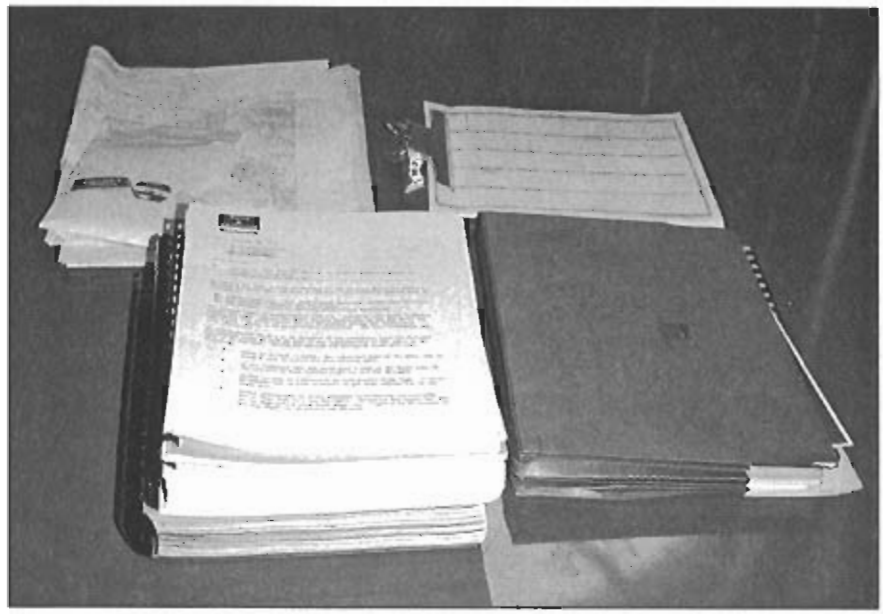

Figure 20. Associated documentation stored at HPA.

Paper Records

Paper records associated with archaeological investigations on Whiteman AFB total 0.2 linear feet. These include administrative (0.13 linear feet) and background (0.07 linear feet) records.

Photographic Records

Photographic records associated with archaeological projects on Whiteman AFB, which measure 0.02 linear feet, are stored in the box containing other associated documentation.

Maps and Oversized Documents

Maps associated with archaeological work on Whiteman AFB, totaling 0.04 linear feet, are stored in the box containing other associated documentation.

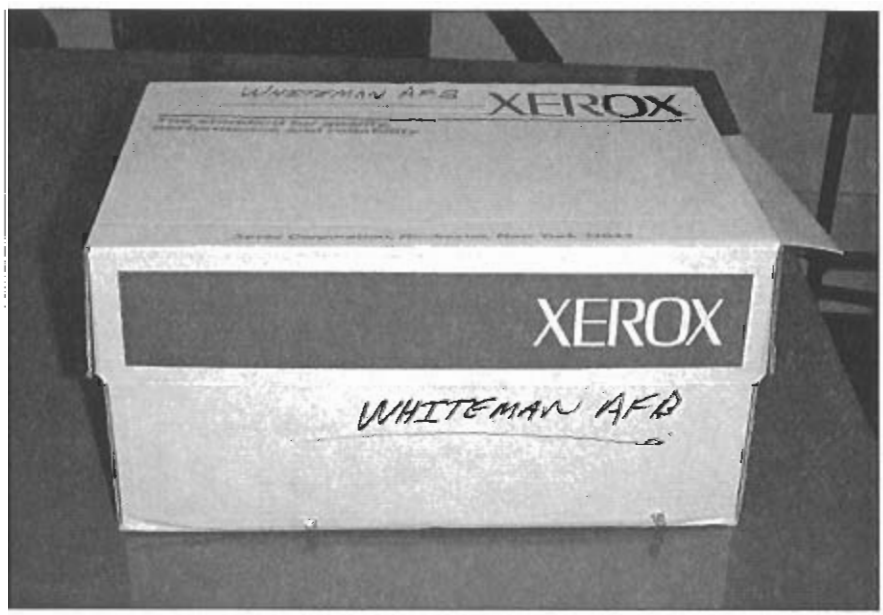

Figure 21. Primary documentation container, HPA.

Reports

Reports associated with archaeological work on Whiteman AFB measure 0.33 linear feet. These are stored in the box containing other associated documentation.

Collections-Management Standards

As noted above, HPA is a contract-archaeology firm that is not interested in serving as a long-term curation facility. Their primary responsibility toward collections is to analyze and store them until a long-term curation facility can be located. No formal curation or collections-management standards are in place at HPA, which is serving only as an interim-curation facility until the project at Whiteman is completed.

Comments

1. Whiteman AFB collections require complete rehabilitation to comply with federal curation guidelines.

2. No human skeletal remains were recovered during archaeological investigations on Whiteman AFB.

3. Storage of associated records from Whiteman AFB does not meet modern archival standards.

Recommendations

1. ACC should assist Whiteman AFB in expediting its current project with the USACE Kansas City District, so that a long-term repository for the records at HPA can be located.

2. Send all original paper records to the state repository (UMC) for complete rehabilitation once the project is completed. An alternative would be to send the materials to the USACE Kansas City District office if they are adequately rehabilitated prior to storage.

3. Replace current primary and secondary containers with an acid-free records box or place them in a metal filing cabinet and acid-free folders, respectively.

4. Remove all contaminants (e.g., paper clips and staples) from the records.

5. Duplicate all paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place folders in acid-free cardboard boxes, and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

6. Organize records according to modern archival procedures and create a finding aid for the collection.

7. Duplicate all records onto acid-free paper or microfilm and store these materials in a separate, fireproof, secure location.

6

Nevada

Nellis Air Force Base, Las Vegas

Installation Summary for Nellis AFB

Volume of Artifact Collections: 20.71 ft^3
On Base: None
Off Base: 16.18 ft^3 (Desert Research Institute, Reno [DRI, Reno]); 2.02 ft^3 (Harry Reid Center for Environmental Studies, University of Nevada, Las Vegas [UNLV]); 1.51 ft^3 (Dames & Moore [D&M]); 1 ft^3 (Desert Research Institute, Las Vegas [DRI, LV])
Compliance Status: Collections stored at DRI, Reno; DRI, LV; and D&M require partial rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials, while those stored at UNLV require complete rehabilitation.

Linear Feet of Records: 14.47 linear feet
On Base: 1.09 linear feet
Off Base: 11.34 linear feet (TRC Environmental Solutions, Inc. [TRC ESI]); 1.44 linear feet (DRI, Reno); 0.24 linear feet (D&M); 0.21 linear feet (DRI, Las Vegas); 0.16 linear feet (UNLV)
Compliance Status: Associated documentation stored at DRI, Reno; D&M; DRI, LV; and UNLV requires partial rehabilitation to comply with federal regulations and modern archival-preservation standards, while that stored at TRC ESI and Nellis AFB requires complete rehabilitation.

Human Skeletal Remains: None

Status of Curation Funding: Nellis AFB has no formal agreement with any repository for curation of its associated documentation.

Recommended Curation Facility: ACC should send all collections to DRI, LV for rehabilitation and long-term curation. Even though DRI, LV is not a curation facility, they do have the capability to store ACC materials. Their facilities are comparable, and in many cases superior, to other repositories in Nevada, and would represent the best, most cost-effective storage for ACC collections. ACC should approach DRI, LV regarding curation of its collections from Nevada installations. A cooperative agreement should be made between ACC, Nellis AFB, and DRI, LV to provide adequate funding to the repository for the curation of Nellis AFB archaeological collections.

Repository 1: Nellis AFB

Date of Visit: January 8, 1996

Point of Contact: Eric Watkins

Approximately 50 bound cultural resource management (CRM) reports (Figure 22) and two file drawers of correspondence (Figure 23) associated with archaeological investigations on Nellis AFB and Nellis AFR (1.09 linear feet) are stored in the Environmental Office, Nellis AFB.

Figure 22. Extent of associated documentation at Nellis AFB.

Because of the lack of any other materials pertaining to archaeological investigations at Nellis AFB, a complete curation-needs assessment was not performed.

Nellis AFB is a military installation that possesses neither curation facilities nor any curation and/or management standards. However, if materials (artifacts, paper records, or both) are generated as a result of archaeological investigations on the installation, Nellis AFB is responsible for holding the materials until directed to transport them to a proper curation facility.

Comments

1. Associated documentation stored at Nellis AFB requires complete rehabilitation to comply with federal curation guidelines.

2. No human skeletal remains were recovered during archaeological investigations on Nellis AFB.

3. Storage of associated records from Nellis AFB does not meet modern archival standards.

Figure 23. File cabinet storing paper records at Nellis AFB.

Recommendations

1. Duplicate all documentation currently held on base onto acid-free paper and place in an acid-free folder for use by base personnel.

2. Create a duplicate, security copy on acid-free paper or microfilm and store in a separate, fireproof, secure location.

3. Send originals to a qualified repository, preferably DRI, LV, for long-term, archival curation.

Repository 2: Dames & Moore

Date of Visit: January 10, 1996

Point of Contact: Robin McMullen, Staff Archaeologist

Artifacts totaling 1.51 ft^3 and 0.24 linear feet of associated documentation from two archaeological projects conducted at Nellis AFB and Nellis AFR are curated at D&M, Las Vegas. The artifact collection includes materials from prehistoric and historical-period contexts. Of the total, prehistoric material classes include lithics (50%) and ceramics (40%), whereas historical-period material classes present include glass (1%) and metal (4%). Botanical specimens (noncultural materials collected for environmental baseline studies) are also included in the collection (4%). The repository is approximately 25 years old and contains areas for office space, library storage, artifact processing and study, and report preparation.

Assessment

Structural Adequacy

The structure housing D&M was constructed in the 1970s and has undergone numerous internal and external renovations to better serve its current functions. The repository encompasses approximately 7,500 ft^2, of which approximately 544 ft^2 is dedicated to temporary artifact storage.

The structure has a concrete foundation and brick exterior walls. Its shingled roof is original to the structure. Both the foundation and roof are structurally sound; no cracks or leakage have been reported by staff. The building serves as office and laboratory space. Internal renovations have included the addition of plasterboard walls used to delineate offices. All windows in the repository have vertical blinds and aluminum frames. The windows are original to the structure, but no air or water leakage has been noted by staff. The facility is structurally sound, but has never been considered a long-term curation facility.

The facility has heating, running water, rest rooms, telephone lines, air-conditioning, and electricity; All utility systems are approximately three years old; none of the systems has experienced a major malfunction, and no evidence of water damage has been reported by D&M staff.

Environmental Controls

The structure is equipped with heating and air-conditioning systems; temperature is set to staff preferences. Humidity is not controlled. However, the low relative humidity of the Las Vegas area results in even lower humidity levels within buildings. Thus, relative humidity is estimated to be below 30 percent year-round at D&M's facility. Dust filters are present on the heating/air-conditioning ducts, and the facility is maintained by a contracted janitorial service on a daily basis.

Pest Management

Pest-management procedures are performed by a certified company on a monthly basis. No infestations have been reported by staff.

Security

Exterior doors are equipped with dead-bolt locks. Key locks are present on office doors, and key pads are on doors from a hallway. A security guard is present at night. According to staff, there have been no incidents of forced entry through windows or doors.

Fire Detection and Suppression

Smoke detectors and fire extinguishers are present throughout the facility. Fire extinguishers

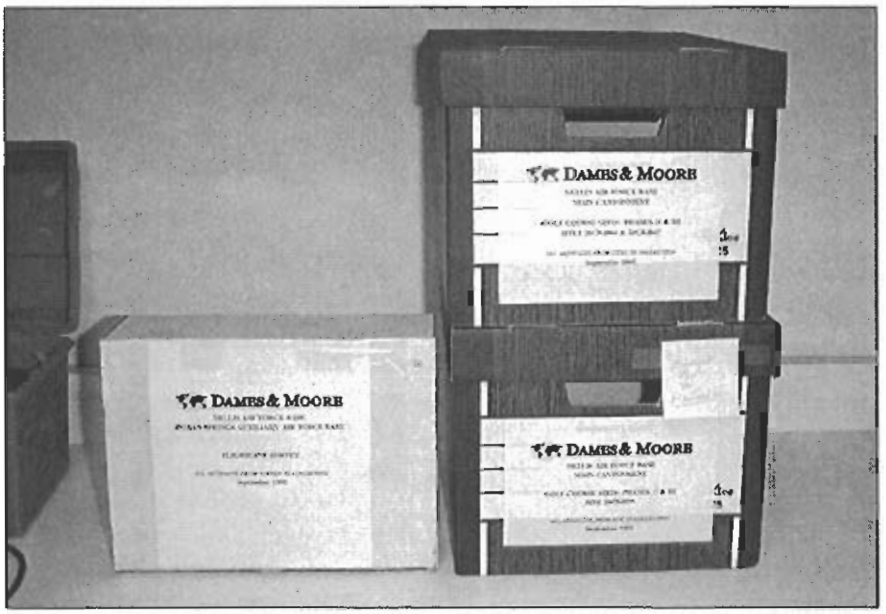

Figure 24. Primary storage containers at D&M.

were last inspected in April 1995. None of the facility is considered fireproof.

Artifact Storage

A total of 1.51 ft^3 of prehistoric and historical-period material from projects conducted at Nellis AFB and Nellis AFR is currently housed at D&M. The collections storage area is one large room in the northeast portion of the structure. The room is used for temporary storage; D&M does not curate collections on a long-term basis; artifacts are held only until analyses are complete. The collections storage area is structurally identical to the remainder of the structure; they share common environmental, utility, fire-detection and -suppression, and security systems. Maintenance and pest-management schedules are also the same as for the rest of the facility. All collections are stored on standard, metal shelving units. Boxes are not overstacked, and clutter is kept to a minimum. The collections storage area is at 50-percent capacity.

Primary Containers

Material is stored in two acid-free, cardboard boxes that measure 12 x 10 and 12 x 15 inches (Figure 24). Labeling is applied directly to the boxes; label information includes investigator, site number, project number, provenience, and date.

Secondary Containers

Secondary containers are 4-mil, plastic, zip-lock bags, some of which are nested within one another. Labeling is applied directly to the bags.

Human Skeletal Remains

No human skeletal remains from Nellis AFB or Nellis AFR are curated at D&M.

Records Storage

Associated documentation from Nellis AFB archaeological projects is arranged by project and site number. Documentation measures 0.24 linear feet and is easily accessed. Documents are stored in one manila folder and two binders. These are housed, near the artifacts, in the collections storage area.

Paper Records

Associated documentation stored at this facility includes 0.16 linear feet of paper records. These are administrative (0.05 linear feet), background (0.01 linear feet), and excavation (0.10 linear feet) records. Documents are easily accessible, but the presence of contaminants (e.g., paper clips and staples) was noted.

Photographic Records

Photographs and slides associated with archaeological investigations on Nellis AFB, which total 0.08 linear feet, are present in the records collection.

Collections-Management Standards

As noted above, D&M is not a long-term curation facility. They hold collections for analysis until permanent housing is located. Collections-management standards regarding field curation for in-house projects are, however, in place. Laboratory guidelines are present and cover labeling, accessioning, and analysis. The guidelines exist in order to better prepare collections for permanent housing.

D&M possesses collections-management guidelines for associated documentation. For example, all documents are available to bona-fide researchers. They are checked out through the records manager and have been duplicated for security reasons. Copies are on-site and on computer. Contract reports are also available for examination in their library.

Comments

1. Temperature controls are in place throughout the repository.

2. Intrusion-detection and -deterrent measures in place at D&M meet the minimum guidelines in 36 CFR Part 79.

3. Artifact collections are housed in acid-free, Hollinger boxes. Secondary containers are plastic, zip-lock bags.

4. No human skeletal remains were recovered during archaeological investigations on Nellis AFB.

5. Storage of all associated records from Nellis AFB does not meet modern archival standards.

Recommendations

1. ACC should assist Nellis AFB in selecting a repository for collections currently held by D&M.

2. Transfer materials stored at D&M to an appropriate repository for partial rehabilitation and long-term curation.

3. Remove all contaminants (e.g., paper clips and staples) from associated documentation.

4. Duplicate all paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place all folders in acid-free, cardboard boxes and apply adhesive polyethylene plastic label holders, with acid-free inserts, to the boxes.

5. Arrange all records according to modern archival procedures and create a finding aid for the documentation.

6. Duplicate all records onto acid-free paper or microfilm and store in a separate, fireproof, secure location.

Repository 3: Desert Research Institute (Headquarters)

Date of Visit: January 9, 1996

Point of Contact: Anne DuBarton, Laboratory Supervisor

Assessment

Structural Adequacy

A total of 0.21 linear feet of associated documentation from archaeological investigations on Nellis AFB is curated at this facility. The Las Vegas structure housing DRI headquarters includes offices, laboratories, and collections storage areas, and is referred to here as Repository 3. Offices for staff are located throughout the facility, but

are concentrated in the southeastern portion of the structure. Most of the northern half of the structure functions as temporary collections storage and laboratory space. The DRI headquarters structure contains only those artifact collections that are being analyzed, thus a full structural evaluation for Repository 3 was not warranted. However, DRI collections are permanently stored in two other, separate facilities. One is located in Las Vegas, a short distance from DRI headquarters (Repository 4), and the other is located in Reno (Repository 5). These two repositories also were visited by St. Louis District personnel, and assessments of their facilities follow.

Artifact Storage

The DRI headquarters structure only houses artifact collections that are in the process of being analyzed. Collections are permanently stored in two separate facilities. One is located in Las Vegas, a short distance from the DRI headquarters, while the other is located in Reno. Refer to the assessments of both repositories for discussions of Nellis AFB artifacts being curated by DRI.

Human Skeletal Remains

No human skeletal remains recovered from Nellis AFB are curated at DRI.

Records Storage

Associated documentation is stored within a standard, letter-size, metal filing cabinet at the DRI headquarters building. All documents are arranged by county and site number. Documentation measures approximately 0.21 linear feet and is easily accessible.

Paper Records

Paper records associated with archaeological investigations on Nellis AFB, which total 0.16 linear feet, are present at DRI, LV.

Collections-Management Standards

See discussion under Repository 4.

Comments

1. DRI, LV headquarters facilities have environmental controls in place.

Recommendations

1. Remove all contaminants (e.g., staples, paper clips, and rubber bands) from the documents.

2. Duplicate all paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place all folders in acid-free, cardboard boxes, and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

3. Arrange associated documentation according to modern archival procedures and create a finding aid for the documentation collection.

Repository 4: Desert Research Institute (Las Vegas Repository)

Date of Visit: January 9, 1996

Point of Contact: Anne DuBarton, Lab Supervisor

Collections stored at the DRI, LV repository include 1 ft^3 of artifacts from sites on Nellis AFB. The collection includes materials from prehistoric and historical-period contexts. Of the total, prehistoric material classes include lithics (90%) and ceramics (5%), whereas the sole historical-period material class present is metal (5%). DRI, LV is not a long-term curation facility; they are holding the Nellis AFB materials only until analyses are completed.

Assessment

Structural Adequacy

The DRI, LV repository is a single-story warehouse structure constructed in the 1980s; it has undergone minimal interior renovations since DRI acquired it. The repository comprises

approximately 2,067 ft^2, of which 900 ft^2 is dedicated to long-term artifact and records curation. In addition to the space allocated for long-term curation, the facility has space for artifact-study areas.

The structure has a concrete foundation with poured-cement and stucco exterior walls. The built-up, asphalt roof is original to the structure. No cracks in the foundation or leakage through the roof have been reported by staff. The structure functions solely as storage space. Interior renovations consist primarily of the addition of shelving units and an intrusion-alarm system. The single window in the repository has shades and an aluminum frame. According to DRI, LV staff, there has been no evidence of air or water leakage from the window.

Utility systems present include heating, running water, rest rooms, telephone lines, air-conditioning, and electricity. All utility systems are original to the structure. According to DRI, LV staff, there has been no evidence of water damage in the collections area or other parts of the structure, which is sound and adequate for the long-term curation of archaeological collections.

Environmental Controls

The structure has heating and air-conditioning systems; temperature is set to staff preferences, usually 65–75°F. Humidity is monitored on a weekly basis by staff, and is kept at less than 30 percent. Dust filters are present on the air-conditioning ducts, and the repository is maintained by the lab supervisor on a weekly basis.

Pest Management

Pest-management procedures are performed on an as-needed basis by a professional pest-management company; no pest-infestation problems have been reported by DRI, LV staff in the past few years.

Security

The structure is equipped with key padlocks and dead-bolt locks for all doors. The sole window is sealed shut. In addition, the facility has an intrusion alarm that is wired to the local police department. Motion detectors are present in some portions of the facility, and access to some areas is controlled. According to DRI, LV staff, there has been no evidence of unauthorized entry. Because it is a single-story structure, all windows and doors are accessible from the outside; however, current security measures have served as useful deterrents.

Fire Detection and Suppression

According to staff, no parts of the structure are considered fireproof. A sprinkler system is the only fire-detection or -suppression measure present.

Artifact Storage

Storage Units

All collections are stored on standard, metal shelving units. Boxes are not overstacked, and clutter is kept to a minimum. DRI, LV collections storage is at 80-percent capacity.

Primary Containers

The objects are stored in a 12-x-12-x-10-inch, acid-free, cardboard box (Hollinger type) that is directly labeled with relevant site numbers (Figure 25).

Secondary Containers

Inside the primary container, objects are placed within plastic, zip-lock bags that also contain a slip of acid-free paper that lists project number, reference number, provenience, site number, specimen number, weight, quantity, catalog number, and date.

Human Skeletal Remains

No human skeletal remains recovered from Nellis AFB are curated at DRI, LV.

Records Storage

No records associated with archaeological investigations on Nellis AFB are curated at this repository. Refer to the discussion of Repositories 3 and 5, above and below, for a discussion of Nellis AFB records held by DRI.

Collections-Management Standards

DRI, LV is not a curation facility, but because they are part of the University of Nevada system,

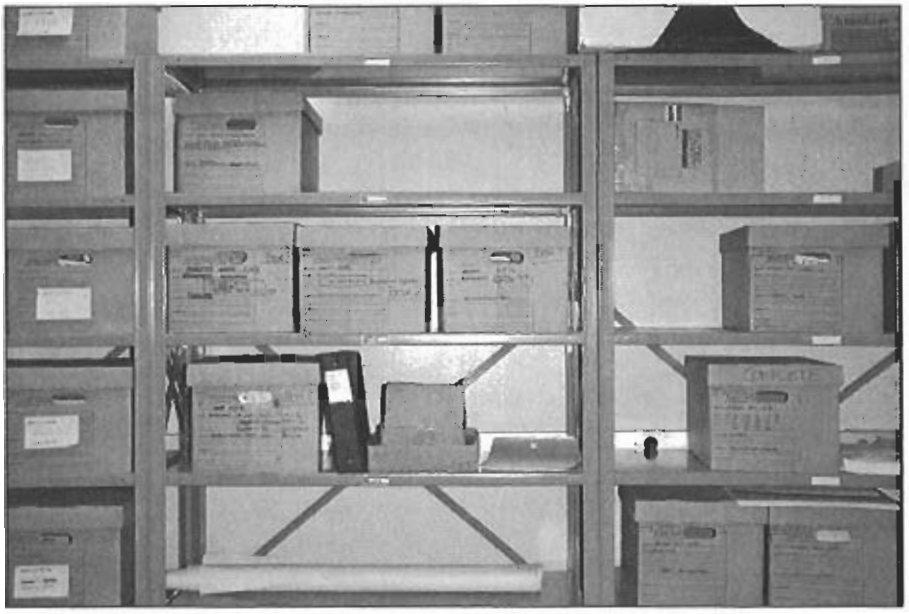

Figure 25. Primary collections storage area at DRI, LV.

they have minimal management standards in place for collections. Materials are stored by site, if possible, and are accessioned upon receipt. Collection locations are noted in a master location binder. Documents are maintained by a records manager and are available to any archaeologist on staff. A check-out system is in place. A security copy is available on acid-free paper and is stored at the DRI facility in Reno. The repository does not have any curation guidelines because it does not curate collections generated by other institutions. DRI does follow guidelines created by the Department of Energy (DoE) that pertain to collections discovered on DoE property.

Comments

1. Temperature controls are in place throughout the repository.

2. Intrusion-detection and -deterrent measures for DRI, LV meet the minimum guidelines in 36 CFR Part 79.

3. Nellis AFB collections are housed in acid-free, Hollinger boxes; secondary containers are plastic, zip-lock bags.

4. No human skeletal materials were recovered from archaeological investigations on Nellis AFB.

5. Storage of associated records from Nellis AFB does not meet modern archival standards.

6. DRI, LV has a full-time lab supervisor who also serves as curator for archaeological collections

Recommendations

1. Labels for secondary containers should be made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper), labeled in indelible ink, and inserted into the secondary containers.

2. Remove all contaminants (e.g., staples, paper clips, and rubber bands) from the documents.

3. Duplicate all paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place all folders in acid-free, cardboard boxes, and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

4. Organize associated documentation according to modern archival procedures and create a finding aid for the documentation collection.

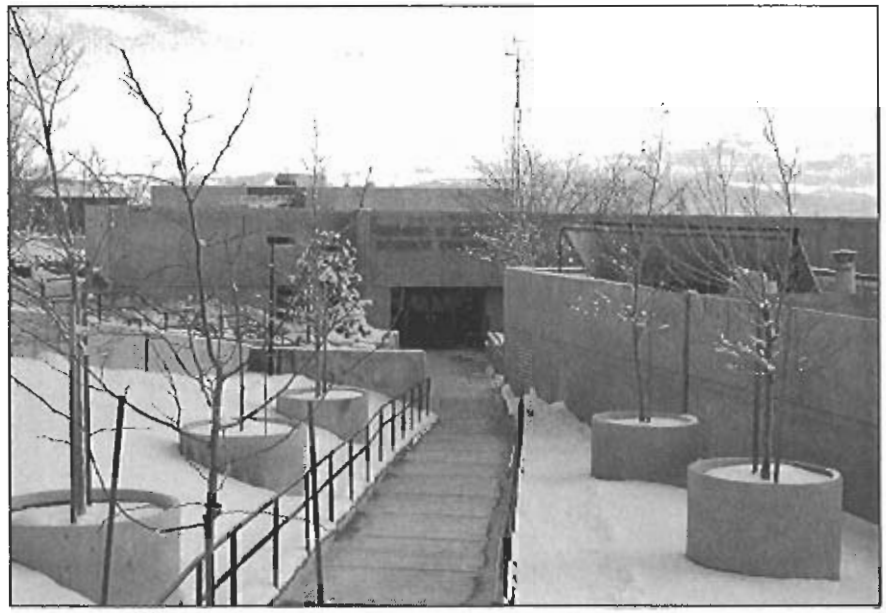

Figure 26. Exterior of the Maxey Science Center, location of DRI, Reno.

Repository 5: Desert Research Institute, Reno

Date of Visit: January 9, 1996

Point of Contact: Anne DuBarton, DRI, LV Lab Supervisor, and Cher Walton

The Maxey Science Center (Figure 26) was built to serve as the DRI, Reno repository.

Approximately 16.18 ft^3 of artifacts and 1.44 linear feet of associated documentation from archaeological investigations on Nellis AFB are curated at this facility. The artifact collection includes materials from prehistoric and historical-period contexts. Of the total, prehistoric material classes include lithics (56%) and ceramics (0.8%), whereas historical-period material classes present include ceramics (0.3%), glass (0.3%), and metal (41%). Botanical and faunal remains are also included in the collections (0.8% each).

Assessment

Structural Adequacy

The structure housing DRI, Reno is approximately 20 years old, and has a concrete foundation and concrete walls. The built-up asphalt roof is original to the structure. There have been cracks in the basement wall, but the cracks were repaired, and no additional cracks have been reported. The facility includes a laboratory, offices, and a collections storage area. Internal renovations have been made to the facility in the form of added interior walls. There are no windows in the facility. The repository comprises approximately 22,894 ft^2, of which 1,450 ft^2 is dedicated to long-term artifact and records curation. In addition to space for long-term curation, the facility also has areas for artifact study.

Utility systems present include heating, running water, rest rooms, telephone lines, and electricity. All utility systems are original to the structure except for the heating system, which was installed in 1992. According to DRI, Reno staff, there has been no evidence of water damage in the building, including the collections storage area.

Environmental Controls

The structure has controls for heating only; temperature is set to staff preferences. Humidity is not controlled or monitored, and dust filters are not present on the heating ducts. Janitorial services are provided by staff on a weekly basis.

Pest Management

Pest maintenance occurs on an as-needed basis. There has been only one major pest-infestation problem at this repository; it has been controlled, and DRI, Reno staff have reported no other pest-infestations in the past few years.

Security

The structure is equipped with key-pad locks and dead-bolt locks for all doors. There are no windows in the facility. According to DRI, Reno staff, there has been no evidence of unauthorized entry.

Figure 27. Primary containers on metal shelving units at DRI, Reno.

Fire Detection and Suppression

According to staff, no parts of the structure are considered fireproof. The only fire-detection or -suppression equipment present consists of fire extinguishers.

Artifact Storage

DRI, Reno has devoted 1,450 ft^2 to long-term curation of all archaeological collections from throughout Nevada. The facility currently stores 16.18 ft^3 of artifacts from Nellis AFB. The collections storage area is structurally identical to the rest of the repository and shares common environmental controls, utilities, fire-detection and -suppression, and security systems. Maintenance and pest-management schedules are the same as for the rest of the facility. Boxes are not overstacked, and clutter is kept to a minimum. DRI, Reno collections storage is at 60-percent capacity.

Storage Units

Collections are archaeological, botanical, and geological in nature, and are stored on standard, metal shelving units (Figure 27). Archaeological collections comprise 33 percent of the materials.

Primary Containers

The objects are stored in a 12-x-12-x-10-inch, acid-free, cardboard box with telescoping lid, which is directly labeled with relevant site numbers (Figure 28).

Secondary Containers

Inside the primary container, artifacts are within plastic, zip-lock bags that also contain a slip of acid-free paper listing project number, reference number, provenience, site number, specimen number, weight, quantity, catalog number, and, date.

Human Skeletal Remains

No human skeletal remains recovered on Nellis AFB are curated at DRI, Reno.

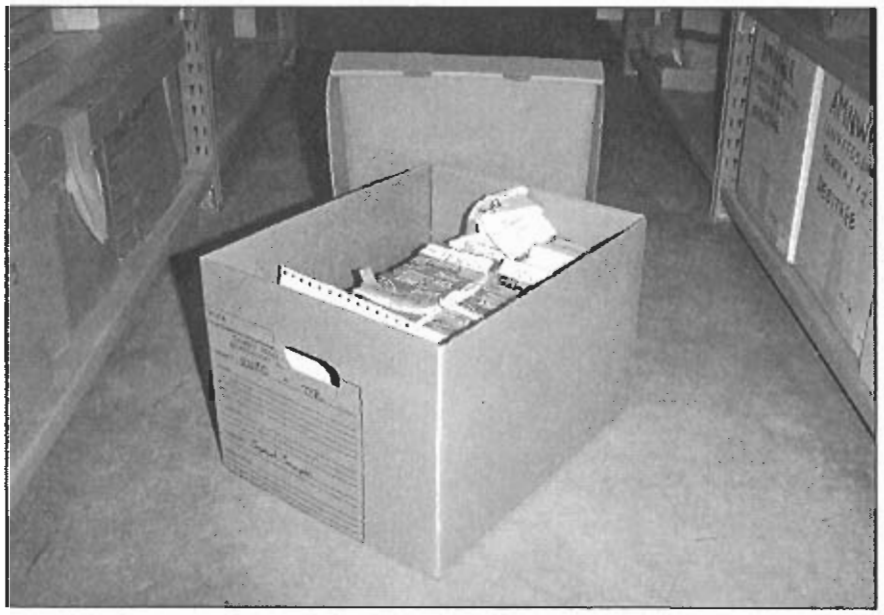

Figure 28. Primary container with telescoping lid at DRI, Reno.

Records Storage

Associated documentation from archaeological investigations on Nellis AFB total 1.44 linear feet. These are stored in a standard, letter-size, metal filing cabinet at this repository.

Most associated documentation held by DRI is stored at Repository 3. Refer to the assessment of that repository, above, for an additional discussion of Nellis AFB records curated by DRI.

Paper Records

Paper records associated with archaeological projects on Nellis AFB total approximately 1.18 linear feet. These include administrative records (0.01 linear feet), survey records (1.17 linear feet), and analysis sheets from one archaeological project conducted by DRI on Nellis AFB property (Figure 29).

Figure 29. Extent of Nellis AFB associated documentation stored at DRI, Reno.

Photographic Records

A total of 0.25 linear feet of photographic records associated with archaeological work on Nellis AFB is stored at DRI, Reno.

Maps and Oversized Documents

A small quantity (0.01 linear feet) of maps associated with archaeological work on Nellis AFB is stored at DRI, Reno.

Collections-Management Standards

Because DRI is a part of the University of Nevada system, they have minimal management standards in place for collections. Materials are stored by site, if possible, and are accessioned upon receipt. Collection locations are noted in a master location binder. Documents are maintained by a records manager and are available to any archaeologist on staff. A check-out system is in place. A security copy is available on acid-free paper and is stored at the DRI facility in Reno. The repository does not have any curation guidelines because it does not curate collections generated by other institutions. DRI does follow guidelines created by the Department of Energy (DoE) that pertain to collections discovered on DoE property. Anne DuBarton is responsible for all ACC collections held by DRI.

Comments

1. A heating system is the only environmental control in place in the repository.

2. Intrusion-detection and -deterrent measures for DRI, Reno meet the minimum guidelines in 36 CFR Part 79.

3. Nellis AFB collections are housed in acid-free, Hollinger boxes; secondary containers are plastic, zip-lock bags.

4. No human skeletal remains were recovered from archaeological investigations on Nellis AFB.

5. Storage of associated records from Nellis AFB does not meet modern archival standards.

6. DRI, Reno has a full-time lab supervisor who also serves as curator for archaeological collections.

Recommendations

1. Labels for secondary containers should be made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper), labeled in indelible ink, and inserted into the secondary containers.

2. Remove all contaminants (e.g., staples, paper clips, and rubber bands) from the documents.

3. Duplicate all paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place all folders in acid-free, cardboard boxes, and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

4. Arrange associated documentation according to modern archival procedures and create a finding aid for the documentation collection.

Repository 6: TRC Environmental Solutions, Inc.

Date of Visit: January 12, 1996

Point of Contact: Robert Mason, Project Director

TRC ESI is located in Irvine, California. The repository is approximately eight years old and primarily serves as office space. Approximately 11.34 linear feet of associated documentation from archaeological investigations on Nellis AFB by TRC ESI are curated at the facility.

Assessment

Structural Adequacy

The structure housing TRC ESI was constructed in 1988 and has undergone numerous internal and external renovations to better serve its current functions. The structure has a concrete

foundation and concrete exterior walls. It has a roll-on roof that is original to the structure. The foundation and roof are structurally sound; no cracks or leakage have been reported by staff. Internal renovations have included the addition of plasterboard walls to delineate office boundaries. All windows in the repository have aluminum frames, vertical blinds, and ultraviolet filters. The windows are original to the structure, but no leakage of air or water through them has been reported by staff.

Building utility systems include: heat, running water, rest rooms, telephones, air-conditioning, and electricity. All utility systems are original to the building and have experienced no major malfunctions. No evidence of water damage has been noted by any personnel or by the facility manager.

The repository encompasses approximately 64,430 ft^2, of which approximately 18 ft^2 is dedicated to records storage. The facility is structurally sound, but has never been considered a long-term curation facility.

Environmental Controls

The structure is equipped with heating and air-conditioning systems; temperature is set to staff preferences. Humidity is not controlled. Dust filters are present on the furnace/air-conditioning ducts, and the building is maintained by a contracted janitorial service on a daily basis.

Pest Management

Pest-management procedures are performed by a certified company on a monthly basis. No pest infestations have been reported by staff.

Security

The repository has an intrusion-alarm system that is wired into the local police department, key locks on office doors, and key pads on doors that lead to specific areas of the building. Motion detectors are also present throughout the facility, and dead-bolt locks are located on exterior doors. Windows do not open, and ground-floor windows are connected to the intrusion- alarm system. According to staff, there have been no incidents of forced entry through any windows or doors.

Fire Detection and Suppression

Fire walls and fire extinguishers (dry chemical CO_2) are present throughout the facility. Smoke detectors, heat sensors, and a sprinkler system are in place. The repository is wired into the local fire department's computer system.

Artifact Storage

No artifacts recovered during archaeological work on Nellis AFB are curated at TRC ESI.

Human Skeletal Remains

No human skeletal remains recovered during archaeological work on Nellis AFB are curated at TRC ESI.

Records Storage

The collections storage area is at one end of a main hall on the second floor of the structure. The records area is structurally identical to the rest of the repository and shares common environmental controls, utilities, fire-detection and -suppression, and security systems. Maintenance and pest-management schedules are the same as for the remainder of the facility. Associated documentation from Nellis projects is arranged by project and site number. Documentation measures 11.34 linear feet and is easily accessed. Documents are stored in standard, legal-size, metal filing cabinets and currently fill three drawers.

Paper Records

Paper records associated with archaeological work on Nellis AFB measure 7.84 linear inches. These include administrative (2.29 linear feet), background (1.63 linear feet), and survey/excavation (3.92 linear feet) records. Documents are easily accessible, but the presence of contaminants (e.g., paper clips and staples) was noted.

Photographic Records

Photographic records, measuring 0.33 linear feet, associated with archaeological work on Nellis AFB are being stored at TRC ESI.

Reports

Reports associated with archaeological investigations on Nellis AFB, which total 3.17 linear feet, are present at TRC ESI.

Collections-Management Standards

TRC ESI is a contract-archaeology firm, not a long-term curation facility for associated documentation. However, management standards are in place for collections. For example, all documents are available to staff members. They are checked out with the records manager and are checked in when research is completed. Copies reside with the particular project directors as paper copies and on computer. To allow for space in the active files, documents from inactive projects are stored off-site at a warehouse administered by TRC ESI staff.

Comments

1. Temperature controls are in place throughout the repository.

2. Intrusion-detection and -deterrent measures for TRC ESI meet the minimum guidelines in 36 CFR Part 79.

3. No human skeletal remains were recovered during archaeological investigations on Nellis AFB.

4. Storage of associated records from Nellis AFB does not meet modern archival standards.

Recommendations

1. ACC should assist Nellis AFB in selecting a permanent repository for collections currently held by TRC ESI.

2. Transfer Nellis AFB associated documentation to an appropriate repository for complete rehabilitation and long-term archival storage.

3. Remove all contaminants (e.g., paper clips and staples) from the records.

4. Duplicate paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place folders in acid-free, cardboard boxes and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

5. Arrange records according to modern archival procedures and create a finding aid for the collection.

6. Duplicate all records on acid-free paper or microfilm and store in a separate, fireproof, secure location.

Repository 7: Harry Reid Center for Environmental Studies, University of Nevada, Las Vegas

Date of Visit: January 9, 1996

Point of Contact: Lynda Blair, Principal Investigator, Cultural Resources

The Harry Reid Center for Environmental Studies, UNLV repository contains areas for office space, library storage, artifact processing and study, and report preparation (Figure 30). The structure formerly served as a gymnasium.

The facility is in a multistory structure with a long hallway that leads directly to staff offices. The collections storage area is located on the second floor of the structure. Collections are no longer accepted for curation. However, UNLV serves as a long-term curation facility for the collections it currently houses. UNLV houses 2.02 ft^3 of artifacts and 0.16 linear feet of associated documentation from archaeological investigations on Nellis AFB. The artifact collection consists of materials from prehistoric and historical-period contexts. Of the total, prehistoric material classes include lithics (83%) and ceramics (16%), whereas historical-period material classes include glass and metal (0.5% each).

Figure 30. Harry Reid Center for Environmental Studies, UNLV.

Assessment

Structural Adequacy

The structure was constructed sometime in the 1950s and has undergone numerous internal and external renovations to better serve its current functions. The structure has a concrete foundation and concrete-block exterior walls. It has a built-up, asphalt roof that was added in 1992. The foundation and roof are structurally sound; no cracks or leakage have been reported by staff. The structure contains office space, classrooms, laboratories, and a complete museum-exhibit area. Internal renovations include the addition of plasterboard walls used to delineate office boundaries. All windows in the repository have shades and aluminum frames. Most of the windows are original to the structure, but some have been replaced. No leakage of air or water through the windows has been reported by UNLV staff.

Utility systems present include heating, running water, rest rooms, telephone lines, air-conditioning, and electricity. Age of the equipment is mixed, some systems are newer depending on their location in the building. None of the systems has experienced major malfunctions, and no evidence of water damage has been noted by UNLV personnel. The UNLV repository is structurally sound.

Environmental Controls

The structure is equipped with heating and air-conditioning systems; temperature is set to staff preferences. Humidity is not controlled. Dust filters are present on the furnace/air-conditioning ducts, and the facility is maintained by a contracted janitorial service on a nightly basis. The repository comprises approximately 50,000 ft^2, of which 1,200 ft^2 is dedicated to long-term artifact and records curation. Most of the facilities space is dedicated to offices, temporary artifact storage, processing area and study room, photographic storage, security/monitoring space, and materials/supplies storage.

Pest Management

Pest-management procedures are performed by a certified company on a monthly basis. No pest infestations have been reported by UNLV staff.

Security

The repository has an intrusion alarm that is wired into the local police department. A guard patrols the campus throughout the day and night. Key and dead-bolt locks are located on interior and exterior doors. Windows are not designed to open. According to staff, there have been no incidents of forced entry through any

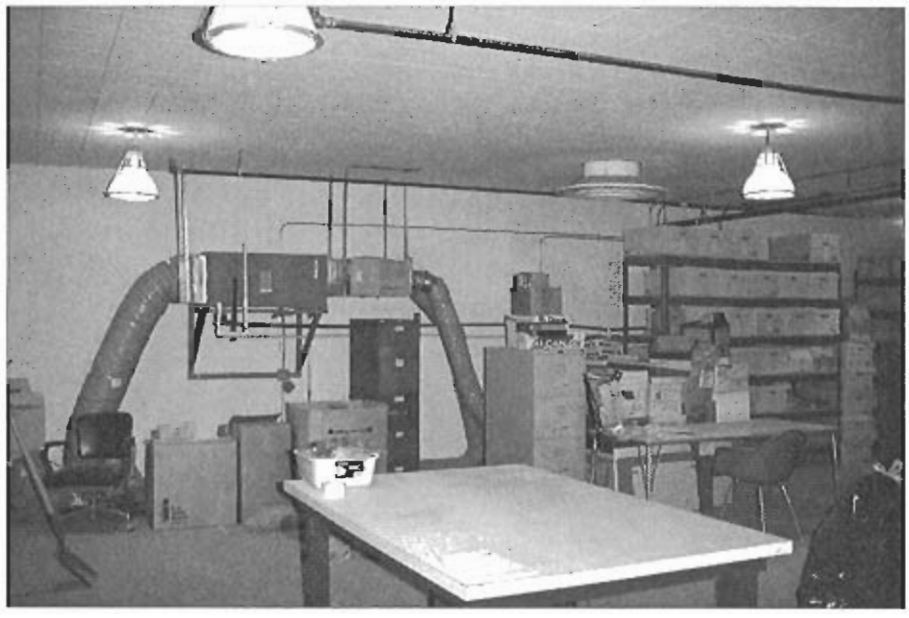

Figure 31. Collections storage area at UNLV.

windows or doors. Access through the windows is possible, but would require breaking a window. Current security precautions have, so far, safeguarded the facility against such an occurrence.

Fire Detection and Suppression

Smoke detectors and fire extinguishers are located throughout the facility. Fire extinguishers were last inspected in April 1995. There are also manual fire alarms wired to the local fire department. None of the facility is fireproof, but the staff uses fire-retardant filing cabinets and vaults.

Artifact Storage

UNLV devotes 1,200 ft^2 to the long-term curation of archaeological collections from throughout Nevada (Figure 31). Approximately 2.0 ft^3 of prehistoric and historical-period artifacts from projects conducted at Nellis AFB are currently housed at UNLV. The collections storage area is structurally identical to the rest of the repository and shares common environmental controls, utilities, fire-detection and -suppression, and security systems. Maintenance and pest-management schedules are the same as those in place for the rest of the facility. Boxes are not overstacked, and clutter is kept to a minimum. UNLV collections storage is at 50-percent capacity.

Storage Units

All collections are stored on standard, metal shelving units, which measure 95 x 24 inches, in the collections area.

Primary Containers

Artifacts are stored in seven 24-x-15-inch, acidic-cardboard boxes. Labeling is applied directly to the box. Label information consists of investigator, site number, project number, provenience, and date.

Secondary Containers

Secondary containers are 4-mil, plastic, zip-lock bags (70%), which are nested within one another in some instances, and acidic-paper bags (30%). Labeling is applied directly to the bags.

Human Skeletal Remains

No human skeletal remains recovered on Nellis AFB or Nellis AFR are curated at UNLV.

Records Storage

Associated documentation is stored in the UNLV archives area. All documents are

arranged by county and site number. Documentation present measures 0.16 linear feet and is easily accessed.

Paper Records

Associated documentation from archaeological projects at Nellis AFB consists of one manila folder containing 0.16 linear feet of museum catalog sheets and artifact-description forms. These documents are stored in a standard, letter-size, metal filing cabinet.

Reports

Contract reports are available for examination in the UNLV CRM library, located on the first floor of the Harry Reid Center.

Collections-Management Standards

The Harry Reid Center for Environmental Studies, UNLV, has not accepted collections for curation in several years. They function as a long-term storage facility for the collections they have, but would not qualify as a long-term curation facility for ACC collections without extensive structural renovations.

UNLV is responsible for collections that are generated from in-house contracts and for collections acquired prior to the current policy. Accordingly, it has no current curation or collections-management standards and is serving only as an interim-curation facility until permanent housing for the materials from Nellis AFB is located. In terms of documents, UNLV does possess management guidelines. For example, all documents are available to bona fide researchers. They are checked-out by the records manager, and they have been duplicated for security reasons. Copies are currently held in the collections area and in the records vault.

Comments

1. Temperature controls are in place throughout the repository.

2. No human skeletal materials were recovered from archaeological investigations on Nellis AFB.

3. Storage of associated records from Nellis AFB does not meet modern archival standards.

Recommendations

1. ACC should assist Nellis AFB in selecting a permanent repository for collections currently held by UNLV.

2. Transfer artifacts stored at UNLV to an appropriate repository for complete rehabilitation and long-term curation.

3. Replace secondary and primary containers with plastic, zip-lock bags and place in acid-free (Hollinger-type) boxes.

4. Remove contaminants (e.g., paper clips and staples) from the paper records.

5. Duplicate all paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place all folders in acid-free, cardboard boxes and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

6. Organize records according to modern archival procedures and create a finding aid for the collection.

7. Duplicate all records onto acid-free paper or microfilm and store in a separate, fireproof, secure location.

7

North Carolina

Pope Air Force Base, Fayetteville, and Seymour Johnson Air Force Base, Goldsboro

Installation Summary for Pope AFB and Seymour Johnson AFB

Volume of Artifact Collections:
Pope AFB: 0.76 ft^3
On Base: None
Off Base: 0.76 ft^3 (Fort Bragg)
Seymour Johnson AFB: None
Compliance Status: Pope AFB artifacts stored at Fort Bragg require complete rehabilitation to comply with federal regulations governing the long-term curation of archaeological collections.

Linear Feet of Records
Pope AFB: 0.28 linear feet
On Base: None
Off Base: 0.28 linear feet (Fort Bragg)
Seymour Johnson AFB: 0.83 linear feet
On Base: None
Off Base: 0.83 linear feet (PCI)
Compliance Status: All collections of associated documentation require complete rehabilitation to comply with federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: All Pope AFB collections are being housed at Fort Bragg. Pope AFB has no agreements for the curation of its collections with other repositories. As of the time of this evaluation, Fort Bragg had had little contact with Pope AFB, but did plan to continue curating the collections in its curation facility. Seymour Johnson AFB has no agreement for curation of its collections with any repository.

Recommended Curation Facility: ACC should contact Fort Bragg regarding its Pope AFB collections and arrange to leave them in the care of Fort Bragg personnel. The current storage at Fort Bragg is unacceptable for long-term curation, but collections at Fort Bragg were scheduled to be transferred to a new curation facility in 1996. This facility should be adequate for the storage and maintenance of collections. All documentation from Seymour Johnson AFB should be transferred to the Fort Bragg curation facility for long-term curation.

Repository 1: Fort Bragg

Date of Visit: December 8, 1995

Point of Contact: Beverly Boyco

Building 3-1634 on Fort Bragg currently houses the Environmental Division. All archaeological collections and records from projects conducted on Fort Bragg and Pope AFB are currently housed at this facility. Pope AFB collections include 0.76-ft^3 of artifacts and 0.28 linear feet

of associated documentation. The artifact collection includes materials from prehistoric and historical-period contexts. Of the total, the sole prehistoric material class is lithics (33%), whereas historical-period material classes include ceramics (53%) and glass (14%). Because the structure is used primarily as office space and is only a temporary repository for collections, a detailed building evaluation was not conducted. However, storage procedures were noted.

Assessment

Artifact Storage

Fort Bragg holds prehistoric and historical-period artifacts recovered during three archaeological surveys on Pope AFB and Fort Bragg.

Storage Units

Artifacts are stored on wooden shelving units.

Primary Containers

Primary containers for the artifacts are three 6-x-18-inch, acidic-cardboard boxes.

Secondary Containers

Inside the primary containers, artifacts are within plastic, zip-lock bags that are directly labeled with project, date, investigator, and provenience.

Human Skeletal Remains

No human skeletal remains recovered during archaeological work on Pope AFB are curated at Fort Bragg.

Records Storage

Five manila folders that contain 0.28 linear feet of associated documentation generated by three archaeological surveys on Pope AFB and Fort Bragg are stored at Fort Bragg. All records are stored, loose in each box, in the three acidic-cardboard boxes that house the artifacts.

Paper Records

Paper records associated with archaeological investigations on Pope AFB, which total 0.13 linear feet, are present at Fort Bragg. These include administrative (0.07 linear feet) and survey (0.06 linear feet) records.

Photographic Records

A small quantity (0.02 linear feet) of photographic records associated with archaeological projects on Pope AFB is stored at Fort Bragg.

Reports

A total of 0.13 linear feet of reports associated with archaeological investigations on Pope AFB is stored at Fort Bragg.

Collections-Management Standards

Fort Bragg is a military installation that operates a curation facility for its collections as well as those from Pope AFB. Currently, it has no written standards for collections management. However, curation personnel do follow procedures for dealing with archaeological materials (artifacts and records).

Comments

1. Fort Bragg will transfer all collections to its new curation facility upon completion of that repository.

2. Artifacts and associated documentation are stored in acidic-cardboard primary containers.

Recommendations

1. ACC should work with Pope AFB to ensure that adequate managerial control over its collections at Fort Bragg is maintained.

2. Replace acidic primary containers with acid-free boxes, folders, and appropriate labeling when collections are transferred to the new repository.

3. Remove contaminants (e.g., paper clips and staples) from the paper records.

4. Duplicate all paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place all folders in acid-free cardboard

boxes and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

5. Organize records according to modern archival procedures and create a finding aid for the collection.

6. Duplicate all records on acid-free paper or microfilm and store these materials in a separate, fireproof, secure location.

Repository 2: Panamerican Consultants, Inc.

Date of Visit: November 15, 1995

Point of Contact: Jennifer Grover, Laboratory Director

Panamerican Consultants, Inc. (PCI) is not a long-term curation facility. They are only holding materials until their analyses are complete. PCI houses 0.83 linear feet of associated documentation from archaeological investigations on Seymour Johnson AFB (and Dare County AFR as well). Any funding concerns for the disposition of the collection are between Seymour Johnson AFB and a curation facility that meets the provisions in 36 CFR Part 79. Refer to Chapter 3 of this report for a detailed assessment of PCI.

Records Storage

Records associated with archaeological projects on Seymour Johnson AFB are stored on the floor of the PCI lab area. Records are kept in a 12-x-15-inch, acidic-cardboard box (Figure 32). Secondary containers for the records are manila folders. Documents are organized by project and date. They are in good condition, but some contaminants (e.g., paper clips, staples, and rubber bands) were noted. Documentation is easily accessible and represents the extent of collections from Seymour Johnson AFB.

Paper Records

A total of 0.75 linear feet of paper records associated with archaeological investigations on Seymour Johnson AFB is stored at PCI. These include administrative (0.04 linear feet), background (0.04 linear feet), and survey (0.67 linear feet) records.

Photographic Records

A total of 0.02 linear feet of photographic records associated with archaeological projects on Seymour Johnson AFB is stored at PCI.

Figure 32. Extent of associated documentation from Seymour Johnson AFB stored at PCI.

Maps and Oversized Documents

A small quantity (0.02 linear feet) of maps associated with archaeological work on Seymour Johnson AFB is stored at PCI.

Reports

Reports associated with archaeological work on Seymour Johnson AFB, measuring 0.04 linear feet, are stored at PCI.

Collections-Management Standards

PCI is a contract-archaeology firm and is not interested in serving as a long-term curation facility. Their primary responsibility toward collections is to analyze and hold the materials until permanent housing can be located. They have no formal curation or management standards and are serving only as an interim-curation facility until permanent housing for the artifacts and documentation from Seymour Johnson AFB is located.

Comments

1. Temperature controls are in place throughout the repository.

2. No human skeletal remains were recovered during archaeological investigations on Seymour Johnson AFB.

3. Storage of associated records from Seymour Johnson AFB does not meet modern archival standards.

Recommendations

1. ACC should assist Seymour Johnson AFB in selecting a long-term repository for the collections currently held by PCI.

2. Once a repository is selected, artifacts and records should be transferred there for complete rehabilitation.

3. Replace primary and secondary containers with an acid-free records box or metal filing cabinet and acid-free folders, respectively.

4. Remove contaminants (e.g., paper clips and staples) from the paper records.

5. Duplicate all paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place all folders in acid-free cardboard boxes and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

6. Organize all records according to modern archival procedures and create a finding aid for the collection.

7. Duplicate all records on acid-free paper or microfilm and store in a separate, fireproof, secure location.

Editors' note: Since this assessment was made, all materials held by PCI from Seymour Johnson AFB have been returned to that installation.

8

South Dakota

Ellsworth Air Force Base, Rapid City

Installation Summary for Ellsworth AFB

Volume of Artifact Collections: ft^3 (one artifact)
On Base: None
Off Base: One artifact (SDARC)
Compliance Status: One artifact is curated at the South Dakota Archaeological Research Center (SDARC). It requires only partial rehabilitation to comply with federal guidelines.

Linear Feet of Records: 0.10 linear feet
On Base: None
Off Base: 0.10 linear feet (SDARC)
Compliance Status: All associated documentation requires partial rehabilitation to meet current federal guidelines and modern archival-preservation standards.

Human Skeletal Remains: None

Status of Curation Funding: Ellsworth AFB has no formal arrangement for curation funding in place, other than including curation costs in project budgets. Work to date has been insufficient to warrant any major funding considerations. SDARC charges curation fees for long-term curation.

Recommended Curation Facility: SDARC currently holds all Ellsworth AFB collections. Any future collections should be transferred to SDARC for curation. A cooperative agreement should be made between Ellsworth AFB and SDARC to provide adequate funding to the repository for curation of ACC archaeological collections.

South Dakota Archaeological Research Center

Date of Visit: December 6, 1995

Point of Contact: Renee M. Boen, Curator

SDARC is located in Rapid City, South Dakota. The structure housing SDARC formerly functioned as a social-services building. Offices for staff are located throughout the structure, but are concentrated in the southeastern portion of the facility. Most of the northern half of the structure is dedicated to collections storage and laboratory space. One artifact (a prehistoric biface fragment) collected on Ellsworth AFB is curated at SDARC, as are 0.10 linear feet of associated documentation.

Assessment

Structural Adequacy

The exact age of the structure housing SDARC is unknown, but is thought to be between 10 and

20 years. The repository encompasses approximately 16,725 ft^2, of which 1,200 ft^2 is dedicated to long-term artifact and records curation. The structure has a concrete foundation with corrugated-metal, exterior walls. The tin roof is original to the structure. Cracks in the foundation and leaks through the roof have been reported by staff. The structure primarily functions as office, report-preparation, and study space, but areas for collections storage and artifact processing are also present. The metal, single-story structure has undergone numerous internal renovations since becoming the research center, which include addition and removal of plasterboard, internal walls to facilitate the building's current function. All windows in the repository have shades and aluminum frames. According to SDARC staff, none of these windows has shown any evidence of air or water leakage. Most windows in the repository are original to the structure.

Utility systems present include heating, running water, rest rooms, telephone lines, air-conditioning, and electricity. All utility systems are original to the structure. According to SDARC staff, there has been evidence of water damage in the collections storage area and other parts of the structure. However, the building is structurally sound and is adequate for the long-term curation of archaeological collections.

Environmental Controls

The structure is equipped with heating and air-conditioning systems; temperature is set to staff preferences. Humidity is not controlled, but humidity levels are occasionally monitored. No dust filters are present on the furnace ducts. The facility is maintained by a contracted janitorial service on a weekly basis.

Pest Management

Pest-management procedures are performed on an as-needed basis by professionals. No pest infestations have been reported by SDARC staff in the past few years.

Security

Key locks and dead-bolt locks are present on all doors. Main doors for offices have key locks, and locks are present on all windows. Only one incident of unauthorized entry has been reported by staff; an individual walked in through an open door while SDARC staff were moving into the building. The individual was escorted out of the facility, and no further incidents have been noted. Because it is a single-story structure, all windows and doors are accessible from the exterior. Current security measures have, however, served as useful deterrents.

Fire Detection and Suppression

Smoke detectors, heat sensors, manual fire alarms, and fire extinguishers are present throughout the facility. Fire extinguishers were last inspected in March 1995. No portions of the structure are considered by staff to be fireproof.

Artifact Storage

SDARC devotes 1,200 ft^2 to the long-term curation of archaeological collections from throughout South Dakota. One artifact (a biface fragment) from a 1977 survey of Ellsworth AFB (site 39MD417) is stored at SDARC. The collections storage area is structurally identical to the other portions of the repository, and common environmental controls, utilities, fire-detection and -suppression, and security systems are shared. Maintenance and pest-management schedules are the same as those for the rest of the facility.

Storage Units

All collections are stored on movable (automatic), space-saver shelving units (Figure 33). Boxes are not overstacked, and clutter is kept to a minimum. SDARC collections storage is at 60-percent capacity.

Primary Containers

The Ellsworth AFB artifact is stored in a 12-x-18-inch, acid-free, cardboard box (Hollinger type) that is labeled with site number, provenience, investigator, and accession number (Figure 34). The label is inside of a plastic sleeve that is attached to the front of the box with adhesive.

Secondary Containers

Within the primary container, the artifact is inside a 4-mil, plastic, zip-lock bag that is labeled much as is the primary container.

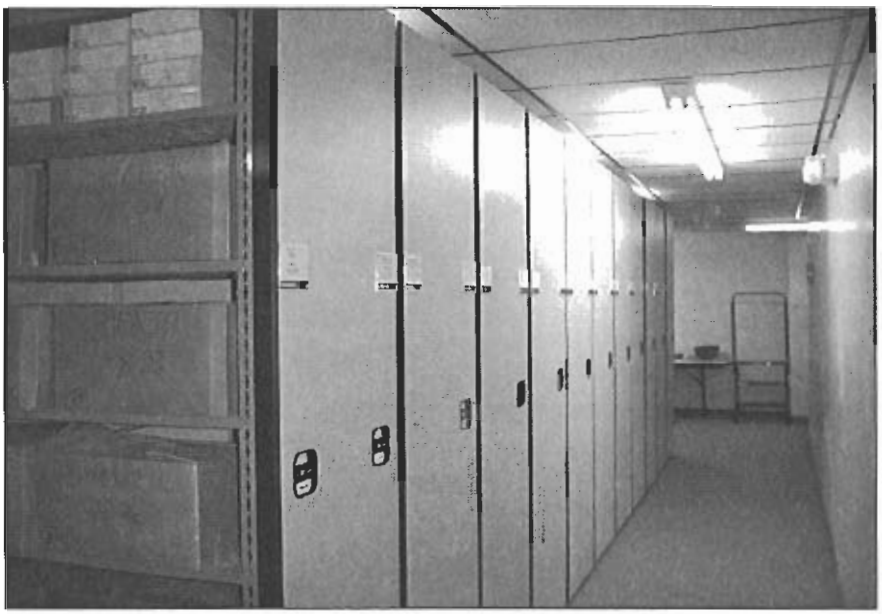

Figure 33. Space-saver shelving at SDARC.

Human Skeletal Remains

No human skeletal remains recovered from Ellsworth AFB are curated at SDARC.

Records Storage

Associated documentation is stored in a room set aside for that purpose at SDARC. All documents are arranged by site number and county. Documentation associated with archaeological investigations on Ellsworth AFB measures 0.10 linear feet and is easily accessed. The SDARC library contains South Dakota cultural resource management reports, anthropological and archaeological publications, and other reference materials.

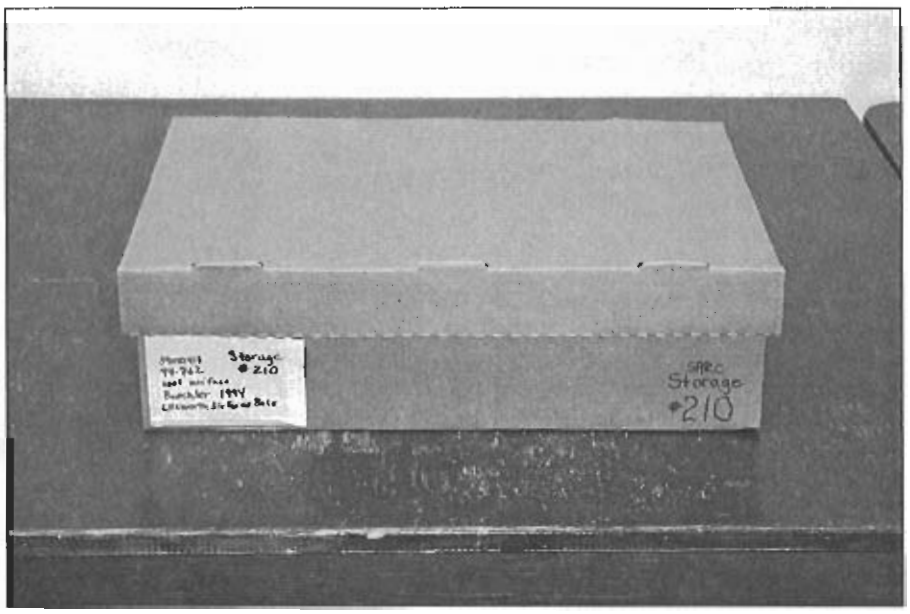

Figure 34. Primary container for Ellsworth AFB artifact stored at SDARC.

Paper Records

Paper records associated with archaeological work on Ellsworth AFB, which include administrative, background, survey (each measuring 0.02 linear feet), and excavation (0.04 linear feet) records, are stored at TRC Environmental Solutions, Inc. (TRC ESI), Rapid City, South Dakota. These are stored in two types of primary containers.

SDARC curates only a field notebook from a 1977 archaeological survey conducted on Ellsworth AFB. It is stored loose at the front of a drawer in a letter-size, metal filing cabinet that is labeled "field notes." Three manila file folders have not yet been accessioned; these are organized loosely by date and include information from a 1995 survey of selected portions of Ellsworth AFB. Once accessioned, these folders will be stored in the room that houses the field notebook.

Maps and Oversized Documents

Archaeological sites, surveyed areas, report reference numbers, and National Register of Historic Places status are recorded on SDARC base maps (USGS 7.5' topographic maps). Information is updated weekly.

Collections-Management Standards

The following standards are outlined in *Requirements for Submitting a Collection to the State Archaeological Research Center* (1994). Summarized below is information pertaining to curation fees, complete collections, and the curation of records, maps, and photographs. Information included in the publication but not summarized here includes field treatment of artifacts, laboratory methods for records and artifacts, film processing, cataloging, labeling, location identification, cross-indexing of files, minimum standards for acceptance, and inventory, deaccessioning, and repatriation policies. Detailed information on all these procedures can be found in the publication or obtained from SDARC.

Registration Procedures

Accession Files. SDARC staff assign collection numbers to incoming artifact collections. Numbers correspond with the year that the material is accessioned into the repository. Numbers can be obtained from the curator.

Site-Record Administration. SDARC maintains site records, survey data, accession records, photographic records, and report references. County files are also maintained by SDARC; these contain paper records associated with particular sites (field notes, excavation forms, etc.).

Computerized Database Management. SDARC maintains site records, survey data, accession records, photographic records, and report references on a computerized database system.

Written Policies and Procedures

Acquisition Policy. SDARC will only accept "material remains that are excavated or removed during a survey, excavation, or other study of a prehistoric or historic resource, and associated records that are prepared or assembled in connection with the survey, excavation or other study (36CFR79.4a)."

Original documentation should be deposited at the repository and copies should be retained by the contractor.

Loan Policy. Most collections at SDARC are available for long- and short-term loans to qualified professionals and institutions. Loans are available for research, exhibits, educational programs, and ceremonial purposes. A limited number of reports, slides, negatives, and photographs are also available for loan.

Curation Personnel

Renee M. Boen is the full-time curator.

Curation Financing

Fees for storage are based on box size. The fee for an 8-x-10-x-3-inch box is $24, that for a 12-x-6-x-5-inch box is $36, that for a 12-x-18-x-5-inch box is $108, and that for a 12-x-15-x-10-inch box is $180. A $15-per-hour charge is assessed for processing time.

Access to Collections

Written permission must be received from the curator before collections can be accessed. Access is granted only to legitimate researchers.

Comments

1. Temperature controls are in place throughout the repository.

2. Intrusion-detection and -deterrent measures for SDARC meet the guidelines established in 36 CFR Part 79.

3. Ellsworth AFB collections are housed in acid-free, Hollinger boxes. Secondary containers are plastic, zip-lock bags.

4. No human skeletal remains were recovered during archaeological investigations on Ellsworth AFB.

5. Storage of associated documentation from Ellsworth AFB does not meet modern archival standards.

6. Collections-management standards and practices have been published.

7. SDARC has a full-time curator for archaeological collections and associated records.

8. SDARC's professional staff is dedicated to the safeguarding and care of the materials curated at their facility.

Recommendations

1. Labels for secondary containers should be made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper), labeled in indelible ink, and inserted into the secondary containers.

2. Remove all contaminants (e.g., staples, paper clips, and rubber bands) from the documents.

3. Duplicate all paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place all folders in acid-free cardboard boxes and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

4. Arrange associated documentation according to modern archival procedures and create a finding aid for the documentation.

5. Duplicate all associated documentation on acid-free paper or microfilm and store these materials in a separate, fireproof, secure location.

9

Texas

Dyess Air Force Base, Abilene

Installation Summary for Dyess AFB

Volume of Artifact Collections: 6.78 ft^3
On Base: 4.2 ft^3
Off Base: 2.58 ft^3 (TARL)
Compliance Status: Artifacts stored at Dyess AFB require complete rehabilitation to comply with federal regulations governing the long-term curation of archaeological materials, while Dyess AFB materials stored at the Texas Archaeological Research Laboratory (TARL) require partial rehabilitation.

Linear Feet of Records: 0.24 linear feet
On Base: 0.06 linear feet
Off Base: 0.08 linear feet (TARL); 0.10 linear feet (3D International Environmental Group [3D])
Compliance Status: Associated documentation stored at Dyess AFB and TARL requires partial rehabilitation to comply with current federal guidelines and modern archival-preservation standards, while paper records stored at 3D require complete rehabilitation.

Human Skeletal Remains: None

Status of Curation Funding: Dyess AFB has no formal curation agreement with any repository except the University of Texas, Austin (UTA). An agreement regarding materials collected during work on base several years ago has expired. Dyess AFB had just completed an archaeological survey at the time of this evaluation; materials collected and generated during this project are currently stored on base. Long-term curation is not currently planned.

Recommended Curation Facility: ACC should transfer its collections from Dyess AFB to TARL (at UTA) for long-term curation.

Repository 1: Dyess AFB

Date of Visit: October 20, 1995

Point of Contact: Don Pits, Cultural Resource Manager

Artifacts totaling 4.2 ft^3 and 0.06 linear feet of associated documentation from a recent survey of Dyess AFB are housed in two separate repositories on base: the Environmental Office (Repository 1) and a small equipment shed (Repository 2) that is used for artifact storage. The artifact collection consists solely of prehistoric lithics. Condensed evaluations were performed for both repositories; detailed information regarding collections storage for each repository is presented below.

Figure 35. Exterior of equipment shed, Dyess AFB.

Assessment

Structural Adequacy

Repository 1

The Dyess AFB Environmental Office stores a total of 0.06 linear feet of documentation and 0.20 ft^3 of artifacts from archaeological projects conducted on base property. Repository 1, which is approximately 11 years old, serves as office space for a number of separate divisions within the Environmental Section. The foundation of the structure is concrete, while the exterior walls are of plaster veneer. Interior walls are plasterboard on sandstone, and ceilings are suspended acoustical tile.

Repository 2

Artifacts collected on Dyess AFB totaling 4 ft^3 are stored in Repository 2, an equipment shed near the Environmental Office (Figure 35). The shed has a concrete foundation and corrugated-metal walls and ceiling. The ceiling of the shed shows evidence of past water damage. The shed measures approximately 240 ft^2, of which 4 ft^2 is devoted to artifact storage.

Environmental Controls

Repository 1

Environmental controls consist of air-conditioning and steam heating; temperature levels are maintained according to staff preferences. Humidity is electronically monitored. Janitorial maintenance is handled by staff, while pest control for the facility is maintained by a professional firm and is monitored on an as-needed basis.

Repository 2

No temperature controls are present.

Pest Management

Repository 1

Pest-management procedures are performed on an as-needed basis.

Repository 2

Pest-management procedures are performed on an as-needed basis.

Security

Repository 1

Security measures include a dead-bolt lock on the front door, key locks on interior doors, window locks, intrusion alarms, and 24-hour base security.

Repository 2

Security consists of a dead-bolt lock on the only door to the shed. There has been no recent evidence of unauthorized access.

Fire Detection and Suppression

Repository 1

The facility is equipped with heat and smoke detectors, manual fire alarms, and fire-retardant walls. Fire extinguishers are located throughout the structure.

Repository 2

No fire-detection or -suppression measures are in place for the equipment shed.

Artifact Storage

Lithics are the only cultural materials recovered during a 1994 archaeological survey on Dyess AFB.

Storage Units

Repository 1. Approximately 0.20 ft^3 of prehistoric lithics collected on Dyess AFB are stored in a standard, letter-size filing cabinet that is kept locked by staff.

Repository 2. Boxes containing 4.0 ft^3 of Dyess AFB artifacts are stored on shelves in the corner of the shed nearest the door.

Primary Containers

Repository 1. Artifacts stored in the Environmental Office are in a large, plastic, zip-lock bag that is directly labeled with provenience, catalog, and site number information.

Repository 2. Artifacts in the equipment shed are stored in acidic-cardboard boxes that are directly labeled in black ink (Figures 36 and 37). Label information consists of site number and provenience. The boxes exhibit severe compression damage.

Secondary Containers

Repository 1. Within the large, zip-lock primary container, smaller zip-lock bags serve as secondary containers. These are labeled much like the primary container, discussed above.

Repository 2. Artifacts in Repository 2 are stored loose within the primary containers.

Figure 36. Dyess AFB collections stored in equipment shed.

Figure 37. Close-up of label information and primary container with compression damage.

Human Skeletal Remains

No human skeletal remains were recovered during archaeological work on Dyess AFB.

Records Storage

Approximately 0.06 linear feet of associated documentation from archaeological investigations on Dyess AFB, including copies of draft reports and survey notes, are stored loose on a shelf near the artifacts in Repository 1. No associated documentation from archaeological investigations on Dyess AFB is stored at Repository 2. The following discussions of records pertain to Repository 1.

Paper Records

Paper records present total 0.02 linear feet.

Reports

Reports total 0.04 linear feet.

Collections-Management Standards

Dyess AFB is a military installation that possesses neither curation facilities nor any curation and/or management standards. If materials (artifacts, paper records, or both) are generated as a result of archaeological investigations on the installation, Dyess AFB is responsible for holding the materials until directed to transport them to a proper curation facility.

Comments

1. Repository 1 at Dyess AFB has environmental controls in place.

2. Repository 2 at Dyess AFB lacks both environmental controls and fire-detection and -suppression systems.

Recommendations

1. Transfer all Dyess AFB collections to TARL for long-term curation.

2. ACC should work with Dyess AFB and TARL to create a cooperative agreement regarding curation costs.

3. Replace all primary containers with acid-free boxes and folders once Dyess AFB artifacts and paper records are transferred to TARL.

4. Remove all contaminants (e.g., paper clips and staples) from the paper records.

5. Duplicate paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place all folders in acid-free, cardboard boxes and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

6. Organize records according to modern archival procedures and create a finding aid for the collection.

7. Duplicate all records on acid-free paper or microfilm and store in a separate, fireproof, secure location.

Repository 2: Texas Archaeological Research Laboratory

Date of Visit: October 23, 1995

Point of Contact: Dr. Darrell Creel, Curator

ACC collections from Dyess AFB are stored in two repositories on UTA's J. J. Pickle Research Campus. Repository 1 (Building 5) is the structure housing TARL. This facility holds 0.08 linear feet of associated documentation from archaeological projects conducted on Dyess AFB property. Repository 2 is Building 33 on the J. J. Pickle campus, which is used solely for storage. This repository houses 2.58 ft^3 of artifacts collected during Dyess AFB archaeological projects. The collection consists of prehistoric lithics (30%) and two soil samples (70%).

Assessment

Structural Adequacy

Repository 1

Building 5 is approximately 52 years old. It formerly served as a magnesium-processing plant. Offices for faculty and staff are located throughout the facility, but the majority are on the second floor. The repository encompasses approximately 30,000 ft^2, with the majority (70%) being devoted to artifact and records storage. In addition to areas for long-term curation, the facility has space for artifact-washing and -processing laboratories, study areas, and classrooms. Records, photographic, and map-storage areas are also present. The central portions of the structure are mainly devoted to collections storage and laboratory space. The structure has undergone internal and external renovations to better serve its current function.

The structure has a concrete-and-rubble-core foundation. The exterior walls are brick and corrugated transite (a long-fiber asbestos asphalt composite shingle; Figure 38). The two-year-old roof is a composite of transite and concrete. No cracks in the foundation or leakage through the roof have been reported by staff. The structure, which has three stories aboveground and one below, contains areas for office space, collections storage, laboratories, and classrooms. Internal renovations included the addition and removal of plasterboard walls to facilitate current usage. Most windows in the repository have steel frames and have been covered with walls or painted over. According to TARL staff, none of these windows has shown any evidence of air or water leakage. Most windows in the repository are original to the structure.

Utility systems present include heating, running water, rest rooms, telephone lines, air-conditioning, and electricity. A few of the utilities are original to the structure. One incident of water damage in the collections storage area and other parts of the building in the early 1980s was reported by TARL staff. No such episodes have been reported since.

Repository 2

Building 33 on the J. J. Pickle Research Campus is structurally sound and is entirely devoted to artifact and equipment storage. The structure has a concrete foundation and corrugated-metal exterior walls (Figure 39). No windows are present in the storage area. Incandescent lighting, without ultraviolet filters, is present throughout the structure. Utilities present include heating, rest rooms, telephone lines, and electricity. All utilities are original to the structure.

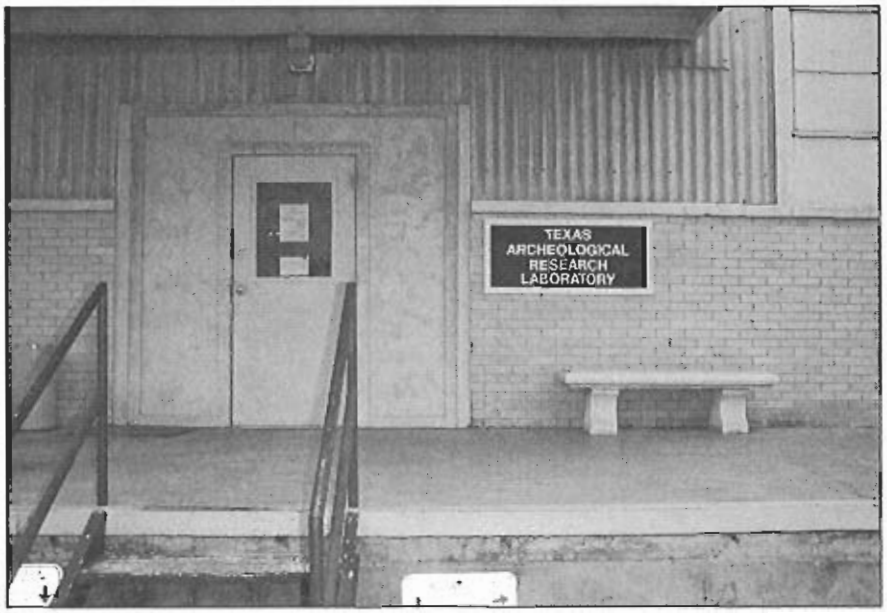

Figure 38. Main entrance to TARL.

Environmental Controls

Repository 1

The facility is equipped with heating and air-conditioning; temperature is set to staff preferences, except in enclosed artifact storage facilities. Humidity levels are controlled in only two of the collection facilities. Dust filters are present on the furnace ducts, and the facility is maintained by university janitorial staff on a daily basis.

Repository 2

The well-insulated structure is equipped with heaters, but not air-conditioning; it is comfortable during the summer. Humidity is not monitored within the structure.

Figure 39. Building exterior, TARL.

Pest Management

Repository 1

Pest-management procedures are performed by university staff on an as-needed basis. Pest-infestation problems have included the presence of fire ants, fleas, spider beetles, bats, silverfish, and mice in portions of the structure. No such episodes have been recently reported by staff.

Repository 2

Pest-management procedures are performed on an as-needed basis.

Security

Repository 1

This repository has key locks on all interior doors, dead-bolt locks on all exterior doors, and locks on all windows. Security for windows has been enhanced: most are covered with walls or painted. The vault area of the repository is constantly monitored by the university police department and is accessible only via a tightly controlled card-reader system. Controlled access and padlocks on some cabinets add to the security measures in place at this facility. According to TARL staff, there have been no incidents of unauthorized access in the last 10 years.

Repository 2

Security for this repository consists of electronic locks on the main loading doors and campus police patrols.

Fire Detection and Suppression

Repository 1

Smoke detectors, heat sensors, manual fire alarms, and fire extinguishers are located throughout the facility. Fire extinguishers are inspected annually. The vault area is also protected by a CO_2 fire-suppression system. No portions of the structure are considered fireproof by staff.

Repository 2

No fire-detection or -suppression measures are in place for this facility.

Artifact Storage

Dyess AFB artifacts held by TARL are stored in Repository 2. Artifacts include several lithic fragments (30%) and two soil samples (70%) from Dyess AFB (sites 41TA150, -153, and -154). Approximately 4, 000 ft^2 of Repository 2 is devoted to the long-term curation of archaeological collections from Texas (Figure 40). The collections storage area is at about 60-percent capacity.

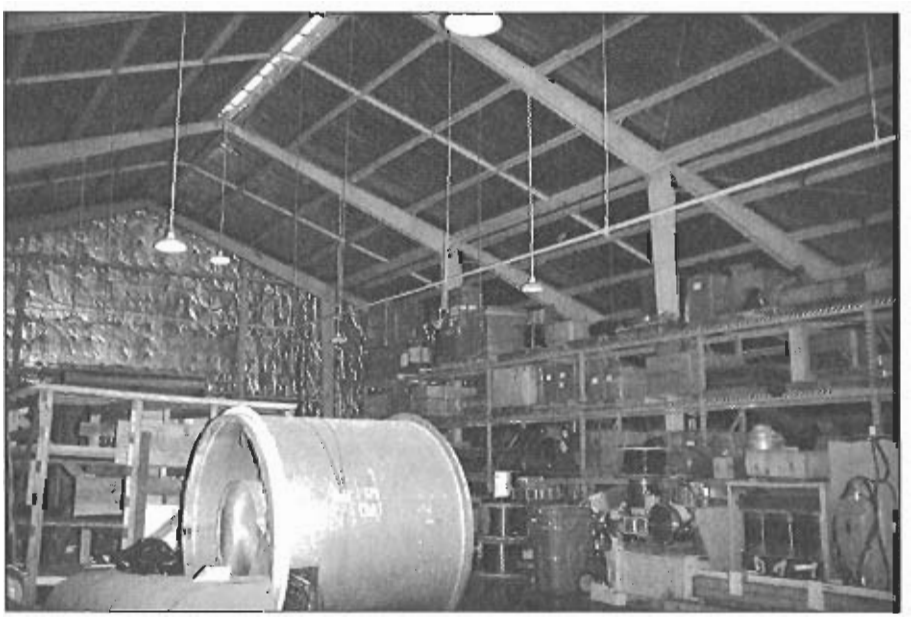

Figure 40. Overview of storage and lighting conditions, TARL.

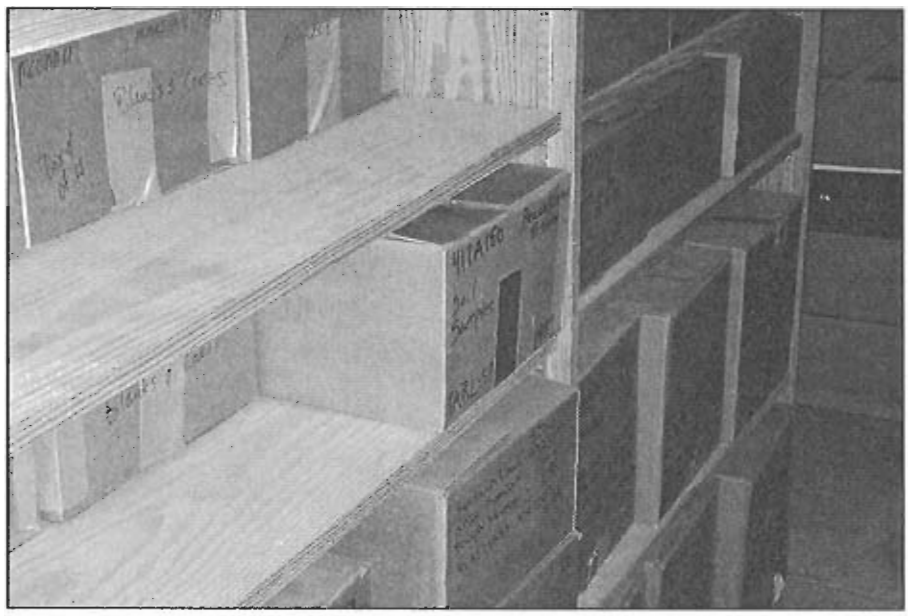

Figure 41. Primary-container storage on wooden shelving units at TARL.

Storage Units

Collections are stored on metal and/or wooden shelving units.

Primary Containers

Artifacts are stored in two acidic-cardboard boxes (Figure 41), which measure 7.25 x 10 and 12 x 12 inches. The boxes are not overstacked. Primary containers are directly labeled in black marker with site number, provenience, investigator, and accession number.

Secondary Containers

Secondary containers for the artifacts are plastic, zip-lock bags that are labeled much as are the primary containers.

Human Skeletal Remains

No human skeletal remains recovered on Dyess AFB are curated at TARL.

Records Storage

Records are stored in Repository 1. Less than one-tenth (0.08) linear feet of associated documentation from Dyess AFB is stored in the records room (Figure 42), which is located on the first floor of Building 5. This room is part of the larger site-files-and-records repository at TARL. Documents are arranged by site number and county and are easily accessible.

Paper Records

Paper records, which include 0.02 linear feet of field records associated with Dyess AFB archaeological projects, are stored in a standard, metal, letter-size filing cabinet. Within the filing cabinet, records are in manila folders that are directly labeled in black marker. All material is in good condition.

Photographic Records

A small quantity (0.04 linear feet) of photographic records associated with archaeological investigations on Dyess AFB is stored in Repository 1 at TARL.

Reports

Reports associated with archaeological projects on Dyess AFB, which measure 0.02 linear feet, are stored in Repository 1 at TARL.

Collections-Management Standards

All of the following standards are outlined in various curation policies created by TARL. Summarized below is basic information on stipulations for curating collections at TARL and curation fees. Information found in the

Figure 42. Records storage at TARL.

policies but not summarized here includes procedures for the preparation of archaeological materials to be curated at TARL, transfer-of-ownership letters, gift agreements, and background on site-record administration, registration procedures, and accessioning, deaccessioning, repatriation, loan, and inventory policies. Detailed information on these procedures can be found in the publication, which can be obtained from TARL.

Minimum Standards for Acceptance

Collections must be complete. Records must be complete and organized. Collections should be cleaned, cataloged, labeled, and conserved as needed prior to acceptance for curation. A TARL collection-processing record and a collection-inventory sheet must be filled out.

Acquisition Policy

The TARL information packet includes the stipulation that TARL must receive a written request from any contractor wishing to deposit a collection at TARL. TARL notifies the contractor in writing if the collection is to be accepted.

Curation Personnel

Dr. Darrell Creel is the full-time curator for archaeological collections, and Carolyn Spock is responsible for associated records at TARL.

Curation Financing

TARL charges specific fees for permanent-curation services. Curation fees are billed to the contractor or sponsor at the time of accession. As of the site visit, no formal agreement for funding was in place between ACC and TARL for any future collections from Dyess AFB beyond including curation costs in project budgets. TARL's fees for curation are as follows: for records—1.0 ft^3 = \$389, and 1.8 ft^3 = \$700; for general collections—1.0 ft^3 = \$584, and 1.2 ft^3 = \$700; and for associated materials—1.0 ft^3 = \$340, and 2.06 ft^3 = \$700.

Access to Collections

Permission to access collections must be obtained from the curator, either verbally or in writing.

Comments

1. Temperature controls are in place throughout most of the facility.

2. Intrusion-detection and -deterrent measures for TARL meet the guidelines in 36 CFR Part 79.

3. Dyess AFB collections are housed in acidic-cardboard boxes. Secondary containers are plastic, zip-lock bags.

4. No human skeletal remains were recovered during archaeological investigations on Dyess AFB.

5. Storage of associated documentation from Dyess AFB does not meet modern archival standards.

6. Collections-management standards and practices have been published.

7. TARL has full-time curators for archaeological collections and for associated records.

8. TARL's professional staff is dedicated to safeguarding and caring for the materials curated at their facility.

Recommendations

1. Labels for secondary containers should be made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper), labeled in indelible ink, and inserted into the secondary containers.

2. Remove all contaminants (e.g., staples, paper clips, and rubber bands) from the documents.

3. Duplicate all paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place all folders in acid-free cardboard boxes and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

4. Organize associated documentation according to modern archival procedures and create a finding aid for the documentation collection.

5. Duplicate associated documentation on acid-free paper or microfilm and store in a separate, fireproof, secure location.

Repository 3: 3D International Environmental Group

Date of Visit: October 25, 1995

Point of Contact: Don Miller, Lab Director

3D International Environmental Group (3D) is located in Cincinnati, Ohio. The structure, formerly an apartment building, is situated in a suburb. Offices for staff are located on the first and second floors. Report preparation and artifact study take place on the second floor. Approximately 0.10 linear feet of associated documentation from archaeological investigations on Dyess AFB are stored at 3D.

Assessment

Structural Adequacy

The headquarters building for 3D is approximately 20 years old. The building is structurally sound and has undergone internal and external renovations to better serve its current function; however, it has never been considered a long-term curation facility. The repository encompasses approximately 5,185 ft^2, none of which is dedicated to long-term artifact or records curation.

The structure has a concrete foundation and brick, exterior walls (Figure 43). The shingled roof is original to the structure. No cracks in or leakage through the foundation or roof have been reported by staff. The structure primarily functions as office, report preparation, and study space. There is one floor aboveground and one below. There have been numerous internal renovations to the facility since 3D moved into this facility. These include the addition of plasterboard, internal walls and renovations to rest rooms. All windows in the repository have shades and aluminum window frames. According to 3D staff, none of these windows has shown any evidence of air or water leakage.

Utility systems present include electrical heating, running water, rest rooms, telephone lines, air-conditioning, and electricity. All utilities

Figure 43. Exterior of 3D building.

are original to the structure. No evidence of water damage has been reported by 3D staff.

Environmental Controls

The structure is equipped with heating and air-conditioning; temperature is set to staff preferences. Humidity is not controlled. Dust filters are present on the furnace ducts, and the building is maintained by a contracted janitorial service three times per week.

Pest Management

Pest-management procedures are performed by a certified company on a monthly basis. No pest infestations have ever been reported by 3D staff.

Security

The structure has key locks on all doors and dead-bolt locks on main, exterior doors. Locks are also present on all windows. According to 3D staff, there have been no incidents of unauthorized entry during the time that they have used the structure. In addition to the deterrents mentioned above, 3D staff try to limit the amount of material stored at the office and the length of time that it is kept on the premises. Their objective is to analyze materials and send them to a long-term curation repository as soon as possible.

Fire Detection and Suppression

The structure has a fire alarm that is wired into the local fire department. Smoke detectors and fire extinguishers are located throughout the facility. Fire extinguishers were last inspected in April 1995. No portions of the structure are considered fireproof by staff.

Human Skeletal Remains

No human skeletal remains recovered on Dyess AFB are curated at 3D.

Records Storage

Associated documentation totaling 0.10 linear feet from a 3D archaeological project on Dyess AFB is stored at 3D. Because of their active status and the fact that 3D is not a long-term curation facility, the records have not been archivally processed.

Paper Records

Paper records generated from the 3D project at Dyess AFB include administrative (0.04 linear feet) and background (0.02 linear feet) records. These are stored in a 9-x-12-inch manila folder within a standard, letter-size, metal filing cabinet (Figure 44) in the main office suite on the second floor. Documents are easily accessed,

Figure 44. File drawer containing Dyess AFB paper records at 3D.

loosely organized by date, and in good condition, but the presence of contaminants (e.g., paper clips and staples) was noted. Thus far, only limited information for the project is available on computer. None of the records pertaining to Dyess AFB is archivally stored at the present time.

Photographic Records

A total of 0.02 linear feet of photographic records associated with archaeological projects on Dyess AFB is curated at 3D.

Reports

Reports (0.02 linear feet) associated with archaeological investigations on Dyess AFB are stored at 3D.

Collections-Management Standards

As noted previously, 3D is a multidiscipline environmental firm, which includes CRM. Their primary responsibility toward collections is to analyze them and store them until long-term curation can be arranged. They have no curation or collections-management standards and are treating Dyess AFB documents as active files.

Comments

1. Temperature controls are present in this facility.

2. No artifacts collected on Dyess AFB are curated at 3D.

3. All documentation requires complete rehabilitation to meet modern archival standards.

Recommendations

1. Send associated records to the state repository (TARL at UTA) for complete rehabilitation.

2. Replace primary and secondary containers with an acid-free records box or metal filing cabinet and acid-free folders, respectively, once the records are moved to a long-term curation facility.

3. Remove all contaminants (e.g., paper clips and staples) from the paper records.

4. Duplicate all paper records onto acid-free paper and place in acid-free folders labeled in indelible ink. Place all folders in acid-free, cardboard boxes and apply adhesive, polyethylene label holders, with acid-free inserts, to the boxes.

5. Organize associated documentation in accordance with modern archival procedures and create a finding aid for the collection.

6. Duplicate all records on acid-free paper or microfilm and store in a separate, fireproof, secure location.

Editors' note: Since this assessment was made, all original records held by 3D from Dyess AFB have been returned to that installation.

10

Findings Summary for 20 ACC Installations

Of the 20 ACC installations initially addressed in this project, 19 were found to have collections at the time of the first telephone survey. These 19 installations have 12 distinct collections and 63 unique reports located in 23 facilities in 13 states (see Table 1). The St. Louis District team visited all of these repositories and, as applicable, performed building evaluations and collections and documentation evaluations, and administered survey questionnaires at each location. In summary, the following can be concluded.

- All 23 facilities evaluated approach the standards of 36 CFR Part 79. However, only three meet the standards well enough to be considered as long-term curation facilities—ISHS, SDARC, and TARL.
- To achieve proper care, collections must be brought together in a single repository per state, in the same state as the ACC installation(s) whose collection(s) they house. However, some states do not possess a repository that meets the standards of 36 CFR Part 79. ACC collections from these states should be transferred to the next-closest state that has a repository meeting the standards of 36 CFR Part 79.
- All collections require some rehabilitation; approximately one-third require complete rehabilitation (see Table 2).
- Records are in very poor condition, and over 60 percent of the collections should be completely rehabilitated (see Table 2).
- Management controls and a master collection database do not exist for ACC installations and should be created immediately.

Infrastructure Controls

Only 3 of the 23 evaluated facilities were designed originally or adapted to the requirements of a modern curation center. ACC collections are housed in a variety of building types—museums, university classrooms and laboratories, modern multistory office buildings, storage spaces, renovated military buildings, and warehouses. With rare exceptions, these buildings were neither designed nor properly adapted to function as modern curation centers. In most cases, institutions use whatever space they can acquire from their governing bodies; they do not have the financial capability to acquire additional space suitable for collections-management needs.

Most facilities receive some measure of maintenance, though on an irregular basis (Table 3). At most facilities, offices are cleaned by professional companies, but maintenance of the collections storage areas is the responsibility of curatorial staff.

None of the facilities is fully in compliance with the mandates of 36 CFR Part 79. Most of the repositories are partially in compliance with major standards—proper environmental controls, pest management, security, and fire safety—included in federal regulations. These elements,

Table 3.
Infrastructure Controls Present in Evaluated Repositories

Repository	Maintenance	Environmental Controls			Security			Fire Safety						Pest Management
		Dust Filters	Heating	Air Conditioning	Alarm	Motion Detector	Guard	Smoke Detector	Heat Sensor	Alarm	Fire Extinguishers	Sprinkler	Fireproof Cabinet	
3D	P	x	x	x				x		x	x			P
D&M	P	x	x	x			x	x			x			P
DRI, LV[a]	S	x	x	x	x	x						x		P
DRI, Reno	S		x								x			P
TRC ESI	P	x	x	x	x	x		x	x	x	x	x		P
G-M	P	x	x	x						x	x	x		P
HPA	P	x	x	x				x			x			P
ISHS	S		x		x			x	x	x	x	x		S
ASI	S		x	x	x	x					x		x	S
PCI	P	x	x	x	x	x		x	x		x			P
SAIC	P		x	x							x		x	P
SDARC	P		x	x				x	x	x	x			P
TARL Repository 1	P	x	x	x	x			x		x	x			P
TARL Repository 2			x				x							P
Tellus	S	x	x	x	x	x		x		x	x	x		P
UND	P		x				x	x	x	x	x			P
UNLV	P	x	x	x	x		x	x		x	x	x		P

Key: P = service by professionals; S = service by staff; x = control present.
[a] Corresponds to Repository 4 in the text (see Chapter 6).

and how well they are met, are discussed and summarized below.

Environmental Controls

Some environmental controls are in place at all of the facilities inspected (see Table 3). Ten facilities have dust filters on furnace or air-conditioner vents. All 17 of the facilities are heated, and 13 have air-conditioning systems. Fifteen facilities monitor humidity.

Security

Federal regulations require a number of security measures for the proper safeguarding of archaeological collections. These measures include door locks, motion detectors, intrusion alarms, limited access, and window security. None of the 17 evaluated facilities meets all federal guidelines for security (see Table 3). Eight possess intrusion alarms, four make use of a guard or patrol service, five use motion detectors, and all possess locks on interior and exterior doors and on all windows. Seven have a policy limiting access to certain areas, and none has reported major cases of unauthorized entry that resulted in the removal of collections.

Fire Detection and Suppression

All except one of the repositories possess at least one fire-detection measure (see Table 3). For example, 11 use smoke detectors, 5 use heat sensors, and 15 have regularly inspected fire extinguishers at key locations in both the repository and collections area. In addition, 6 have sprinkler systems in place, and only 2 make use of fireproof containers for materials. On a whole, only 2 repositories meet all of the federal requirements for safeguarding against fire (smoke and heat detectors, alarm to local fire company, sprinklers, and fire extinguishers. Of the remaining 15 facilities, 4 meet 80 percent of the standards, 4 meet 60 percent, and 7 meet 40 percent or less.

Pest Management

Of the 17 facilities evaluated, 15 have a formal pest-management program—one that monitors and controls insects and small mammals (see Table 3). These facilities are sprayed with chemicals on a regular basis. Evaluation of the types of chemicals used, their frequency of use, and the attendant hazard to personnel and collections was beyond the scope of work of this project, but should be investigated. Severe pest infestation and subsequent damage to the collections were not noted at any of the repositories.

Status of Artifacts

Two of the facilities (ISHS and SDARC) holding material remains have properly prepared ACC artifact collections for long-term curation (Table 4). In the remaining facilities, most primary containers are acidic-cardboard boxes of varying size that are frequently overstacked, overpacked, compressed, and torn. Not all primary containers include adequate label information.

Although approximately 55 percent of the secondary containers used to house ACC collections are zip-lock bags, many are of only 2-mil thickness and have begun to suffer puncture damage. Paper bags are also used as secondary containers. The assessment team also found materials packaged loose in primary containers and in paper envelopes (see Table 4). The wide variety of nonarchival containers makes an inventory of the collections difficult. However, the inventory that was performed suggests that the collections are deteriorating under the existing storage conditions.

Six basic steps are necessary for the most basic physical stabilization of most archaeological material remains: (1) cleaning, (2) sorting, (3) directly labeling each artifact, (4) bagging the material properly and labeling each bag, (5) creating acid-free label inserts for each secondary container, and (6) boxing the materials and labeling the primary containers. These steps also help ensure the integrity of the data, thus enhancing the research value of the collection. Full control is accomplished through proper registration procedures. Physical stability is ensured by proper

Table 4.
Summary of Primary and Secondary Containers Used at Evaluated Facilities

Facility	Artifacts					Records					
	Primary			Secondary		Primary				Secondary	
	Acid-Free Box	Acidic Box	Plastic Bag	Paper Bag	Cabinet	Acidic Box	Shelf	Loose	Manila Folder	Acid-Free Folder	Bound
3D					x				x		
D&M	x		x		x				x		
DRI, LV	x		x		x				x		
DRI, Reno	x	x	x	x							
Dyess AFB		x	x				x	x			
TRC ESI					x			x	x		x
Fort Bragg		x	x		x				x		
G-M		x	x		x				x		x
HPA						x		x			
ISHS	x		x		x						
ASI									x		
Little Rock AFB					x			x	x		
Moody AFB					x			x	x	x	
Mountain Home AFB					x			x	x		x
Nellis AFB							x	x			x
PCI (Seymour Johnson AFB)						x		x			
PCI (Moody AFB)		x	x		x		x				
SAIC					x				x		
SDARC	x		x		x			x	x		
TARL		x	x		x				x		
Tellus					x				x		
UND		x	x								x
UNLV		x	x	x							
Whiteman AFB					x			x	x		x

storage conditions (e.g., in a controlled environment). All collections require at least partial rehabilitation to comply with federal regulations.

Data also were collected regarding the major prehistoric and historical-period material classes observed in each of the ACC collections (Table 5). Lithics are most abundant in prehistoric collections. Metal and glass are the most abundant historical-period materials. As Table 5 illustrates, the majority of the ACC materials are from prehistoric contexts.

Human Skeletal Remains

No human skeletal remains were present in the ACC collections evaluated.

Records Management

ACC associated records encompass approximately 22 linear feet (Table 6). Although some attempts at minimal conservation practices have been made at most facilities, archival-quality protocols were not in place at any of the 22 facilities holding associated documentation. In only limited instances have the original paper records been duplicated. Paper documents are not housed within acid-free folders, metal contaminants are present, maps are not always stored flat in metal cases, and photographic materials have not always been isolated and stored in chemically inert sleeves and in the proper environment. Fourteen collections of associated documentation require complete rehabilitation to comply with federal standards and modern archival practices.

Environmental controls that meet the minimum federal standards are absent in most of the repositories that curate associated documentation. All repositories have suffered humidity and temperature fluctuations outside accepted ranges. Archival materials readily absorb and release moisture, leading to expansion and contraction—dimensional changes that accelerate deterioration and promote major visible damage such as flaking ink, warped covers on books, and cracked emulsion on photographs.

Collections-Management Standards

Basic collections management tools—e.g., accession records, inventories, and written policies and procedures for curation, records management, and loans—exist at 5 of the 23 applicable facilities; in some cases these are only field-curation guidelines and are not used to prepare collections according to 36 CFR Part 79. Therefore, many of the examined repositories entrusted with the care of the nation's heritage have no long-term plan for the management of these resources. In fact, most of the repositories evaluated are not interested in serving as long-term curation facilities. They are facilities belonging to archaeological contractors who hold materials on a temporary basis (during analysis) until more suitable, long-term curation facilities can be found. The responsibility for long-term curation rests with ACC. Failure to meet elementary curation needs and responsibilities has led to substandard care for many of the ACC archaeological collections.

Prior to this collections assessment, ACC did not know the extent, locations, or conditions of their archaeological collections. ACC personnel should be commended for recognizing this problem and addressing it, but now that specific deficiencies have been identified, action must be taken. At a minimum, a plan of action for the long-term management of ACC collections should implement the following four items.

1. Establish an order for the rehabilitation of all the collections.

2. Place collections in appropriate curation repositories in each state of origin.

3. Inventory and rehabilitate the collections and associated documentation.

4. Develop an archives-management plan.

Implementation of these minimal tasks will contribute greatly to the preservation of data essential to our understanding of the culture history of North America.

Table 5.
Volume of Material Classes Present in ACC Collections at Evaluated Facilities

Facility	Material Class									Total
	Lithics	Prehistoric Ceramics	Historical-Period Ceramics	Glass	Metal	Botanical	^{14}C	Faunal Remains	Soil	
3D	—	—	—	—	—	—	—	—	—	0.00
D&M	0.75	0.60	—	0.01	0.07	0.08	—	—	—	1.51
DRI, LV	0.90	0.05	—	—	0.05	—	—	—	—	1.00
DRI, Reno	9.0	0.12	0.06	0.06	6.70	0.12	—	0.12	—	16.18
Dyess AFB	4.20	—	—	—	—	—	—	—	—	4.20
TRC ESI	—	—	—	—	—	—	—	—	—	0.00
Fort Bragg (Pope AFB)	0.25	—	0.40	0.11	—	—	—	—	—	0.76
G-M	0.05	—	0.14	0.50	0.15	—	0.10	0.05	—	0.99
HPA	—	—	—	—	—	—	—	—	—	0.00
ISHS	0.50	—	—	0.17	0.17	—	—	—	—	0.84
Little Rock AFB	—	—	—	—	—	—	—	—	—	0.00
Moody AFB	—	—	—	—	—	—	—	—	—	0.00
Mountain Home AFB	—	—	—	—	—	—	—	—	—	0.00
Nellis AFB	—	—	—	—	—	—	—	—	—	0.00
PCI (Moody AFB)	0.90	0.15	0.15	0.15	0.15	—	—	—	—	1.50
PCI (Seymour Johnson AFB)	—	—	—	—	—	—	—	—	—	0.00
SAIC	—	—	—	—	—	—	—	—	—	0.00
SDARC	< 0.01 (1 artifact)	—	—	—	—	—	—	—	—	< 0.01
TARL	0.78	—	—	—	—	—	—	—	1.80	2.58
Tellus	—	—	—	—	—	—	—	—	—	0.00
UND	0.17	—	0.08	—	—	—	—	—	—	0.25
UNLV	1.68	0.32	0.01	0.01	—	—	—	—	—	2.02
Whiteman AFB	—	—	—	—	—	—	—	—	—	0.00
Total	19.19	1.24	0.84	1.01	7.29	0.20	0.10	0.17	1.80	31.84

Note: Volume measured in ft^3.

Table 6.
Documentation Types Present in ACC Collections at Evaluated Facilities

Facility	Administrative	Background	Survey/ Excavation/ Analysis	Reports	Photographic	Maps	Total
3D	0.04	0.02	—	0.02	0.02	—	0.10
D&M	0.05	0.01	0.10	—	0.08	—	0.24
DRI, LV	—	—	0.21	—	—	—	0.21
DRI, Reno	0.01	—	1.17	—	0.25	0.01	1.44
Dyess AFB	—	—	0.02	0.04	—	—	0.06
TRC ESI	2.29	1.63	3.92	3.17	0.33	—	11.34
Fort Bragg (Pope AFB)	0.07	—	0.06	0.13	0.02	—	0.28
G-M	0.20	0.20	0.80	—	0.30	—	1.50
HPA	0.13	0.07	—	0.33	0.02	0.04	0.59
ASI	—	—	—	0.04	—	—	0.04
Little Rock AFB	0.08	—	0.02	0.25	—	—	0.35
Moody AFB	0.08	—	—	0.05	—	—	0.13
Mountain Home AFB	0.34	—	—	0.08	—	—	0.42
Nellis AFB	0.38	—	—	0.63	0.08	—	1.09
PCI (Moody AFB)	0.06	0.08	1.08	0.02	—	0.08	1.32
PCI (Seymour Johnson AFB)	0.04	0.04	0.67	0.04	0.02	0.02	0.83
SAIC	0.08	0.04	0.33	0.25	0.08	0.04	0.82
SDARC	0.02	0.02	0.06	—	—	—	0.10
TARL	—	—	0.02	0.02	0.04	—	0.08
Tellus	0.17	—	0.08	0.08	0.02	—	0.35
UND	—	—	—	0.08	—	—	0.08
UNLV	—	—	0.16	—	—	—	0.16
Whiteman AFB	0.04	—	—	0.27	—	—	0.31
Total	4.08	2.11	8.70	5.50	1.26	0.19	21.84

Note: Documentation measured in linear feet.

11

Recommendations

The following general recommendations are submitted for bringing the evaluated ACC collections into compliance with the mandates of 36 CFR Part 79 and NAGPRA. To ensure maximum savings in cost to ACC, compliance with 36 CFR Part 79 and NAGPRA should be undertaken by multiple installations whenever possible. A comprehensive plan for curation compliance includes the following points.

Develop a Plan of Action

A plan of action minimally must address four points—(1) long-term housing of the collections and records, (2) rehabilitation of the artifact collections, (3) rehabilitation of the associated records, and (4) management of these data.

Develop a Formal Archives-Management Program

A plan of action must be developed immediately to establish archives-deficiency priorities within ACC. Following this survey, all records for each state must be brought together in a single repository and rehabilitated to comply with existing federal guidelines and standards for modern archival practices. Archives rehabilitation must precede the rehabilitation of the artifact collections, because the ACC archives are in the most immediate danger. The cost of rehabilitation for these collections is approximately $11,000. Archives rehabilitation includes 11 steps.

1. Develop an archives-inventory-management program that uses microcomputer technology.

2. Inventory and catalog all associated records in a manner consistent with professional museum standards.

3. Assess the condition of all records, using qualified, appropriate staff, and implement a long-term conservation program for appropriate records.

4. Conserve significant records that are currently at risk.

5. Arrange records in accordance with modern archival principles.

6. Remove all contaminants from the records.

7. Transfer paper records into acid-free folders that are labeled directly in indelible ink, store in acid-free primary containers that are also labeled in indelible ink, and place on appropriate archival storage units.

8. Place photographs, negatives, and slides into archival, polyethylene sleeves, acid-free envelopes, and appropriate storage units.

9. Catalog and curate large-scale maps in metal map cases.

10. Produce duplicate or back-up copies of associated records that will be stored in a separate, fireproof, secure location.

11. Create a finding aid for each collection; create a master, cross-indexed finding aid to be housed at HQ ACC.

Inventory and Rehabilitate Existing Artifact Collections

A priority based on physical condition must be assigned to ACC collections, a general inventory must be produced, and the collections must be rehabilitated to professional museum standards. Rehabilitation should include the following four steps.

1. Inventory and catalog all artifact collections in a manner consistent with professional museum standards.

2. Label and package artifacts consistently and in accordance with archival standards, and place them in archivally stable containers.

3. Using qualified, professional staff, assess the condition of all perishable artifacts and implement a long-term conservation program for appropriate materials.

4. Develop a collections manual to aid in the management of archaeological collections.

These steps will result in the stabilization and preservation of existing collections and will ensure management of the collections in the most cost-efficient manner for the federal taxpayer. Proper management of these collections will ensure that scholars, students, and the public have access to, and benefit from, ACC archaeological collections, which presently do not approach their potential for use.

Bring Together Collections

A plan of action for the long-term care of collections and associated records must be adopted by ACC. In this era of cost-effectiveness, the St. Louis District recommends bringing together collections at regionally based, federally owned or leased repositories whose primary mission is the curation and long-term management of archaeological collections. Another option, which is not cost-efficient, is to place the collections in existing facilities in their state of origin, then spend the requisite funds to upgrade these facilities to meet the federal curation standards and the regional differences in collections and management needs.

The second option—placing the collections in facilities in their states of origin—is recommended as a temporary solution for the long-term curation needs of ACC collections. At the very least, ACC installations should cooperate within their state of origin to curate their materials collectively.

Develop Cooperative Agreements

To defray costs, the ACC is encouraged to develop cooperative agreements with other agencies regarding building construction and collections rehabilitation. Cooperative agreements provide opportunities for joint ventures between and among federal agencies with similar curation requirements. The St. Louis District has long-term experience in this area and, if needed, could assist the ACC.

Dedicate Space for Storage of Collections

Following the adoption of a curation strategy, ACC must develop a plan of action that identifies how their curation facility will function. Space must be dedicated strictly to the curation of artifact collections and associated records. Office, research, and work areas must be separated from storage areas. Space that is used both as storage and work areas is not acceptable. Minimal curation standards must include the following five points.

1. Storage spaces should contain adequate environmental controls to maintain stable temperature

and humidity levels for the types of objects being curated within them.

2. The number of exterior walls, windows, and doors in storage spaces should be minimized in order to (1) decrease the chance of condensation on walls and windows during seasonal temperature changes, (2) enhance security, and (3) increase energy efficiency.

3. Water lines associated with fire-suppression systems are the only kind of overhead pipes allowed in collections storage areas. Water and sewer pipes should be removed.

4. Electric junction boxes and gas and electric meters should be located outside of collections storage areas in order to limit access by non-curatorial staff.

5. Storage areas should be large enough to accommodate existing collections and projected-growth needs.

Develop Security, Fire-Detection and -Suppression, and Maintenance Measures

A plan of action for any collections storage facility must include measures for security, fire protection, and maintenance of the collections storage area that minimally incorporates the following.

Security

Entrances to any collections storage area should have metal or solid-core, wooden doors, with dead-bolt and key locks. The collections storage area should be protected by an electronic intrusion-detection system. Keys to the storage area must be restricted to repository staff. All cabinets housing archaeological collections should remain locked except for when items are being removed for research. Researchers and visitors should not be allowed access to the collections storage area unless accompanied by curatorial staff. When researchers or visitors request to work with objects, the objects be should be taken to a separate area outside the collections storage area.

Fire Detection and Suppression

Fire-detection and -suppression systems must be installed to safeguard collections and personnel. Smoke detectors must be placed in all parts of collections storage areas. The appropriate types and number of fire extinguishers, in relation to the types of collections and the overall size of the collections storage areas, must be properly maintained and placed in clearly marked positions within collections storage areas. Sprinkler systems should be installed throughout facilities, including collections storage areas.

Facility Maintenance

A scheduled plan for maintenance must be established for collections storage areas. Maintenance activities should include routine sweeping, mopping, and dusting by curatorial staff or contracted janitorial service. An integrated pest-management program should be implemented, including regular monitoring for signs of pest infestation. Smoking, eating, and drinking should be forbidden in collections storage areas.

Hire a Full-Time Collections Manager

It is imperative that a full-time collections manager be hired to care for the archaeological collections. This person should have professional qualifications and prior experience in collections management. Collections managers minimally are responsible for the following seven tasks.

1. Ensuring that adequate written policies and procedures are in place and are shared so that staff have appropriate guidance.

2. Ensuring that management records are kept up-to-date, complete, properly monitored, and readily available to researchers.

3. Managing a computerized database.

4. Ensuring that artifacts can be located easily.

5. Ensuring that objects are properly labeled.

6. Ensuring that artifacts and records are maintained under physically secure conditions, whether in storage, on exhibit, or under study.

7. Performing periodic inventories and inspections of collections and records to ensure their long-term survival.

The St. Louis District regards all the aforementioned recommendations as minimal tasks that must be addressed in order to bring ACC into compliance with federal standards for archaeological curation.

ACC has been entrusted with important collections of prehistoric and historical-period artifacts. Its trust lands today occupy areas of great importance in the history of this country. Our knowledge of Native American prehistory, American history, and European–Native American interactions may be enhanced through the study of ACC collections. Citizens of the United States trust that their national heritage will be preserved for future generations, and ACC's contributions to the preservation of that heritage are essential.

APPENDIX 1

Annotated Bibliography for Dyess AFB, Texas

Haywood, Norman, and Keith Russell
1995 *Final Report Cultural Resource Survey at Dyess AFB, Abilene, Taylor County Texas.* FNW2-94-4051. 3D International Environmental Group, Cincinnati, Ohio.

Collection Location: Dyess AFB
Documentation Location: Dyess AFB; 3D

Powell, Joseph, and Darrell Creel
1989 Cultural Resources in the Proposed Peacekeeper Rail Garrison Facilities, Dyess AFB, Taylor County, Texas. *Technical Report* No. 5. Texas Archaeological Research Laboratory, Austin.

Collection Location: TARL
Documentation Location: Dyess AFB

APPENDIX 2

Annotated Bibliography for Ellsworth AFB, South Dakota

Berg, Richard

1982 *Land Disposal on Ellsworth AFB, Cultural Resource Reconnaissance.* Submitted to the U.S. Army Corps of Engineers, Omaha District.

Collection Location: None
Documentation Location: SDARC

Beuchler, Jeffrey V.

1989 *A Short Format Report of an Intensive Cultural Resource Inventory Survey of Proposed Housing Expansion of Ellsworth AFB in Meade County, South Dakota.*

Collection Location: SDARC
Documentation Location: SDARC

Hackbarth, Mark

1977 *A Cultural Resources Survey of a Proposed School Administration Building, Douglas School District Ellsworth AFB, South Dakota.*

Collection Location: None
Documentation Location: SDARC

APPENDIX 3

Annotated Bibliography for Little Rock AFB, Arkansas

Cliff, Maynard, et al.
1995 *An Archaeological Survey of Little Rock AFB, Pulaski County, Arkansas.* Geo-Marine, Plano, Texas. Submitted to the U.S. Army Corps of Engineers, Tulsa District, and the U.S. Air Force.

Collection Location: G-M
Documentation Location: Little Rock AFB

Santeford, Lawrence, Judith Abernathy-Steward, and Robert H. Lafferty III
1986 *A Background and Literature Search for Significant Historic Archaeological Sites at Little Rock AFB in Pulaski County, Arkansas.*

Collection Location: None
Documentation Location: HQ ACC

APPENDIX 4

Annotated Bibliography for Minot AFB, North Dakota

Anderson, Adrian D.
1995 *Class I and III Cultural Resource Inventory of Minot AFB, Ward County, North Dakota.* Tellus Consultants, Minneapolis. Submitted to Minot AFB.

Collection Location: None
Documentation Location: Tellus

Kuehn, David D.
1988 Cultural Resources Inventory, Minot AFB, Peacekeeper Rail Garrison. *UNDAR West Report* No. 1090. University of North Dakota, Grand Forks. Submitted to Tetra Tech, Inc.

Collection Location: UND
Documentation Location: UND

APPENDIX 5

Annotated Bibliography for Moody AFB, Georgia

Blick, Jeff

1995 *Cultural Resources Survey, Grand Bay Ordnance Range, Moody AFB, Valdosta, Georgia.* Panamerican Consultants, Inc., Tuscaloosa, Alabama. Submitted to the U.S. Army Corps of Engineers, Savannah District, Contract No. DACW 21-93-D-8040.

Collection Location: PCI
Documentation Location: Moody AFB

Blick, Jeff, and Rose Lockwood Moore

1994 *Management Summary: Cultural Resources Survey, Grand Bay Ordnance Range, Moody AFB, Valdosta, Georgia.* Panamerican Consultants, Inc., Tuscaloosa, Alabama. Submitted to the U.S. Army Corps of Engineers, Savannah District, Contract No. DACW 21-93-0040.

Collection Location: None
Documentation Location: PCI

Ehrenhard, John E.

1986 Letter report from John Ehrenhard, Southeast Region, National Park Service, to Dr. Elizabeth Lyon, Georgia Deputy State Historic Preservation Officer.

Collection Location: None
Documentation Location: Georgia State Site Files, University of Georgia, Athens

Studstill, David E.

1995 Letter report of negative findings: Concurrence with Findings of a Previous Archaeological Survey of Moody AFB; GDOT project STP-034-1(22), Widening and Reconstruction of S. R. 125, P. I. #422280, Lowndes County.

Collection Location: None
Documentation Location: Moody AFB

Wright, Newell

1985 Archaeological Resources of the Winnersville Range, Moody AFB, Valdosta, Georgia. *Report of Investigation* No. 16. Archaeological Research Associates, Valdosta State College, Valdosta, Georgia

Collection Location: Valdosta State University
Documentation Location: Moody AFB

APPENDIX 6

Annotated Bibliography for Mountain Home AFB, Idaho

Corbyn, Ronald C.

1989 *Cultural Resource Assessment and Management Recommendations for Mountain Home AFB, Elmore and Owyee Counties, Idaho.* Interagency Archeological Services Branch National Register Programs, Western Region, National Park Service. Submitted to Mountain Home AFB.

Collection Location: None
Documentation Location: Environmental Office, Mountain Home AFB

Science Applications International Corporation

1991 *Prehistoric and Historic Archaeological Resource Inventory, Mountain Home AFB and Small Arms Range, Boise, Idaho.* Science Applications International Corporation, Boise, Idaho. Submitted to the U.S. Air Force and Mountain Home AFB.

Collection Location: None
Documentation Location: HQ ACC; ASI

1991 *Saylor Creek Air Force Range Class II Archaeological Survey.* Science Applications International Corporation, Boise, Idaho. Submitted to the U.S. Air Force and Mountain Home AFB.

Collection Location: None
Documentation Location: ASI; Mountain Home AFB

APPENDIX 7

Annotated Bibliography for Nellis AFB, Nevada

Bergin, Kathleen Ann

1991 *A Cultural Resource Inventory of the Indian Springs Landfill Expansion Project Area.* TRC Environmental Solutions, Inc., Irvine, California. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: TRC ESI

1991 *A Cultural Resource Inventory of the Tolicha Peak Gravel Pit Project Area.* TRC Environmental Solutions, Inc., Irvine, California, for Nellis AFB.

Collection Location: Undetermined
Documentation Location: TRC ESI

1992 *Archaeology of the SA-5 Target Project Area.* TRC Environmental Solutions, Inc., Irvine, California. Submitted to Nellis AFB, Contract No. CX8002-0-0011.

Collection Location: Undetermined
Documentation Location: TRC ESI

1993 *Archaeology of the Main Cantonment, Nellis AFB.* TRC Environmental Solutions, Inc., Irvine, California. Submitted to Nellis AFB, Contract Nos. CX8000-0-0011 and CX8004-0-0011.

Collection Location: Undetermined
Documentation Location: TRC ESI

1994 *A Cultural Resource Inventory of the Radar Threat Site Project Area.* TRC Environmental Solutions, Inc., Irvine, California. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: TRC ESI

1995 *Cultural Resource Management Plan: Nellis AFB, Nye, Lincoln, and Clark Counties, Nevada.* 3 vols. TRC Environmental Solutions, Inc., Irvine, California. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: TRC ESI

Bergin, Kathleen Ann, Richard Stockton, and David Ferraro
1994 *Archaeology of Areas II and III, Nellis AFB, Clark County, Nevada.* TRC Environmental Solutions, Inc., Irvine, California. Submitted to Nellis AFB, Contract Nos. CX8000-0-0011 and CX8007-0-0011.

Collection Location: Undetermined
Documentation Location: TRC ESI

Drollinger, Harold
1995 A Class III Cultural Resource Reconnaissance for the Expansion of the AII facility, Nellis Air Force Range, Nye County, Nevada. *Short Report* No. SR092695-3. Desert Research Institute, Nevada. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

1995 A Class III Cultural Resource Reconnaissance of a Proposed Fiber Optic System for Tolicha Peak, Nellis Air Force Range, Nye County, Nevada. *Short Report* No. SR032994-1. Desert Research Institute, Nevada. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

1995 A Class III Cultural Resource Reconnaissance of a Proposed Fiber Optic System for Tolicha Peak, Nellis Air Force Range, Nye County, Nevada. *Short Report* No. SR033994-1. Desert Research Institute, Nevada. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

1995 A Class III Cultural Reconnaissance for Site 5 West Facility, Nellis Air Force Range, Nye County, Nevada. *Short Report* No. SR110994-1. Desert Research Institute, Nevada. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

Durand, Stephen, Ronald L. Reno, and Alvin R. McLane
1988 *Archaeological Survey and Evaluation of Six Parcels on Nellis AFB, Lincoln, Clark, and Nye Counties, Nevada.* Desert Research Institute, Nevada. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

Durand, Stephen R., Ronald L. Reno, and Alvin R. McLane
1988 Archaeological Survey and Evaluation of Six Patriot-Hawk Parcels North of Nellis AFB, Nevada. *Desert Research Report* No. 88-2. Desert Research Institute, Nevada. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

Ellis, Robert R.
1979 *Final Report on the Archaeological Survey of Electronic Warfare Sites and Related Developments, Nellis AFB Ranges.* Archaeological Research Center, University of Nevada, Las Vegas. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

Livingston, Stephanie D., and Lonnie C. Pippin
1989 Evaluation of Site 26CK3906 on the Air Force Auxiliary Field, Indian Springs, Nevada. *Desert Research Report* No. SR071888-1. Desert Research Institute, Nevada. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

Livingston, Stephanie D., Fred L. Nails, and Jerry D. Williams
1989 Evaluation of Site 26CK3905, Range 62 Nellis AFB, Nevada. *Short Report* No. SR080589, *Technical Report* No. 71. Quaternary Sciences Center, Desert Research Institute, Reno.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

McMullen, Robin E., Paula deLespinasse, and Andrew L. York
1995 *Summary of Findings During the Class III Cultural Resource Inventory of Indian Springs Air Force Auxiliary Field, Nevada.* Dames and Moore. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

Murphy-Cline, Susan, and Lynda Blair
1992 *Archaeological Project Index for the Nellis Air Force Bombing and Gunnery Ranges in Clark, Lincoln, and Nye Counties, Nevada.* Harry Reid Center for Environmental Studies, University of Nevada, Las Vegas.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

1994 Nellis AFB, A Report on the Inventory of Cultural Artifacts. *Report* No. 1-8-15. Harry Reid Center for Environmental Studies, University of Nevada, Las Vegas. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

Murphy-Cline, Susan, and Lynda M. Blair
1992 *Native American Graves and Protection Repatriation Act of 1991 (NAGPRA) Partial Compliance for the Nellis Air Force Ranges Southern Nevada.* Division of Environmental Assessment, Harry Reid Center for Environmental Studies, Marjorie Barrick Museum of Natural History, University of Nevada, Las Vegas. Submitted to the U.S. Air Force.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

Pippin, Lonnie C.
1995 A Class III Cultural Resources Survey of the Proposed P-51 Electronic System Site on Cedar Peak, on Nellis Range R-4807, Nye County, Nevada. *Short Report* No. SR041295-1. Desert Research Institute, Nevada, for Nellis AFB.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

Pippin, Lonnie C., Robert L. Clerico, and Ronald L. Reno
1982 An Archaeological Reconnaissance of the NNWSI Yucca Mountain Project Area, Southern Nye County, Nevada. *DRI Report* No. 28. Desert Research Institute, Nevada. Submitted to the U.S. Department of Energy.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

Stockton, Richard R., and Stephen T. Neese
1980 *A Cultural Resource Investigation of the Ragged Ridge Gap Filler Radar Site, Nellis Air Force Bombing and Gunnery Range, Nye County, Nevada.* Archaeological Research Center, University of Nevada, Las Vegas. Submitted to Boyles Engineering Corporation.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

York, Andrew L., and W. Geoffrey Spaulding
1995 *Final Phase III Archaeological Investigations at Sites 26CK4856, 26CK4864, and 26CK4867 Within the Main Cantonment of Nellis AFB, Clark County, Nevada.* Dames and Moore, Las Vegas. Submitted to the U.S. Army Corps of Engineers, Omaha District.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

York, Andrew, Robin E. McMullen, Paula deLespinasse, and W. Geoffrey Spaulding
1995 *Cultural Resource Inventory of the Indian Springs Air Force Auxiliary Field, Nellis AFB, Clark County, Nevada.* Dames and Moore, Las Vegas. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

Zukosky, William
1993 *Class III Cultural Resources Inventory for a Proposed Cluster Bomb Unit Target Site Within Nellis Range Complex, Nellis AFB, Nevada.* Dames and Moore, Las Vegas. Submitted to Nellis AFB.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

1995 *Cultural Resource Inventory of the U.S. Force, Nellis AFB Well Water Annex, Clark County, Nevada.* Sierra Delta Corporation. Submitted to Nellis AFB and the City of North Las Vegas.

Collection Location: Undetermined
Documentation Location: Environmental Office, Nellis AFB

APPENDIX 8

Annotated Bibliography for Offut AFB, Nebraska

DeVore, Steven L.
1992 *Archaeological Reconnaissance Survey of Offut AFB, Sarpy County, Nebraska.* Rocky Mountain Section, National Park Service, Denver.

Collection Location: Undetermined
Documentation Location: HQ ACC

Forstadt, Michael S., and Stanley R. Berryman
1990 *Archaeological Investigations of Minuteman Radar Sites.* Advanced Sciences, Inc.

Collection Location: Undetermined
Documentation Location: HQ ACC

Hoffman, J. J.
1992 Letter of findings from J. J. Hoffman, National Park Service, Denver, to Maj. Robert Feldman.

Collection Location: Undetermined
Documentation Location: HQ ACC

APPENDIX 9

Annotated Bibliography for Pope AFB, North Carolina

Ehrenhard, John E.

1984 Preliminary Archaeological Reconnaissance of Pope AFB, Cumberland County, NC. Letter report to William Price, Division of Archives and History.

Collection Location: None
Documentation Location: North Carolina Office of State Archaeology (NCOSA)

Jones, David

1991 *Cultural Resources Survey for Construction Projects on Fort Bragg Military Reservation and Pope AFB.* Gulf Engineers and Brockington and Associates. Submitted to the U.S. Army Corps of Engineers, Savannah District.

Collection Location: Fort Bragg
Documentation Location: Fort Bragg

Jones, David, and Marian Roberts

1993 *Phase I Cultural Resources Survey, Proposed A-10 Munitions Storage Facility, Pope AFB, and Proposed Cumberland County School Tract, Fort Bragg Military Reservation.* Gulf Engineers and Brockington and Associates. Submitted to the U.S. Army Corps of Engineers, Savannah District.

Collection Location: Fort Bragg
Documentation Location: Fort Bragg

Jones, David, Marian Roberts, and Eric Poplin

1994 *Phase I Cultural Resources Survey of the Bridge Road and Utilities Site for a Munitions Storage Area, Pope AFB, North Carolina.* Gulf Engineers and Brockington and Associates. Submitted to the U.S. Army Corps of Engineers, Savannah District.

Collection Location: Fort Bragg
Documentation Location: Fort Bragg

Markham, Virginia
1994 *Phase I Cultural Resources Survey of the Bridge Road and Utilities Site for a Munitions Storage Area, Pope AFB, North Carolina, Management Summary.* Gulf Engineers and Brockington and Associates. Submitted to the U.S. Army Corps of Engineers, Savannah District.

Collection Location: None
Documentation Location: NCOSA

APPENDIX 10

Annotated Bibliography for Seymour Johnson AFB, North Carolina

Brook, David

1993 Letter of negative findings from David Brook, Deputy State Historic Preservation Officer, to Donald Abrams, Chief of Environmental Flight, Seymour Johnson AFB.

Collection Location: None
Documentation Location: NCOSA

Glass, Brent D.

1978 Letter of negative findings from Brent D. Glass, Deputy State Historic Preservation Officer, to Lt. Col. Robert S. Dobbins, Seymour Johnson AFB Civil Engineering.

Collection Location: None
Documentation Location: NCOSA

Grover, Jennifer

1995 *Cultural Resources Survey of the Dare County Ordnance Range, Seymour Johnson AFB, Goldsboro, North Carolina.* Panamerican Consultants, Inc., Tuscaloosa, Alabama.

Collection Location: None
Documentation Location: NCOSA

Panamerican Consultants, Inc.

1991 Letter report to Lt. Col. David W. DeFoliant, Seymour Johnson AFB Civil Engineering, concerning Fort Fisher Air Force Station.

Collection Location: None
Documentation Location: NCOSA

1994 *Research Design: Cultural Resources Survey, Dare County Ordnance Range, Seymour Johnson AFB, North Carolina and Grand Bay Air Force Range, Moody AFB, Georgia.* Panamerican Consultants, Inc., Tuscaloosa, Alabama. Submitted to the U.S. Army Corps of Engineer, Savannah District.

Collection Location: None
Documentation Location: PCI

Tise, Larry E.
1978 Letter of negative findings from Larry E. Tise, State Historic Preservation Officer, to Lt. Col. Robert S. Dobbins, Seymour Johnson Air Force Base Civil Engineering.

Collection Location: None
Documentation Location: NCOSA

APPENDIX 11

Annotated Bibliography for Whiteman AFB, Missouri

HQ ACC, Langley Air Force Base, Virginia

1992 *Final Environmental Impact Statement of the Minuteman II Wing at Whiteman AFB, Missouri.*

Collection Location: None
Documentation Location: HQ ACC

Historic Preservation Associates

1995 *Proposed Golf Course Expansion Area at Whiteman AFB.* Historic Preservation Associates, Fayetteville, Arkansas. Submitted to the U.S. Army Corps of Engineers, Kansas City District.

Collection Location: None
Documentation Location: Whiteman AFB; HPA

Miller, Russ

1994 *Phase I Cultural Resources Survey of Parkland Replacement for Missouri Route 132, Route 50 South to Whiteman AFB, Johnson County, Missouri.* Missouri Highway and Transportation Department, Jefferson City, Job No. J4S0963.

Collection Location: None
Documentation Location: Missouri Department of Natural Resources, Jefferson City

Moberly, Pat, and Mary Lucido

1978 *Survey of Excess Property Whiteman Communications Annex.*

Collection Location: None
Documentation Location: U.S. Army Corps of Engineers, Kansas City District

Sturdevant, Craig

1989 *Cultural Resource Investigations Proposed Peacekeeper Rail Garrison Program, Whiteman AFB, Johnson County, Missouri.*

Collection Location: None
Documentation Location: Missouri Department of Natural Resources, Jefferson City

Contract Particulars

Prepared for and
submitted in fulfillment
under agreement with the
U.S. Air Force,
Headquarters Air Combat Command,
Langley Air Force Base, Virginia

by

Eugene A. Marino

Michael K. Trimble
and Christopher B. Pulliam
Series Editors

U.S. Army Corps of Engineers
St. Louis District
Mandatory Center of Expertise for the
Curation and Management of Archaeological Collections

Archaeological Curation-Needs Assessment
Technical Report No. 10, Volume 2

edited and produced by
Statistical Research, Inc.,
P.O. Box 31865, Tucson, AZ 85751

1997