

**AN ARCHAEOLOGICAL CURATION-NEEDS ASSESSMENT FOR  
FORT IRWIN,  
NAVAL AIR STATION, NORTH ISLAND,  
EDWARDS AIR FORCE BASE,  
MARINE CORPS AIR-GROUND COMBAT CENTER,  
TWENTYNINE PALMS**

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1997





## CONTENTS

List of Figures .....	v
List of Tables .....	vi
EXECUTIVE SUMMARY .....	ix
ACKNOWLEDGEMENTS.....	xv
1. INTRODUCTION .....	1
2. FORT IRWIN .....	5
3. NAVAL AIR STATION NORTH ISLAND, CALIFORNIA .....	13
4. EDWARDS AIR FORCE BASE .....	27
5. MARINE CORPS AIR-GROUND COMBAT CENTER, TWENTYNINE PALMS, CALIFORNIA .....	51
6. ANTELOPE VALLEY COLLEGE, CALIFORNIA .....	55
7. CALIFORNIA STATE UNIVERSITY, FULLERTON .....	63
8. CALIFORNIA STATE UNIVERSITY, NORTHRIDGE .....	71
9. DAMES AND MOORE, CALIFORNIA .....	79
10. FAR WESTERN ANTHROPOLOGICAL RESEARCH GROUP .....	89
11. JOSHUA TREE NATIONAL MONUMENT, JOSHUA TREE, CALIFORNIA .....	101
12. LOS ANGELES COUNTY MUSEUM OF NATURAL HISTORY, LOS ANGELES, CALIFORNIA .....	109
13. SAN BERNARDINO COUNTY MUSEUM, SAN BERNARDINO, CALIFORNIA .....	117
14. SAN DIEGO MUSEUM OF MAN, SAN DIEGO, CALIFORNIA .....	125
15. SAN DIEGO STATE UNIVERSITY, SAN DIEGO, CALIFORNIA .....	137
16. SOUTHWEST MUSEUM, LOS ANGELES, CALIFORNIA .....	147
17. STATISTICAL RESEARCH, TUCSON, ARIZONA .....	155







## FIGURES

Figure 1. Security measures present on door to Archaeological Material Storage Area 2 .....	16
Figure 2. Shelving units used in Archaeological Material Storage Area 1 .....	17
Figure 3. Storage units for associated records .....	19
Figure 4. View of Edwards Air Force Base archeological collections .....	30
Figure 5. Molded hard plastic tubs used to hold Edwards Air Force Base archaeological materials .....	58
Figures 6 and 7. Murphy collection storage unit types 1 and 2 .....	66
Figure 8. Murphy collection storage unit type 3 .....	66
Figure 9. Space devoted to storage of NAS North Island archaeological materials .....	72
Figure 10. Container labels used for archaeological materials .....	74
Figure 11. Exterior view of FWARG repository 1 .....	91
Figure 12. Exterior view of FWARG repository 2 .....	91
Figure 13. View of container for cartographic records .....	96
Figure 14. Exterior view of the Joshua Tree National Monument curation repository.....	102
Figure 15. Storage of some types of artifacts at Joshua Tree National Monument .....	103
Figure 16. Storage units for collections at Joshua Tree National Monument .....	104
Figure 17. Storage units for paper records housed at Joshua Tree National Monument .....	105
Figure 18. View of archaeological material storage area .....	110
Figure 19. View of archaeological material storage area at the California Archaeological Inventory .....	119
Figure 20. Types of storage unit used for archaeological materials. Note poles used for earthquake protection .....	120
Figure 21. Storage units used in Archaeological Material Storage Area 1 at the San Diego Museum of Man .....	129

Figure 22. Storage units and primary containers used in Archaeological Material Storage Area 2 at the San Diego Museum of Man .....	130
Figure 23. View of the Montezuma School Repository 1 .....	138
Figure 24. Secondary containers used for NAS North Island human remains .....	142
Figure 25. View of repository at the Southwest Museum .....	149
Figures 26 and 27. Storage units for NAS North Island archaeological materials at the Southwest Museum .....	150
Figure 28. View of archaeological materials in storage area 1 .....	163
Figure 29. View of repository located in the basement of the Fowler Museum .....	173
Figures 30 and 31. Storage containers for San Clemente archaeological materials .....	175

## TABLES

Table 1. Ground Stone Stored at Fort Irwin .....	6
Table 2. Summary of Associated Documentation housed at Naval Air Station North Island.....	19
Table 3. Volume of Archaeological Materials housed at Edwards Air Force Base .....	28
Table 4. Types of Associated Documentation in Linear Feet at Edwards Air Force Base .....	31
Table 5. Volume of Archaeological Materials from Edwards Air Force Base at Antelope Valley College .....	56
Table 6. Material Classes in Edwards Air Force Base Collections .....	56
Table 7. Material Classes in NAS North Island Collections (Murphy Collection) .....	64
Table 8. Type of Records from Fort Irwin Housed at Dames and Moore .....	80
Table 9. Prehistoric Material Classes in a Sample of Fort Irwin Archaeological Materials .....	90
Table 10. Types of Associated Documentation in the Fort Irwin Collections .....	95



Table 11. Summary of Edwards Air Force Base Collections at the San Bernardino County Museum .....	118
Table 12. Summary of NAS North Island Collections Housed at the San Diego Museum of Man .....	126
Table 13. Summary of Human Skeletal Remains from NAS North Island by Collection and Catalog Number .....	132
Table 14. Summary of NAS North Island Collections at the Southwest Museum .....	148
Table 15. NAS North Island Collections Known to Contain Human Skeletal Remains .....	151
Table 16. Summary of NAS North Island Collections at UCLA .....	162
Table 17. Sites Represented in the NAS North Island Collections at the Institute of Archaeology, UCLA .....	172
Table 18. Types and Frequencies of Repositories Curating DoD Archaeological Collections .....	181
Table 19. Summary of Collections by Location .....	182





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## EXECUTIVE SUMMARY

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### PROBLEM

Federal archaeological collections are a significant and non-renewable national cultural resource. Unfortunately, curation of these materials, for the most part, has not played an integral part in the planning of archaeological projects in the last fifty years. Instead, numerous collections representing our nation's heritage were placed in the attics, basements, and closets of countless storage facilities across the United States where many have undergone steady deterioration. Additionally, many collections were illegally transported to Europe where they still remain. Inappropriate care and subsequent deterioration of these collections are not only transgressions of the laws under which they were recovered, but also prevents them from being used for educational and research purposes, which were the very public benefits Congress intended when they passed historic preservation laws. Valuable portions of the North American prehistory and history are being lost, and the considerable financial investment by the American public in archaeological recovery is quickly being squandered.

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### BACKGROUND

Naval Air Station, North Island (NAS North Island), Edwards Air Force Base, Fort Irwin, and the Marine Corps Air-Ground Combat Center (MCAGCC), Twentynine Palms, are responsible for the management of cultural resources on their properties and for the archaeological and historical resources removed from these lands. As mandated by federal law, agencies are required to ensure that all recovered archaeological materials and the associated records are adequately curated. Unfortunately, funding shortfalls, lack of consistent national policy, and the magnitude of the problem have prevented compliance.

Air Force, Army, and Navy collections 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, and future study. In the past, federal agencies gave 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 collections. At the request of the Legacy Resource Management Program and under the umbrella of the Department of Defense,

inspections of all archaeological materials and associated records in the care of NAS North Island, Edwards Air Force Base, Fort Irwin, and MCAGCC Twentynine Palms were conducted by the U.S. Army Corps of Engineers, Technical Center of Expertise in Archaeological Curation and Collections Management (now a Mandatory Center of Expertise) from July 22, 1992, to October 19, 1992, and September 16-20, 1993. These inspections produced evidence documenting widespread deterioration and neglect of many of the Air Force, Army, and Navy archaeological collections.

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## **FINDINGS**

### **Physical Status of Facilities**

1. Repository Adequacy: Collections in the care of NAS North Island, Edwards Air Force Base, Fort Irwin, and MCAGCC Twentynine Palms are presently curated in 17 repositories.

#### **Installation/Satellite Repository**

Naval Air Station, North Island

Installation Repository

California State University, Fullerton

California State University, Northridge

Natural History Museum of Los Angeles County

San Diego Museum of Man

San Diego State University

Southwest Museum

University of California, Los Angeles

Institute of Archaeology, University of California, Los Angeles

Edwards Air Force Base

Installation Repository

Antelope Valley College

San Bernardino County Museum

Fort Irwin

Installation Repository

Far Western Anthropological Research Group

Dames and Moore

Marine Corps Air-Ground Combat Center, Twentynine Palms

Joshua Tree National Monument

Statistical Research



None of the 17 facilities fulfill all of the standards mandated by 36 CFR Part 79 (Curation of Federally-Owned and Administered Archaeological Collections), a federal regulation that establishes professional standards for the management and care of all federal collections.

2. Environmental Controls: Environmental monitoring and adequate environmental control, which consist of stable temperature and humidity readings, are critical for the long-term preservation of collections. Only two of the repositories examined contain these types of controls. Most of the facilities are heated and air-conditioned, but temperature fluctuations and lack of humidity controlling devices provide for unstable storage environments.

3. Security: Fifty percent of the repositories meet the federal standards for the security of archaeological collections. Included in these standards are such measures as intrusion alarms, motion detectors, limited access to collections storage area, absence of windows in collections storage area, and locks on doors. Although all facilities were locked, there was one documented case of loss from unauthorized entry. Additionally, the isolated location of several facilities creates further security risks.

4. Fire Detection/Suppression: Only 12 of the repositories examined contain adequate fire detection and suppression systems, including smoke alarms, fire alarms, fire extinguishers, and a sprinkler system. Although not adequate protection, all facilities contain at least one fire extinguisher in the collections storage area. Because fire is a major hazard to any museum collection, strict prevention measures must be adhered to.

5. Pest Management: Pests play a major factor in the deterioration of archaeological collections. It is therefore imperative that repositories holding collections for long-term storage also contain adequate pest management programs that incorporate both monitoring and control. Only 50% of the repositories have rudimentary pest management programs, which usually consists of controlling rodents with traps, and chemical spraying for insects on a regular basis. The remainder of the collections storage areas deal with pest infestations on an as-needed basis.

### **Status of Artifacts**

The NAS North Island, Edwards Air Force Base, Fort Irwin, and MCAGCC Twentynine Palms collections consists of approximately 2,176 ft<sup>3</sup> of material. Only one of the facilities has properly prepared the federal archaeological materials for long-term curation using acid-free boxes and archival containers. Eleven of the repositories have properly cleaned, labeled, and sorted their collections.

Overall, the primary containers (boxes that house a group of artifacts) consist of various-sized acidic cardboard boxes, which are frequently overstacked, overpacked, compressed, torn, and dirty. Most primary containers have been labeled, although inconsistently and with basic, or minimal information.

The wide variety of inappropriate secondary containers are contributing to the deterioration of the many components of the collections. Secondary containers (containers that are directly within the primary container) observed include such things as sandwich bags, acidic paper bags, acidic cardboard cartons, small acidic cardboard and plastic boxes, artifacts packed in cotton and/or newspaper, plastic and glass vials, manila envelopes, wax paper bags, and the occasional archival-quality, zip-lock plastic bags.

The major prehistoric material classes in the NAS North Island, Edwards Air Force Base, Fort Irwin, and MCAGCC Twentynine Palms collections include lithics, shell, faunal remains, ceramics, botanical samples, and human skeletal remains. Also observed were glass and metal; leather, trade beads, coins, and medals were observed in lesser quantities.

### **Status of Human Skeletal Remains**

A minimum number of 37 individuals are curated at nine repositories housing NAS North Island, Edwards Air Force Base, Fort Irwin, and MCAGCC Twentynine Palms collections. Additionally, an unknown number of individuals from one of the facilities have been sent to a separate repository where they are undergoing analysis. Complete rehabilitation (e.g., reboxing, rebagging, labeling) needs to be conducted in order to stabilize the remains, and a complete inventory is required for compliance with the Native American Graves Protection and Repatriation Act (P.L. 101-601).

### **Status of Documentation**

The NAS North Island, Edwards Air Force Base, Fort Irwin, and MCAGCC Twentynine Palms records encompass approximately 245 linear feet. The records do not contain the full range of documentation classes that were originally created for each project (e.g., paper records, photographic records, maps and/or oversized documents, project reports). Archaeological materials usually are accompanied by a set of records, photographs, maps, reports, and field notes, some of which are lacking at each of the examined facilities. We could not determine if the records were missing or had never been created.

Minimal professional archival-quality practices were noted at only one of the 17 repositories. In most cases, photographic materials have not been isolated or stored in chemically inert sleeves. Maps and/or oversized documents are not being properly cared for at any of the repositories. In sum



records, which are an integral part of these collections, are receiving the worst treatment and are in the greatest danger. Corrective actions should be taken immediately.

### **Status of Repository Management Controls**

Although over 50% of the repositories have accession records for collections from NAS North Island, Edwards Air Force Base, Fort Irwin, and MCAGCC Twentynine Palms, only nine of the 17 have written records of where their collections are located within the repositories. Only seven of the repositories have inventoried their collections within the last 10 years. Basic policy and procedure statements for artifact curation, records management, and deaccessioning are present at only seven of the curation facilities. Written policies regarding loan procedures are present at nine repositories. Six of the repositories maintain minimum standards for the acceptance of collections, whereas only two have field guidelines for the curation of archeological materials. Only one repository has a published guide to the archaeological material in their care. Thirteen of the 17 repositories employ some form of computer database management for their collections.

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### **CORRECTIVE ACTIONS**

It is imperative that a number of corrective measures take place in order to bring these collections, and the facilities housing them, into compliance with 36 CFR Part 79. Several general recommendations include the following.

1. Coalesce collections into one federally owned repository, or distribute them into existing facilities their state of origin and spend necessary funds to upgrade them.
2. Develop cooperative agreements with other agencies to share costs in building construction and collections rehabilitation.
3. Use archival quality containers to rebox and rebag existing collections.
4. Design and implement formal archives management programs.
5. Develop and enact consistent artifact inventory procedures.
6. Consider employing full-time curators to care for the archaeological collections and associated records.



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**CONCLUSIONS**

Each recommendation may not be readily attainable. However, some action is necessary immediately as the collections are deteriorating in their current storage environments, and there are no long-term plans for curation of archaeological collections and associated records at any of the facilities. If not properly cared for, these federal collections will lose their educational and research value. Any improvements will more sufficiently preserve the collections and help insure that they will be useful to future generations.

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**EDITOR'S NOTE**

All data contained in this report is current as of the date of the visit to the particular repository. During the interim between the completion of fieldwork for this project and the production of the final report, several drafts have been circulated to various individuals who have asked for the information. This report is the final version and all information contained herein should supersede all previous circulated copies.

## **ACKNOWLEDGMENTS**

The entire staff of the Technical Center of Expertise in Archaeological Curation and Collections Management should be commended for their parts in the fieldwork and report editing that led to the completion of these curation-needs assessments. This study is the first real example of a regional approach to the problems surrounding archaeological curation. We are grateful to the following individuals for the time, effort, and contributions they made to the completion of the curation-needs assessments at the institutions/agencies listed below.

### **NAVAL AIR STATION, NORTH ISLAND, CALIFORNIA**

Connie Cameron, California State University, Fullerton  
Lynne Christenson, San Diego State University  
Chris Coleman/Karen Wise, Natural History Museum of Los Angeles County  
Roger Colten/Nancy Davis, University of California, Los Angeles, Institute of Archaeology  
Ken Hedges, San Diego Museum of Man  
George Kritzman, Southwest Museum  
Mark Raab, California State University, Northridge  
Andrew Yatzko, NAS North Island

### **EDWARDS AIR FORCE BASE, CALIFORNIA**

Robin Laska, San Bernardino County Museum  
Rick Norwood, Edwards Air Force Base  
Roger Robinson, Antelope Valley College

### **MARINE CORPS AIR-GROUND COMBAT CENTER, TWENTYNINE PALMS, CALIFORNIA**

Jeffery Altschul/Carol Ellick, Statistical Research  
Rosie Pepito, Joshua Tree National Monument

### **FORT IRWIN**

Walter Cassidy, Fort Irwin  
Debbie Jones, Far Western Anthropological Research Group  
Andrew York, Dames and Moore





# 1

## INTRODUCTION

Naval Air Station, North Island, Fort Irwin, Edwards Air Force Base, and Marine Corps Air-Ground Combat Center, Twentynine Palms, are responsible for archaeological materials and archaeological documentation (archaeological collections) in 18 facilities in two states. This responsibility is mandated by the Antiquities Act (16 U.S.C. 431 et seq.), the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.), the Archaeological Resources Protection Act, as amended (16 U.S.C. 470aa et seq.), and 36 CFR Part 79, Curation of Federally-Owned and Administered Archeological Collections.

In 1990 the Native American Graves Protection and Repatriation Act (NAGPRA 25 U.S.C. 3001 et seq.) was enacted to identify Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony in archaeological collections, and to foster communication between federal agencies and Indian Tribes, Native Alaskans, and Native Hawaiian organizations on the disposition of these remains and objects. All federal agencies are required to meet mandated deadlines for compliance with NAGPRA. A summary of unassociated funerary objects, sacred objects, and objects of cultural patrimony was to be completed by November 16, 1993. An inventory of human remains and associated funerary objects was to be completed by November 16, 1995.

In the Fall 1991, the St. Louis District submitted a proposal to the Legacy Resource Management Program outlining a regional strategy for performing curation needs assessments on a sample of Department of Defense archaeological collections. The regional strategy included performing curation needs assessments for four-military installations and satellite repositories in southern California that were known to have extensive archaeological collections. The proposal was funded in the Spring of 1992. The proposal included a work plan containing the following.

1. Professional and technical services for the inspection and inventory of archaeological collections in selected repositories.
2. A final report detailing the results of the evaluation includes the following.
  - a. Physical description of all repository facilities.
  - b. Physical description of all recovered archaeological materials.
  - c. Physical description of all associated documentation collections.
  - d. Recommendations for compliance with 36 CFR Part 79.
3. A master bibliography of reports associated with archaeological investigations at NAS North Island, Fort Irwin, Edwards Air Force Base, and MCAGCC Twentynine Palms.

As part of a curation-needs assessment the St. Louis District visits each installation to examine any reports, records, or inventory data associated with the archaeological collections and develops an annotated bibliography of reports, that includes a list of the associated collections and their present location.

### **Methods**

Nineteen separate repositories including three installation repositories, were evaluated during the fieldwork. Each repository was visited as follows:

- July 23, 1992—Fort Irwin
- July 27 and 29, 1992—NAS North Island
- July 28, 1992—San Diego State University (SDSU)
- July 30, 1992—San Diego Museum of Man (SDMoM)
- August 3, 1992—California State University (CSU), Northridge
- August 6, 1992—Southwest Museum
- August 11, 1992—Edwards Air Force Base
- August 17, 1992—University of California, Los Angeles (UCLA)
- August 17 and 18, 1992—UCLA, Institute of Archaeology
- August 19, 1992—CSU Fullerton
- August 21, 1992—Joshua Tree National Monument
- August 26, 1992—San Bernardino County Museum (SBCM)
- September 9, 1992—Statistical Research, Inc. (SRI)
- September 15, 1992 and December 15, 1993—Antelope Valley College (AVC)
- October 19, 1992—Natural History Museum of Los Angeles County (NHMLAC)
- September 15, 1993—Dames and Moore
- September 16, 17, and 20, 1993—Far Western Anthropological Research Groups (FWARG)

Repository summaries generated from the aforementioned visits are arranged alphabetically in the report. Also Twentynine Palms was not assessed by St. Louis District personnel; however, an installation summary is provided in the report.

#### ***Pre-Fieldwork Investigation***

The assessment of each facility's compliance with 36 CFR Part 79 included the following:

1. A visit to each installation to examine all reports, records, and inventory data associated with NAS North Island, Edwards Air Force Base, Fort Irwin, and MCAGCC Twentynine Palms collections and to compile an annotated bibliography of project reports.
2. Initial contacts were made with all personnel and agencies with information about NAS North Island, Edwards Air Force Base, Fort Irwin, and MCAGCC Twentynine Palms archaeological collections.



3. From these initial contacts, a list was created of all archaeological contractors and repositories associated with the recovery and curation of materials from these four installations.

### ***Field Inspection and Assessment of Repositories and Collections***

A survey questionnaire was completed for every facility involved with the curation of archaeological collections associated with NAS North Island, Edwards Air Force Base, Fort Irwin, and MCAGCC Twentynine Palms. The questionnaire contained information on the repositories and the archaeological collections.

A building evaluation form was completed for every facility and satellite repository involved with the curation of archaeological collections associated with these four installations. We collected information on structural adequacy, space use, environmental controls, security, fire detection/suppression, pest management, and utilities. These data permitted the determination of whether or not the facility was in compliance with the physical requirements for repositories as specified in 36 CFR Part 79.

A physical examination was performed of all project and site reports, administrative files, field records, curation records, electronic media, and photographic records to determine their presence or absence, the total length of each type of record, the physical condition of the containers and the records, and the overall condition of the storage environment. The status of the facilities compliance with 36 CFR Part 79 is based on this research.

A physical examination was conducted of all archaeological collections. The assessment included the (a) primary and secondary containers, (b) the degree of container labeling, (c) the extent of laboratory processing, (d) the material classes included in each collection, and (e) the condition of any human skeletal remains. Primary containers hold an individual artifact or a group of artifacts. These include acidic and acid-free cardboard boxes, cardboard, metal, or wooden trays, and, wood and metal drawers. Secondary containers are located within the primary containers and they can include acidic paper bags, plastic sandwich bags, plastic zip-lock bags, glass jars, film vials, aluminum foil, and small acidic and acid-free cardboard boxes.

### **NAGPRA-Compliance Assessment**

To satisfy the requirements of NAGPRA, the following tasks need to be performed at each repository with NAS North Island, Edwards Air Force Base, Fort Irwin, and MCAGCC Twentynine Palms archaeological collections.

1. Conduct a records search to identify the location of human remains, associated and unassociated funerary objects, objects of cultural patrimony, and sacred objects.
2. Perform a search of the archaeological materials to document human skeletal remains, associated and unassociated funerary objects, objects of cultural patrimony, and sacred objects.

3. Conduct an analysis of human skeletal remains that includes (a) a detailed skeletal inventory listing elements present, their completeness, and condition, (b) measurements of long bones and crania sufficient to provide basic description of physical characteristics, stature, and morphology of the skeletal remains, (c) estimates of age and sex, and (d) observations of any pathological conditions, cultural modifications, and evidence of life activities and trauma that might provide information to determine the cultural affiliation of the remains or the context from which they were recovered.
4. Produce summary and inventory reports for each installation.

### **Report Preparation**

The report includes descriptions of the facilities, estimates of the size of each collection, and an assessment of their condition. We also include recommendations for the rehabilitation of the facilities and/or the collections, according to 36 CFR Part 79.

### **Chapter Synopsis**

Chapters 2 through 19 discuss the general state of archaeological collections from NAS North Island, Edwards Air Force Base, Fort Irwin, and MCAGCC Twentynine Palms. Chapter 20 provides an overall findings summary of the assessments.



**2**  
**FORT IRWIN, CALIFORNIA**  
**INSTALLATION SUMMARY**

**(1) Volume of Archaeological Materials:** 1,036 ft<sup>3</sup>

On Installation: 89 ft<sup>3</sup>

Off Installation: 947 ft<sup>3</sup> (FWARG)

Compliance Status: Archaeological materials require partial rehabilitation to comply with existing federal standards. Artifacts should be placed in acid-free containers and a proper storage facility should be provided to accommodate the oversized artifacts.

**(2) Linear Feet of Records:** 127 linear feet

On Installation: Unknown

Off Installation: 113 linear feet (FWARG); 14 linear feet (Dames and Moore)

Compliance Status: Documentation requires partial rehabilitation to comply with existing federal guidelines and standards for archival preservation. All associated records should be duplicated on acid-free paper or microfilm and stored in acid-free folders, envelopes, and archival-quality photographic sleeves. A duplicate copy should be stored in a separate and fire-safe location.

**(3) Human Skeletal Remains:** No known human skeletal remains exist from Fort Irwin.

**(4) Status of Curation Funding:** Unknown

## INTRODUCTION

DATE OF VISIT: 23 July 1992

PERSON CONTACTED: Walter Cassidy

An estimated 89 ft<sup>3</sup> of prehistoric, ground stone from numerous projects are currently stored at the Goldstone NASA Deep Space Center, a vacated facility approximately 17 miles from Mr. Cassidy's office on Fort Irwin (Table 1).

**Table 1.**  
**Groundstone Stored at Fort Irwin**

Site Number	Ft <sup>3</sup>	Project/Location
SBR-4453	4	No Name Basin
SBR-4454	4	No Name West
SBR-4483	14	No Name Basin
SBR-4499	2	No Name West
SBR-4458	1	No Name Basin
SBR-4520	7	Bow Willow Wash
SBR-4786	8	Bow Willow Quarry
SBR-4796	2	—
SBR-4457	4	No Name West
SBR-4474	2	No Name West
SBR-4504	1	No Name West
SBR-ISO	1	Gallant Eagle Survey
SBR-4990	1	N. of Red Pass Lake
SBR-4966	9	Nelson Lake Wash
SBR-3831	1	Drinkwater Springs
SBR-4501	2	No Name West
SBR-4583	1	No Name West
SBR-2659	4	Bitter Springs-Tiefort
SBR-4871	1	Langford Well Area
SBR-5368	2	Tiefort Basin
SBR-5377	1	Tiefort Basin
SBR-5380	1	Tiefort Basin
SBR-5367	1	Tiefort Basin
SBR-5373	1	Tiefort Basin
SBR-5365	1	Bow Willow Wash
SBR-5382	2	—
SBR-4204	3	Bow Willow Quarry
SBR-3328	1	—
SBR-2211	1	Garlic Springs
SBR-5250	1	Tiefort Basin
SBR-5247	1	Tiefort Basin
SBR-5534	1	Tiefort Basin
SBR-5532	1	Tiefort Basin
SBR-5535	1	Tiefort Basin
—	1	—
<b>Total</b>	<b>89</b>	



At the time of the assessment, approximately 350 ft<sup>3</sup> of artifacts and documentation from the Bow Willow Wash project were also stored at this facility. Shortly thereafter, these collections were removed from Fort Irwin as part of a rehabilitation project contracted to Far Western Anthropological Research Group (FWARG), Davis, California. All archaeological collections produced from Fort Irwin projects, except oversized groundstone, were subsequently moved to Davis, California, for re-cataloging. Documentation from several archaeological projects conducted on Fort Irwin are stored at Dames and Moore.

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**3**  
**NAVAL AIR STATION, NORTH ISLAND,  
CALIFORNIA**

**INSTALLATION SUMMARY**

**(1) Volume of Archaeological Materials:** 1,061 ft<sup>3</sup>

On Installation: 108 ft<sup>3</sup>

Off Installation: 187.5 ft<sup>3</sup> (CSU Fullerton); 68.5 ft<sup>3</sup> (CSU Northridge); 60 ft<sup>3</sup> (NHMLAC); 27 ft<sup>3</sup> (SDMoM); 6 ft<sup>3</sup> (Southwest Museum); 15 ft<sup>3</sup> (UCLA); 576 ft<sup>3</sup> (UCLA Institute of Archaeology); 13 ft<sup>3</sup> (SDSU)

Compliance Status: All collections require at least partial rehabilitation to comply with existing federal guidelines and standards for curation.

**(2) Linear Feet of Records:** 47 linear feet

On Installation: 20 linear feet

Off Installation: 15 linear feet (CSU Northridge); 1 linear foot (NHMLAC); 0.5 linear feet (SDMoM); 4 linear feet (SDSU); 0.5 linear feet (UCLA); 9 linear feet (UCLA Institute of Archaeology).

Compliance Status: Documentation requires complete rehabilitation to comply with existing federal guidelines and standards for archival preservation. All associated records should be duplicated on acid-free paper or microfilm and stored in acid-free folders, envelopes, or archival quality photographic sleeves. A duplicate copy of all associated records should be stored in a separate and safe location.

**(3) Human Skeletal Remains:** Skeletal remains minimally representing 36 individuals are included in the Naval Air Station North Island collections.

On Installation: 3 individuals

Off Installation: 7 individuals (CSU Fullerton); 5 individuals (NHMLAC); 13 individuals (SDMoM); 7 ft<sup>3</sup> (SDSU); 3 individuals (Southwest Museum); 4 individuals (UCLA); 1 individual (UCLA Institute of Archaeology).

**(4) Status of Curation Funding:** Currently no funding is available for the curation of archaeological collections recovered from Naval Air Station, North Island.



## INTRODUCTION

DATE OF VISIT: July 27 and 29, 1992

PERSON CONTACTED: Andrew Yatsko

Approximately 108 ft<sup>3</sup> of prehistoric archaeological materials generated by four separate archaeological projects are stored at NAS, North Island. Three collections—those recovered by TMI Environmental (1988), the University of California, Riverside (1965), and the sand-dune burial recovered by Andrew Yatsko—are relatively limited. They comprise approximately 8 ft<sup>3</sup> of material. The fourth collection from the San Diego Mesa College Project, consists of 90 boxes of varying sizes and measures approximately 100 ft<sup>3</sup>. During our visit, we examined a sample consisting of 21 of 96 boxes. An additional 20 linear feet of documentation and reports, including records generated by a 1991 no-collection survey by TMI Environmental, were also present. Archaeological materials in the North Island collections and include prehistoric chipped stone, shell, soil samples, botanical remains, ceramics, faunal remains, human skeletal remains, historic glass, metal, botanical, and leather items.

## REPOSITORY

The archaeological repository at the NAS North Island is located in the Staff Civil Engineer Building (Building 3). Archaeological materials are stored in two locations within the facility. All associated documentation is stored in the base archaeologist's office.

### *Archaeological Material Storage Area 1—Hallway Closet*

This small second floor closet is approximately 25 ft<sup>2</sup>. It is located across the hall from the office of the base archaeologist. The TMI Environmental collection, the University of California, Riverside, collection, and the sand dune burial are stored here.

### *Archaeological Material Storage Area 2—Storage Room within the Carpenter's Shop*

This 20 ft<sup>2</sup> room is located within the carpenter's shop of Building 3. The large Mesa College collection is stored here. This area also functions as storage for miscellaneous field equipment and office furniture.

### **Structural Adequacy**

### *Archaeological Material Storage Area 1—Hallway Closet*

Building 3 was constructed in 1918 and is now on the National Register of Historic Places. The hallway closet has concrete walls and ceiling and a finished hardwood floor. There are no windows and only one single-panel wooden-louvered door exists on the west wall. This area is filled to



capacity and does not meet any of the federal requirements for the curation of archaeological collections.

***Archaeological Material Storage Area 2—Storage Room within Carpenter's Shop***

This area is also part of the 1918 structure. The storage room is situated within the Carpenter's Shop which is constructed of corrugated metal and steel. The ceiling and interior walls of the storage area are covered with plasterboard and the concrete foundation is covered with tile. Although there are several windows in the carpenter's shop, no windows exist in the storage area. There is a single wood panel door on the east wall of the archaeological material storage area. Because the storage space is filled with field equipment, office furniture, and personal items, only a small percentage of the total available space is dedicated to archaeological material storage. The storage space does not meet any of the requirements for curation.

**Environment**

***Archaeological Material Storage Area 1—Hallway Closet***

Environmental monitors and controls are nonexistent in the hallway closet storage area. Major deficiencies include the lack of heating, air conditioning, and humidity control systems. Environmental fluctuations cannot be attenuated. Lighting is provided by one covered incandescent bulb.

***Archaeological Material Storage Area 2—Storage Room within Carpenter's Shop***

There are no temperature or humidity controls. Lighting is provided by several fluorescent tubes, one of which was not working properly.

**Pest Management**

***Archaeological Material Storage Area 1—Hallway Closet***

No integrated pest management program exists. Although no evidence of pest infestation was observed during our visit, Mr. Yatsko mentioned that there had been a problem with ants.

***Archaeological Material Storage Area 2—Storage Room within Carpenter's Shop***

There is no integrated pest management program.

**Security**

***Archaeological Material Storage Area 1—Hallway Closet***

No security system exists other than a key lock in the door. However, the security requirements of



the Naval base and the vigilance of the base archaeologist significantly reduce the possibility of collection loss through theft or neglect.

*Archaeological Material Storage Area 2—Storage Room within Carpenter’s Shop*

A combination padlock on the door constitutes the only security measure (Figure 1). Mr. Yatsko, however, is the only one who knows the combination of the lock. The area is also secured through controlled access.



**Figure 1. Security measures present on door to Archaeological Material Storage Area 2.**

**Fire Detection and Suppression Systems**

*Archaeological Material Storage Area 1—Hallway Closet*

No fire detection system is in place. However, fire extinguishers are located in the hallway outside of the closet storage.

*Archaeological Material Storage Area 2—Storage Room within Carpenter’s Shop*

No fire detection system is in place for this storage area and the only means of fire suppression exists outside the storage area in the form of fire extinguishers.

**ARCHAEOLOGICAL MATERIAL STORAGE**

**Storage Units**

*Archaeological Material Storage Area 1—Hallway Closet*

The three small collections (TMI Environmental, University of California, Riverside, and sand dune



burial) stored in the hallway closet are kept on unsealed wooden shelving units measuring approximately 6.5 ft by 2 ft by 1.5 ft (length, width, height; Figure 2). There are six shelving units and a total of 33 individual shelves.



**Figure 2. Shelving units used in Archaeological Material Storage Area 1.**

*Archaeological Material Storage Area 2—Storage Room within Carpenter's Shop*

Three types of storage units house the Mesa College collection. Some are stored on top of and within a homemade, unsealed, wooden shelving unit. A small portion is stored in a two-door enameled-metal cabinet. Most of the collection is stacked on the floor. The collections stored on top of the wooden shelving unit and/or on the floor are stacked at least three boxes high.

**Primary Containers**

*Archaeological Material Storage Area 1—Hallway Closet*

Five acidic, folded-top cardboard boxes of various sizes and one acidic, telescoping-lid box serve as primary containers for collections stored in the hall closet. The exteriors of five of the six boxes are directly labeled in marker with site number, container number, and/or provenience information.



### *Archaeological Material Storage Area 2—Storage Room within Carpenter's Shop*

All of the primary containers consist of various sized acidic cardboard boxes with folded-tops that were taped shut with strapping tape. All are directly labeled with marker and include container number and item number information. Fifty percent of the boxes exhibit container damage; 25 percent are over packed, and 25 percent are compressed. Additionally, one box has been punctured.

### **Secondary Containers**

#### *Archaeological Material Storage Area 1—Hallway Closet*

Secondary containers consist of acidic paper bags with folded tops; a small quantity of two-mil plastic zip-lock bags; material wrapped in toilet paper; and material protected by packing peanuts, but curated loose in boxes. Only a minority of the secondary containers examined were labeled. Information was directly applied in pen and consists of site number, site name, date, and container contents.

#### *Archaeological Material Storage Area 2—Storage Room within Carpenter's Shop*

Most of the secondary containers consist of pieces of acidic brown paper wrapped loosely around artifacts. However, acidic paper bags with folded tops; small acidic boxes; two-mil plastic, zip-lock bags; miscellaneous vials with lids; manila envelopes; artifacts wrapped in acidic paper towels; and wax paper bags are also present. Regardless of the secondary container, all boxes contained packing peanuts. Few of the secondary containers are labeled. Those that have been are directly labeled in pen or pencil with catalog number information. One box contains completed artifact cards glued to secondary containers (manila envelopes). These cards include catalog number, material class, and object description. The security of the wrapped items is poor because the items tend to fall out of their wrappers when handled.

### **Laboratory Processing and Labeling**

#### *Archaeological Material Storage Area 1—Hallway Closet*

All of the artifacts have been cleaned and the majority of the materials, except the soil samples and some shell, have been directly labeled in India ink. Most items have been sorted according to site number and material class.

#### *Archaeological Material Storage Area 2—Storage Room within Carpenter's Shop*

All the artifacts have been cleaned, labeled, and sorted in the same manner as those stored in archaeological material storage area 1.

## **HUMAN SKELETAL REMAINS**

Three human burials are included in the collection from NAS North Island, one each from Mesa



College, Environmental Services (1988) project, and the sand dune burial recovered by Mr. Yatsko. All remains, most of which are in good condition, have been cleaned and partially sorted, but none have been labeled.

### RECORDS STORAGE

Approximately 20 linear feet of documentation associated with three of the four archaeological collections stored at NAS North Island base repository were identified and evaluated. Records exist for the Mesa College Project (1975–1980), and the two TMI Environmental Services Collections (1988, 1991)(Table 2). Associated records for the sand dune burial recovered by Mr. Yatsko and for the collection held by the University of California, Riverside, were not included with the artifacts when they were transferred to the Naval Air Station. It is possible that associated documentation was never generated for these collections. All documentation is stored on two wooden shelves (Figure 3) and in a four-drawer metal file cabinet in the office of the base archaeologist (Building 3). The office area is not heated or air conditioned, a condition that is unacceptable for the long-term storage and preservation of these materials. In addition, a duplicate security/archival copy of the records has not been produced and stored in a separate location. Loss of any original documentation significantly reduces the research value of the associated archaeological materials.

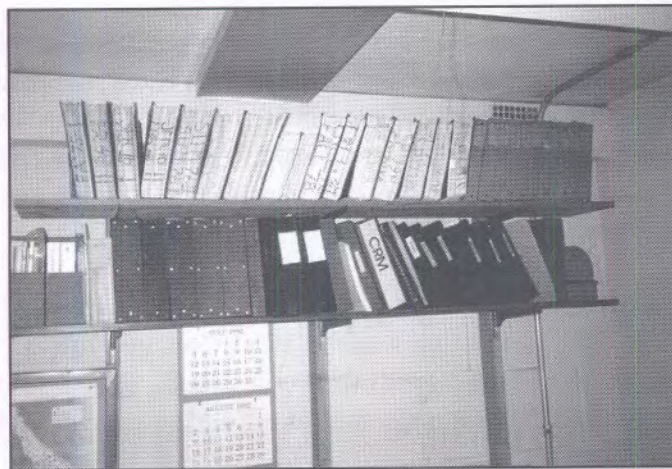


Figure 3. Storage units for associated records.

Table 2. Summary of Associated Documentation housed at NAS North Island

Project	Paper (l.f.)	Photographic	Maps	Reports	Total
Mesa College (1975-1980)	10.00	—	—	—	10.00
TMI Environmental (1988)	0.08	—	—	—	0.08
TMI Environmental (1991)	2.00	—	—	—	2.00
Miscellaneous Projects	—	—	—	8.00	8.00
<b>Total</b>	<b>12.08</b>	—	—	<b>8.00</b>	<b>20.08</b>

Note: l.f. refers to linear feet



***Paper Records******Mesa College Project (1975–1980)***

Approximately ten linear feet of paper records are associated with the Mesa College Project. Included are administrative records, artifact cards, typed field notes, and site records. Typed field notes and site records are maintained in three-ring binders and are stored on wooden shelves. The remaining paper documentation is filed in acidic manila folders inside a metal file cabinet. This cabinet also contains artifact cards, which are stored in an acidic cardboard box within the cabinet.

***TMI Environmental Services Collection (1988)***

There is less than one linear inch of associated records for this collection, that includes site record evaluation forms and a burial form. The latter documentation was located in the box containing the skeleton.

***TMI Environmental Services Collection (1991)***

Two linear feet of paper records associated with the collection consist of archaeological site records and site maps, all of which are stored in three-ring binders on wooden shelves or in acidic paper file folders within a metal file cabinet.

***Photographic Records******Mesa College Project (1975–1980)***

Approximately one linear foot of photographic records consisting of slides, black and white photographs, negatives, and contact print sheets exists and are stored in a metal file cabinet. Slides are stored in their original plastic containers, some photographs and negatives are still stored in the original processing sleeves, and contact sheets are pasted to acidic manila folders. Most negatives are stored in non-archival sleeves within a three-ring plastic binder; some are stored in non-archival sleeves within acidic paper envelopes.

***Maps and/or Oversized Documents***

The only collection that contained field maps was the Mesa College Project. The original field maps for this collection were not examined because of time constraints. However, we were able to make a cursory examination that revealed that the maps are folded and stored with other documentation, rather than stored flat in map cases.

***Reports***

Miscellaneous documentation and reports occupy an additional eight linear feet of space on the wooden shelves in Mr. Yatsko's office.

## COLLECTIONS MANAGEMENT STANDARDS

### Registration Procedures

***Accession Files***

NAS North Island does not maintain accession files.

***Location Identification***

The location of archaeological materials and records are not kept by NAS North Island.



***Cross-indexed files***

Archaeological files are not cross indexed.

***Published Guide to Collections***

A published guide to the collections does not exist.

***Site Record Administration***

Archaeological sites are recorded using the Smithsonian site-numbering system.

***Computerized Database Management***

Archaeological information is maintained in a computer database.

**Written Policies and Procedures*****Minimum Standards for Acceptance***

No minimum standards exist for the acceptance of archaeological collections.

***Curation Policy***

NAS North Island does not have a curation policy.

***Records Management Policy***

NAS North Island does not have a records management policy.

***Field Curation Guidelines***

No written guidelines exist for researchers leaving collections. However, all artifacts must be cataloged and boxed before leaving San Clemente Island.

***Loan Procedures***

No written loan policy exists. However, Mr. Yatsko requires written notification of requests for loans.

***Deaccessioning Policy***

NAS North Island does not have a curation policy deaccessioning policy.

***Inventory Policy***

NAS North Island does not have a inventory policy.

***Latest Collection Inventory***

Collections were inventoried in 1990.

**Curation Personnel**

There is no full-time curator for the archaeological collections maintained at the NAS North Island. Curatorial responsibilities have been assigned to the base archaeologist.

### **Curation Financing**

Funding for the curation of NAS North Island collections has not occurred.

### **Access To Collections**

Access to collections stored on installation is controlled by the base archaeologist. Requests for access must be made through him.

### **Future Plans**

NAS North Island plans to turn the collections over to a long-term repository as soon as a satisfactory facility becomes available. One possible solution is the renovation of a 60,000 ft<sup>2</sup> building owned by the Navy. This building was used previously as an electronics laboratory and, as such, has over 20,000 ft<sup>2</sup> of environmentally controlled space.

## **COMMENTS**

1. Although collection damage was not evident at the time of our visit, the storage conditions under which archaeological materials and records are maintained will lead to significant deterioration and the eventual loss of these materials and records. The closet and storage room where materials are now stored do not meet federal standards for curation and are inappropriate storage facilities. Specifically, this repository does not have adequate environmental protection, fire detection and suppression systems, or pest management controls.
2. Archaeological materials are not curated to federal guidelines and standards for archaeological collections. Archaeological materials are stored in acidic containers with poor security.
3. None of the associated records have been archivally duplicated for storage in a secure location.
4. Labels on all boxes have been applied directly, a practice not in compliance with archival standards.

## **RECOMMENDATIONS**

1. A fire detection/suppression systems should be installed in both repositories if collections are to remain there.
2. Shelving should be installed in Archaeological Material Storage Area 2 in order to move the collections off the floor.
3. All materials should be rebagged in archival-quality four-mil plastic zip-lock polyethylene bags; interior labels made from spun-bonded polyethylene paper (e.g. Nalgene polypaper) should be lettered in India ink and included in each polyethylene bag. bags and acid-free boxes.



4. Rebox archaeological material in acid-free containers and apply adhesive polyethylene label holders with acid-free paper labels to each.
5. Human skeletal remains should be identified and their disposition determined in accordance with the requirements of the Native American Graves Protection and Repatriation Act.
6. All recovered funerary objects (associated and unassociated), sacred objects, and objects of cultural patrimony as defined by NAGPRA, should be identified and their disposition determined.
7. All associated records should be duplicated on acid-free paper.
8. All documentation should be stored in acid-free folders, envelopes, and archival-quality photographic sleeves and then moved to a separate, secure location.

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**4**  
**EDWARDS AIR FORCE BASE,**  
**CALIFORNIA**

**INSTALLATION SUMMARY**

**(1) Volume of Archaeological Materials:** 76.5 ft<sup>3</sup>

On Installation: 60.5 ft<sup>3</sup>

Off Installation: 15 ft<sup>3</sup> (AVC); 1 ft<sup>3</sup> (SBCM)

Compliance Status: Collections require partial rehabilitation to comply with existing federal guidelines and standards for curation. All materials need to be reboxed and rebagged in archival-quality containers.

**(2) Linear Feet of Records:** 66.3 linear feet

On Installation: 65.5 linear feet

Off Installation: 0.5 linear feet (AVC); 0.3 linear feet (SBCM)

Compliance Status: Associated records require complete rehabilitation to comply with existing federal guidelines and standards for archival preservation. All paper records need to be duplicated and curated in acid-free folders, photographic records need to be stored in archival quality containers, and copies of each should be stored at a separate and safe location.

**(3) Human Skeletal Remains:** Skeletal remains from one individual recovered from Edwards Air Force Base are curated in the installation repository.

**(4) Status of Curation Funding:** Curation is financed through Environmental Compliance and Protection funds that appear as a line item in the annual budget.

## INTRODUCTION

DATE OF VISIT: August 11, 1992

PERSON CONTACTED: Rick Norwood

Approximately 60 ft<sup>3</sup> of prehistoric and historic artifacts recovered from Edwards Air Force Base and 65.5 linear feet of associated records are stored in Building 1632A. Collections are stored by project rather than by individual site number (Table 3). Materials include prehistoric charcoal, botanical, faunal, chipped stone, shell, soil samples, and human skeletal remains in addition to historic ceramics, glass, metal, wood, coins, and plastic.

**Table 3. Volume of Archaeological Materials housed at Edwards Air Force Base**

<b>Project/Collection Name</b>	<b>Year</b>	<b>Contractor</b>	<b>Ft<sup>3</sup></b>
no data	1973	AVAS <sup>a</sup>	1.00
East Range	1984	Intermountain Research	2.00
KER-2060	1985	U.S. Air Force	2.00
All-American Pipeline	1986	NMSU <sup>b</sup>	20.00
Farm Drop Zone	1988	RECON	6.00
SB Water	1988	LSA	1.00
KER 1830	1988?	No data	3.25
Leach Lake	1988	no data	0.50
Homesteads	1990	U.S. Air Force	2.00
Piute Ponds	1990	RECON	1.00
KER 1922	no data	no data	0.50
Gem Hills/Bissel Farm	no data	no data	0.25
Tropico Farm	no data	no data	0.25
EAFB Collection	no data	no data	0.75
KER 1248/2135	no data	no data	1.00
Paleo Overview	no data	SBCM <sup>c</sup>	0.25
Misc. Historic	no data	no data	18.75
<b>Total</b>			<b>60.5</b>

<sup>a</sup>AVAS = Antelope Valley Archaeological Survey; <sup>b</sup>NMSU = New Mexico State University, <sup>c</sup>SBCM = San Bernardino County Museum

Human skeletal remains representing one individual have been recovered from site KER-2060, and the remains are stored with the archaeological collections on Edwards Air Force Base. Rick Norwood, the base archaeologist, stated that a Mr. A. Van Dusen Eggers may have an additional cremation in his possession at the time of our assessment. Mr. Van Dusen Eggers has not responded to inquiries by Mr. Norwood.



## **REPOSITORY**

Archaeological collections recovered from Edwards Air Force Base are stored in the office of Mr. Norwood, located in Building 1632A. The building is along the flight line and contains offices, a staff library, a kitchen area, and restrooms.

### **Structural Adequacy**

The office in which the Edwards Air Force Base collections are located is 20 ft by 14 ft. It has a concrete slab foundation covered with tile, a roof covered with sheet asphalt, and a suspended acoustical tile ceiling. Exterior walls are constructed of corrugated metal with steel supports, whereas interior walls are covered with plasterboard. The office contains no windows. A single panel door leads to other offices. The electrical and plumbing systems date to the mid 1960s. This area functions well as office space.

### **Environment**

Temperature in Building 1632A is controlled by a central heating and air conditioning system, but humidity levels are not monitored or controlled. There are no dust filters for the environmental controls. Lighting is provided by fluorescent tubes covered with nonultraviolet plastic shields. The entire building is regularly maintained by a janitorial service under contract to Edwards Air Force Base.

### **Pest Management**

There is a partial program for pest management in the building, including the archaeological material storage area. As there are many rare and endangered rodent species in the area, live traps are used. Mr. Norwood stated that there have not been many problems with insect infestation.

### **Security**

Although the building is locked after hours and a guard is posted on the road at the perimeter of the base, the room containing Edwards Air Force Base collections remains unlocked.

### **Fire Detection and Suppression Systems**

A manual fire alarm is the only device for notifying individuals in the building of a fire. One fire extinguisher is locked in a hallway closet and is the only fire deterrent present.



## ARCHAEOLOGICAL MATERIAL STORAGE

### Storage Units

Most of the Edwards Air Force Base collections are stored in boxes stacked in the middle of the room (Figure 4) or under a table located along a wall. Type specimens and isolated finds are stored in an enameled metal, seven-drawer filing cabinet measuring 2 by 2.5 by 4.5 feet (length, width, height) situated along the back wall of the office. Some smaller artifacts are temporarily stored in 14 beer flats stacked on top of the filing cabinet.

### Primary Containers

Three types of primary containers are used to store the Edwards Air Force Base collections. Fifty-five 1ft<sup>3</sup> acidic cardboard filing boxes with telescoping lids are the primary containers for most of the materials. Additionally, metal drawers in a seven-drawer filing cabinet contain the type specimens. Fourteen standard size beer flats, with additional flats used for lids, temporarily hold the smaller artifacts.

The 1ft<sup>3</sup> boxes contain adhesive labels written in marker listing box number, site number, and occasionally site name. The drawers of the filing cabinet contain acidic paper tags directly labeled and inserted into metal label holders. Label information consists of artifact type written in black marker and/or ink. Adhesive labels written in marker and/or ink are affixed to the beer flats. Label information includes site name, site number, box number, and contents.

### Secondary Containers

Secondary containers consist of a wide variety of materials, including two-mil zip-lock plastic bags, acidic paper bags, open plastic bags, acidic paper envelopes, plastic, cardboard, and glass vials. We also observed several artifacts wrapped and/or padded in newspaper. Many artifacts, especially



**Figure 4. View of Edwards Air Force Base archaeological collections.**



historic materials, are stored loose in the box. Ninety-seven percent of the secondary containers are either directly labeled with black marker or include acidic paper tags labeled in pen and/or pencil. Label information consists of survey name, date, site number, number of artifacts, description of artifacts, location, topographic map name, county, collector initials, catalog number and/or an Isocat number (a tracking number used by the repository).

### Laboratory Processing and Labeling

Most of the archaeological materials examined are clean. Sixty-nine percent are labeled directly with site number, catalog number, and/or Isocat number in India ink, and 77% are sorted by site number and material class. Three boxes contain catalog lists that were typed or handwritten on acidic paper.

## HUMAN SKELETAL REMAINS

The remains of one individual were recovered from KER-2060 in 1985 and are included in the Edwards Air Force Base collections. Elements represented include a partial skull, ribs, vertebrae, innominates, long bones, hands and feet, scapulae and clavicles. Although structurally in good condition, none of the remains are labeled and some of the long bones have been glued together.

## RECORDS STORAGE

Approximately 65.5 linear feet of associated records, including photographs, maps, and reports, are stored in Building (Table 4).

### *Paper Records*

Eighty percent of the paper records are stored in standard metal filing cabinets located in the office/archaeological material storage area and the office library. The remaining 20% are stored in three acidic cardboard records boxes located in the archaeological material storage area under a table. Most of the paper records are in acidic manila folders and have not been archivally processed. Paper records appear to be arranged by project and/or site number. None of the paper records have been archivally duplicated. However, three copies of the site records have been produced. One copy remains at Edwards Air Force Base, one the other is sent to the San Bernardino Information Center, and one is sent to the State Historic Preservation Office in Sacramento.

**Table 4. Types of Associated Documentation in Linear Feet at Edwards Air Force Base**

<b>Documentation Type</b>	<b>l.f.</b>
Paper Records	29.0
Photographic Records	1.5
Reports	35.0
<b>Total</b>	<b>65.5</b>

Note: l.f. refers to linear feet



### ***Photographic Records***

The 1.5 linear feet of photographic records are stored in a variety of containers. Slides are contained in archival sleeves that have been inserted into five plastic three-ring binders. Photographic prints are stored both with the paper records and in acidic envelopes. Negatives are contained in non-archival glassine sleeves and non-archival plastic sleeves. Large aerial photographs are stored flat in metal map drawers. For security, Mr. Norwood has a duplicate set of photographic prints stored at his home.

### ***Reports***

The assessment team recorded 35 linear feet of project reports. Approximately 11 linear feet are stored in the staff library, 13 linear feet are stored on shelves in the archaeological material storage area and 11 linear feet are on shelves in the hallway between various offices.

## **COLLECTIONS MANAGEMENT STANDARDS**

### **Registration Procedures**

#### ***Accession Files***

All materials are assigned an Isocat (artifact specific) number that includes information referring to case number, classifier (e.g. prehistoric, historic, paleontological, ecological), material class, specific type of material, technical class, functional type, description, remarks, original catalog number, location (e.g. box, drawer), Edwards Air Force Base site number, date collected, project file number, how the site was recorded (e.g. site form), artifact count, county, Universal Transverse Mercator locations, and elevation.

#### ***Location Identification***

The location of the collection within the repository is identified by box number in the Isocat file.

#### ***Cross-indexed files***

There are two major types of files. The Isocat database file contains information on in-house projects, isolated finds, and small projects. Data from large projects are kept on a separate DBASE database. At present, the files are cross-indexed by specific database and site number.

#### ***Published Guide to Collections***

A published guide to the collections does not exist at this time.

#### ***Site Record Administration***

The Smithsonian trinomial site-numbering system is used as well as the Edwards Air Force Base system (e.g. EAFB site number). The base is attempting to use the EAFB system exclusively in order to avoid confusion over site numbers.

#### ***Computerized Database Management***

A DBASE database program is in use.



## Written Policies and Procedures

### *Minimum Standards for Acceptance*

At the time of our visit there were no written minimum standards for the acceptance of collections. Since then, Mr. Norwood has developed interim curation guidelines.

### *Curation Policy*

Same as above.

### *Records Management Policy*

There is a policy on how site forms should be completed, how to use the notebook files, which consist of hard copies of site and catalog records, and how to use a new recording system that is based on a Geographic Information System.

### *Field Curation Guidelines*

Loose guidelines have been incorporated into contracts explaining how the material will be curated upon delivery to Edwards Air Force Base.

### *Loan Procedures*

Most loan requests are approved if made by qualified institutions. A letter of intent requesting the loan is required, and a loan form must be completed prior to any collections or portions of a collection being removed from the base.

### *Deaccessioning Policy*

The base does not have a deaccessioning policy. However, when items are deaccessioned, a specific code is entered into the Isocat system designating that items have been deaccessioned.

### *Inventory Policy*

A DBASE program, or "data dictionary," exists that explains how to obtain site numbers and how to record them.

### *Latest Collection Inventory*

A complete collections inventory has never been produced. However, whenever a collection or portion of a collection is loaned for research, an inventory of that material is made.

## Curation Personnel

There is no full-time curator of archaeological collections. Mr. Norwood is responsible for the archaeological collections stored at Edward Air Force Base. His primary responsibilities, however, are cultural resource management and compliance with Sections 106 and 110, and the Native American Graves Protection and Repatriation Act.

## Curation Financing

Curation is financed through Environmental Compliance and Protection funds that are a line item in the yearly budget.



### **Access to Collections**

Access to collections is controlled by Mr. Norwood. Other staff members do not have access to collections, unless they first contact Mr. Norwood. When Mr. Norwood is not available, he gives his key to the in-house contractor.

### **Future Plans**

Mr. Norwood views his primary responsibilities with respect to the collection as research, education, and exhibits. Plans are being made to design a curation facility, purchase equipment, and develop an ongoing curation program. In addition to a curation facility, Mr. Norwood feels that in order to meet the anticipated storage and handling requirements for the next 20 years, a full-time curator for collections is required.

## **COMMENTS**

1. Many historic ceramic, glass and metal items are stored loose in boxes. This practice is detrimental to the collections and to any researcher who must search through the box.
2. The unlabeled human remains may contribute to the disassociation of the elements.
3. One fire alarm is inadequate for the entire building.

## **RECOMMENDATIONS**

1. All archaeological materials should be inventoried, reboxed in acid-free containers, rebagged in four-mil, zip-lock polyethylene bags, and labeled legibly with indelible ink.
2. Additional fire extinguishers and/or a sprinkler system should be installed in Building 1632A.
3. A system to monitor and control humidity should be installed.
4. All associated records should be stored in acid-free folders or archival-quality photographic containers.
5. A duplicate acid free copy of the associated records should be produced and stored in a secure location.
6. An integrated pest management program, including monitoring and control, should be implemented for Building 1632A.
7. The disposition of all identified human skeletal remains should be determined in order to meet the requirements of the Native American Graves Protection and Repatriation Act.
8. All recovered funerary objects, associated and unassociated, sacred objects, and objects of



cultural patrimony, as defined by NAGPRA, should be identified and their disposition determined.

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**5**  
**MARINE CORPS AIR-GROUND COMBAT CENTER,  
TWENTYNINE PALMS,  
CALIFORNIA**

**INSTALLATION SUMMARY**

**(1) Volume of Archaeological Materials:** 2.8 ft<sup>3</sup>

On Installation: None

Off Installation: 0.3 ft<sup>3</sup> (Joshua Tree National Monument); 2.5 ft<sup>3</sup> (Statistical Research)

Compliance Status: Archaeological materials at Joshua Tree National Monument require partial rehabilitation to comply with existing federal standards governing the long-term curation of archaeological materials.

Archaeological materials at Statistical Research require complete rehabilitation.

**(2) Linear Feet of Records:** 1.8 linear feet

On Installation: None

Off Installation: 1.5 linear feet (Joshua Tree National Monument); 0.3 linear feet (Statistical Research)

Compliance Status: Documentation at Joshua Tree National Monument is properly curated, except for photographic materials that must be inventoried and archivally curated. Records at Statistical Research will require partial rehabilitation to comply with existing federal guidelines and standards for archival preservation.

**(3) Human Skeletal Remains:** No known human skeletal remains are at Joshua Tree National Monument or Statistical Research. However, Joshua Tree National Monument is curating records in a sealed, restricted file, of human remains from MCAGCC Twentynine Palms that were repatriated.

**(4) Status of Curation Funding:** MCAGCC Twentynine Palms does not request funds for archaeological curation.

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**6**  
**ANTELOPE VALLEY COLLEGE**  
**LANCASTER, CALIFORNIA**

**REPOSITORY SUMMARY**

**(1) Volume of Archaeological Materials:** 15 ft<sup>3</sup>

Compliance Status: Archaeological materials require complete rehabilitation to comply with existing federal guidelines and standards for curation. Archaeological materials should be stored in four-mil, plastic zip-lock bags within acid-free boxes.

**(2) Linear Feet of Records:** 0.5 linear feet

Compliance Status: Records require complete rehabilitation to comply with existing federal guidelines and standards for archival preservation. Documents should be stored in acid-free containers.

**(3) Human Skeletal Remains:** No human skeletal remains recovered from Edwards Air Force Base were located at Antelope Valley College (AVC).

**(4) Status of Curation Funding:** Funding for curation activities does not exist. Funds for curation are derived from the teacher operating budget or contract work.

## INTRODUCTION

DATE OF VISIT: 15 September 1992, 15 December 1993

PERSON CONTACTED: Roger Robinson

Approximately 15 ft<sup>3</sup> of archaeological materials recovered from Edwards Air Force Base and 0.5 linear feet of associated records are stored in an anthropology laboratory at AVC (Table 5). Of the 15 ft<sup>3</sup> of artifacts examined, 77% were prehistoric and 23% were historic (Table 6).

**Table 5.**  
**Volume of Archaeological Materials from Edwards Air Force Base at Antelope Valley College**

<b>Site Number</b>	<b>Ft<sup>3</sup></b>
AVC-23	1
AVC-24	4
AVC-27	3
AVC-28	5
HR 867	1
EAFB Surface (Mix of Sites)	1
<b>Total</b>	<b>15</b>

**Table 6.**  
**Material Classes in Edwards Air Force Base Collections**

<b>Material Class</b>	<b>%</b>
<b>Prehistoric</b>	
Chipped Stone	30
Faunal Remains	5
Soil Samples	28
Charcoal	2
<b>Historic</b>	
Ceramics	2
Glass	10
Metal	5
Wood	5
Concrete	2
Fiberboard	5
Marble	3
Tile	3
<b>Total</b>	<b>100</b>



## REPOSITORY

Archaeological collections at Antelope Valley College are in a 624 ft<sup>2</sup> anthropology laboratory/office (room 721) adjacent to a classroom on the college campus. The laboratory includes an artifact holding area, artifact washing area, an artifact processing lab, a records storage area, and offices. Approximately 40 ft<sup>2</sup> is devoted to the storage of archaeological collections.

### Structural Adequacy

This single-story university classroom building was originally constructed in 1967. The building has a concrete slab foundation, a built-up asphalt roof, a poured concrete floor that appears to have been sealed, and a drop Celotex ceiling. The exterior walls are concrete overlaid with stucco and interior walls are covered with sheetrock. There are two single panel metal exterior doors to the laboratory. One is functional and faces north. The east facing door has been blocked on the inside by a counter. An interior south facing single panel wooden door leads to the adjacent classroom. The two east facing windows in the laboratory collections area do not have shades. The plumbing and electrical systems, and the roof were replaced in 1991. The repository is at 90% capacity.

### Environment

Temperature in the laboratory archaeological material storage area is controlled by a central heating and air conditioning system. Humidity is not monitored or controlled. Light is provided by desk lamps and fluorescent tubes with non-ultra violet blocking plastic shields. The archaeological material storage area is maintained on a daily basis by university janitorial staff. Hazardous chemicals such as acetone are used in the laboratory collections storage space which has no ventilation.

### Pest Management

An integrated pest management program is absent. When the janitorial staff notices a pest problem, they bring it to the attention of the university, which then contracts with a pest management company to eradicate the pests.

### Security

The only security system at AVC consists of key locks on the doors and window locks. university security guards are available during office hours and randomly patrol the campus in the evenings. The Dean of the college, the secretary to the Dean, the student assistant, and custodial and security personnel all have keys to the laboratory archaeological material storage area. Thus, the room is only partially protected by controlled access.

### Fire Detection and Suppression Systems

Fire extinguishers and manual fire alarms are located throughout the building. However, none are present in the laboratory archaeological material storage area.



## ARCHAEOLOGICAL MATERIAL STORAGE

### Storage Units

Separate, sealed plywood shelves covered with Formica have been built under a counter top as storage units for the Edwards Air Force Base collections. Each unit measures approximately 1.3 feet by 2.6 feet by 1.7 feet (width, height, depth). Each unit has four shelves. The Edwards Air Force Base collections occupied 15 shelves or almost four units.

### Primary Containers

Molded hard plastic tubs 1ft<sup>3</sup> in size are the primary containers for the Edwards Air Force Base collections (Figure 5). The tubs serve as drawers in the shelving units. Primary container labels are made from acidic paper directly labeled with marker and taped to the front of the tubs with cellophane tape. Label information consists of an AVC site number.



**Figure 5. Molded hard plastic tubs used to hold Edwards Air Force Base archaeological materials.**

### Secondary Containers

A variety of secondary containers are used to store the Edwards Air Force Base collections. The majority of the secondary containers are directly labeled with marker. The remainder are labeled with India ink (27%), pen (7%) and pencil (7%). Label information consists of an AVC site number.

### Laboratory Processing and Labeling

Approximately half of the artifacts recovered from Edwards Air Force Base have been cleaned. Cleaning did not apply to 33.3% of the material, as it consisted of soil samples, charcoal samples, and/or of empty artifact bags, and 16.7% had not been cleaned. On the other hand, only 20% of the artifacts have been labeled, whereas 53.3% have not, and labeling did not apply to 26.7%. All artifacts have been sorted by Antelope Valley College site number.



## HUMAN SKELETAL REMAINS

No known human skeletal remains recovered from Edwards Air Force Base were located at AVC at the time of inspection.

### RECORDS STORAGE

Approximately 0.5 linear feet of associated records are stored in the laboratory collections area and adjacent classroom. Record types include field records, maps, and a report. A copy of the records exists, but not on archival quality material. An employee has a copy in his house.

#### *Paper Records*

Paper records consist of site survey forms, field catalogs, and analysis records. These are stored in a five drawer enameled metal file cabinet in the classroom adjacent to the laboratory archaeological material storage area. Paper records are arranged by project and then by site number within a specific project. The drawers of the file cabinet contain typed acidic paper tags placed in metal tag holders. Label information includes project number. The paper records themselves are stored in acidic manila file folders within hanging files. The files are labeled directly with marker and contain the AVC site number, project number, and occasionally site name information.

#### *Photographic Records*

No known photographic documentation of material recovered from Edwards Air Force Base could be located during the assessment even though photographs were taken, but are now missing. Mr. Van Dusen Eggers might have them in his possession.

#### *Maps and/or Oversized Documentation*

Original field maps are stored in the same filing cabinet as the paper records. The maps are folded and have been inserted into acidic manila file folders contained within hanging file folders. Label information is the same as that for the paper records.

#### *Reports*

The final project report is stored in cupboards hung over the counter top work space in the laboratory archaeological material storage area. These cupboards are constructed of Formica and have locking double doors.

## COLLECTIONS MANAGEMENT STANDARDS

### Registration Procedures

#### *Accession Files*

All collections are given an AVC catalog number upon receipt.

#### *Location Identification*

No information was available.

***Cross-Indexed Files***

The files are cross-indexed.

***Published Guide to Collections***

No published guide to the collections exists.

***Site Record Administration***

An AVC site number is given to the collection until a Smithsonian trinomial number can be assigned.

***Computerized Database Management***

A cataloging database management system is being used for specific collections, but not to identify individual objects within a collection.

**Written Policies and Procedures*****Minimum Standards for Acceptance***

No minimum standards of acceptance exist.

***Curation Policy***

A curation policy does not exist. Instructions do exist for washing, labeling, and bagging archaeological materials.

***Records Management Policy***

Guidelines exist for managing the catalog cards.

***Field Curation Guidelines***

No field curation guidelines exist.

***Loan Procedures***

No loan procedures exist. Artifacts are rarely loaned to other institutions.

***Deaccessioning Policy***

No deaccessioning policy exists.

***Inventory Policy***

No inventory policy exists.

***Latest Collection Inventory***

No information was available.



### **Curation Personnel**

A full-time curator position for the archaeological collections does not exist. One employee spends part of the time in collections management and is aided by a student assistant.

### **Curation Financing**

Separate funding for collection management does not exist. Any funding for curation presently comes from an employee's operating budget in his role as a teacher or through contract work.

### **Access to Collections**

Collection access is controlled by one employee. However, the Dean of the college, the secretary to the Dean, security and custodial staff, and a student assistant all have keys to the laboratory archaeological material storage area, thus increasing the chance of a security breach.

### **Future Plans**

No plans exist for upgrading the curation program at AVC.

## **COMMENTS**

1. Fire detection/suppression is not present in the laboratory archaeological material storage area.
2. The molded hard plastic tubs are a good alternative to acid-free boxes.
3. Hazardous chemicals are used in the laboratory that also serves as the archaeological material storage area.
4. The only forms of security are key locks on the doors, window locks, and random patrols by university security guards.
5. The windows in the archaeological material storage area do not have shades.
6. Humidity is not monitored or controlled in the laboratory archaeological material storage area.

## **RECOMMENDATIONS**

1. Smoke detectors, fire extinguishers, and/or a sprinkler system should be installed in the laboratory archaeological material storage area immediately.
2. Hazardous chemicals must be kept away from the collections and some form of ventilation must be installed.

3. An electronic motion detection system should be installed in the laboratory. If this is not possible, a dead-bolt lock should be installed on the doors of the laboratory archaeological material storage area and windows should be sealed shut.
4. Shades should be installed over windows to protect collections from harmful ultraviolet radiation.
5. A climate control system should be installed to monitor and control humidity. If this is not possible, a sling psychrometer should be used to monitor humidity and a commercial dehumidifier should be purchased to control humidity.
6. All archaeological materials need to be reboxed and rebagged into acid-free boxes and four-mil zip-lock plastic bags. The bags should be labeled in indelible ink.
7. The photographic material associated with the Edwards Air Force Base collections should be located, reintegrated with the associated documentation, and archivally preserved.
8. The molded plastic tubs that serve as primary containers need some sort of lid, not only for security purposes and to protect the archaeological materials from spilling out and getting separated from one another, but also to protect the materials from dust and pests.



7

**CALIFORNIA STATE UNIVERSITY  
FULLERTON, CALIFORNIA**

**REPOSITORY SUMMARY**

**(1) Volume of Archaeological Materials:** 187.5 ft<sup>3</sup>

Compliance Status: Archaeological materials require complete rehabilitation to comply with existing federal guidelines and standards for curation.

**(2) Linear Feet of Records:** No associated records are present.

Compliance Status: All missing documentation, photographic records, and maps should be identified, returned to California State University, Fullerton, incorporated into the Murphy collection, and rehabilitated to comply with existing federal guidelines and standards for archival preservation.

**(3) Human Skeletal Remains:** Approximately seven burials are included in the Murphy collection stored at California State University (CSU), Fullerton.

**(4) Status of Curation Funding:** Funding is inadequate. Funds go directly to the Anthropology Department and may then be transferred to the museum.

## INTRODUCTION

DATE OF VISIT: August 19, 1992

PERSON CONTACTED: Connie Cameron

Approximately 187.5 ft<sup>3</sup> of prehistoric artifacts (Table 7) recovered from San Clemente Island by Theodore Murphy are curated at the University of California, Fullerton (accession number 115). This material was originally donated to the San Diego State Historical Society in 1974, but transferred to the University of California, Fullerton in 1988. Private collections, such as the Murphy collection, are stored by artifact class, but general collections are curated according to site number.

**Table 7.**  
**Material Classes in NAS North Island Collections (Murphy Collection)**

<b>Material Class</b>	<b>%</b>
Chipped stone	50
Human skeletal remains	10
Faunal remains	10
Worked shell	30
<b>Total</b>	<b>100</b>

## REPOSITORY

The archaeological laboratory (Room 311) is located in the Humanities Building on the CSU, Fullerton, campus and serves as the archaeological repository. The repository occupies approximately 960 ft<sup>2</sup>. Entrance to the repository is possible from the corridor or from Ms. Cameron's office. Although none of the artifacts from the Theodore Murphy collection are on display, there is a small anthropology/archaeology museum adjacent to the archaeology laboratory.

### Structural Adequacy

The Humanities Building is a modern steel-framed structure with a concrete block exterior. The archaeological material storage area/archaeology laboratory is located on the third floor (Room 311). The interior walls are covered with sheetrock. There is a drop Celotex ceiling and the floor is overlaid with tile. There are two doors, one of which leads to the hallway and one to Ms. Cameron's office. Both are single metal panel. Two windows with shades are present along one wall. The collections storage facility is filled to capacity. The building is structurally adequate for classroom, laboratory, and office space, but the archaeology lab is deficient as a collections storage



facility because of overcrowding. The room does not function well as a collections repository. The collections are at risk from being stored inadequately.

### **Environment**

Temperature is controlled by a central, heating and air conditioning system. Humidity is not controlled or monitored, but does not appear to be a major problem. The overhead lighting is fluorescent with nonultraviolet plastic shields covering the tubes.

### **Pest Management**

An integrated pest management program is absent. Rooms are sprayed as needed.

### **Security**

Although both entrances to the storage room have key locks, there are no alarms on the doors or windows. Motion detectors are not in the room. The Humanities Building is patrolled by campus security guards and access to the archaeology laboratory is controlled by Connie Cameron. There are two sealed windows along one wall.

### **Fire Detection and Suppression Systems**

There are no smoke or heat detectors in the archaeology laboratory or a fire suppression system. However, fire alarms wired into the fire department and fire hoses are located in the corridor outside the archaeological material storage area.

## **ARCHAEOLOGICAL MATERIAL STORAGE**

### **Storage Units**

Storage units holding the Murphy Collection consist of (1) a painted wooden shelves (8 feet high by 3 feet wide by feet deep) (Figure 6), (2) variously sized (heights) unsealed wooden drawers stored in an enameled metal framework (8 feet high by 2 feet wide by 2 feet deep) (Figure 7), and (3) a two-door, locking, enameled metal storage cabinet (7 feet high by 3 feet wide by 2 feet deep) (Figure 8).





**Figures 6 and 7. Murphy collection storage unit types 1 (left) and 2 (right).**



**Figure 8. Murphy collection storage unit type 3.**

### **Primary Containers**

A sample of the primary containers used to hold the Murphy Collection were examined by St. Louis District personnel. These containers consist of four untreated wooden drawers, three acidic flap top boxes, and three cardboard shoe boxes. All boxes are labeled legibly with marker or pen, and box label information is minimal. The box label information sometimes included the date, catalog number, and contents, but more often only had the donor's name.



## **Secondary Containers**

Archaeological materials from San Clemente Island are packaged in a wide variety of containers. These include two-mil zip-lock plastic bags, plastic sandwich bags with folded flaps, small plastic or acidic cardboard boxes both with and without lids, small glass cases with cotton packing (Riker Mounts), as well as items wrapped in newspaper and those stored loose in unlined wooden drawers. The archaeological materials stored in the small plastic or acidic cardboard boxes and Riker Mounts are also packed in cotton or tissue paper. The condition of many of the items is poor because of the acidic nature of the tissue paper, cotton, and newspaper. Security is also poor because of the loosely folded flaps of the unsealed plastic sandwich bags. None of the secondary containers are directly labeled, but the majority contain paper tags including catalog number information that is typed or written in pencil or ink.

## **Laboratory Processing and Labeling**

All of the artifacts in the Murphy Collection have been cleaned and sorted by archaeological material type. The catalog number is applied directly to the chipped stone with india ink. Shell, faunal remains, and human remains have not been labeled. The secondary containers include acidic paper tags with the catalog number, and/or age and sex information written in pencil or ink.

## **HUMAN SKELETAL REMAINS**

Approximately seven incomplete individuals are included in the Murphy Collection, represented by maxilla, mandibles, and a long bone. All remains have been cleaned and sorted, but none are labeled. Acidic paper tags are included with the remains, but only have age and sex information.

## **RECORDS STORAGE**

There are no records associated specifically with the Murphy Collection. However, general paper records are stored in metal filing cabinets in Ms. Cameron's office. Photographs are kept with reports. Oversized maps are folded or rolled and stored in cardboard tubes.

## **COLLECTIONS MANAGEMENT STANDARDS**

### **Registration Procedures**

#### ***Accession Files***

All collections are accessioned upon receipt.

#### ***Location Identification***

The location of the collection within the archaeological material storage area is not identified in the accession file.

#### ***Cross-indexed files***

No information.



***Published Guide to Collections***

A published guide to the collections exists as part of a graduate thesis.

***Site Record Administration***

The Smithsonian Institution trinomial system is used.

***Computerized Database Management***

The repository does not use a computerized database manager.

**Written Policies and Procedures*****Minimum Standards for Acceptance***

No minimum standards for acceptance exist.

***Curation Policy***

No curation policy exists.

***Records Management Policy***

No records management policy exists.

***Field Curation Guidelines***

No field curation guidelines exist.

***Loan Procedures***

Loans are made to other museums upon request and a record of these transactions is kept.

***Deaccessioning Policy***

No deaccessioning policy exists.

***Inventory Policy***

No deaccessioning exists.

***Latest Collection Inventory***

No collections inventory has ever been performed.

**Curation Personnel**

There is no full time curator for the archaeological collections. The curatorial responsibilities belong to adjunct faculty in addition to a 3/4-time museum curator. Little rehabilitation work is being carried out, although artifacts from select collections are being labeled as a part of student projects.

**Curation Financing**

Funding goes directly to the Anthropology Department. The department may then allocate funds to the collections repository.



### **Access to Collections**

Collections are readily accessible and made available to researchers upon request. Artifacts are loaned to other museums upon request. Access to collections is controlled exclusively by Ms. Cameron.

### **Future Plans**

New building funding has been lost. There are no definite plans for the future.

## **COMMENTS**

1. Although the collections do not have any visible signs of damage, the archaeological laboratory is crowded and the collections risk being damaged because of inadequate storage conditions.
2. There is no fire detection or fire suppression system in the collection storage room.
3. Although the Humanities Building is patrolled by campus guards and the two entrances to the collections storage room are secured with key locks, there are no motion detectors in the storage room. There are no alarms on the doors or windows.
4. By packing artifacts in acidic newspaper, plastic sandwich bags with folded flaps, cotton, and tissue paper, the security and longevity of these artifacts are compromised. Additionally, most of the items examined are not labeled. If any of these are misplaced, it will be difficult to reintegrate them with the Murphy Collection.

## **RECOMMENDATIONS**

1. The collections that are now curated in cotton, newspaper, and tissue paper packing will deteriorate more rapidly due to the acidity of these products. These should be repacked into ethyfoam or acid-free tissue packing and stored in acid-free boxes.
2. All artifacts should be labeled in india ink with an identifying number.
3. A fire detection/suppression system should be installed in the archaeological material storage area immediately.
4. An internal security system should be installed in the archaeology storage room so that campus security is not the exclusive means of security.
5. All missing documentation, photographic records, and maps should be identified, recovered, returned to CSU, Fullerton, incorporated into the Murphy Collection, and curated according to federal standards.





**8**  
**CALIFORNIA STATE UNIVERSITY**  
**NORTHRIDGE, CALIFORNIA**

**REPOSITORY SUMMARY**

**(1) Volume of Archaeological Material:** 68.5 ft<sup>3</sup>

Compliance Status: Archaeological materials will require partial rehabilitation to comply with existing federal guidelines and standards for curation.

**(2) Linear Feet of Records:** 15 linear feet

Compliance Status: All records require significant rehabilitation and must be duplicated with copies stored in a separate location for safety and security purposes.

**(3) Human Skeletal Remains:** Human skeletal remains recovered from NAS North Island by California State University (CSU), Northridge, have been transferred to the University of California, Santa Barbara (UCSB). The collections are being inventoried as part of the requirements of the Native American Graves Protection and Repatriation Act. They will remain at the UCSB until their ultimate disposition is determined. All original documentation on the burials is still at CSU Northridge and NAS North Island.

**(4) Status of Curation Funding:** The only financing for curatorial activities comes from cultural resource management contracts. There are no funds available for collections maintenance and rehabilitation.

## INTRODUCTION

DATE OF VISIT: 3 August 1992

PERSON CONTACTED: L. Mark Raab

An estimated 68.5 ft<sup>3</sup> (89 boxes) of prehistoric archaeological material from three seasons of fieldwork (1988-1990) on San Clemente Island and an additional 15 linear feet of associated documentation are curated at California State University, Northridge. The collections, recovered from SCLI-1215 and SCLI-1524, contain chipped stone, ceramics, human skeletal remains, faunal remains, shell, basketry fragments, and flotation samples.

## REPOSITORY

NAS North Island collections are stored at the Center for Public Archaeology located adjacent to the university. The facility was originally a private residence and has approximately 1200 ft<sup>2</sup> of space devoted to collections storage, and office/laboratory space (Figure 9). The office/laboratory facility, including the foyer and hallway, is used for map production, laboratory operations, computer use, field equipment storage, furnace and miscellaneous storage, exhibits.



**Figure 9. Space devoted to storage of NAS North Island archaeological materials.**

### Structural Adequacy

The repository is at least 30 years old and is a wood-frame structure with a concrete slab foundation and stucco exterior. Asphalt shingles cover the roof, which was replaced in 1984 or 1985. The interior walls and ceilings are covered by sheetrock. Most of the floors are of sealed hardwood; however, the floor in the laboratory area is covered with tile. There are windows throughout the



facility with two in the archaeological material storage area and two in the laboratory area. These are covered by plastic shades. There are two single panel wood doors in the facility—in the front and rear of the building. The building was not designed to function as an archaeological repository and is not structurally adequate to meet the basic requirements for such a facility. Limited laboratory and collections storage space is a major deficiency. The facility is filled to capacity. The rooms are too small to function an archaeological material storage area . As a result the collections are stored in any available space, including shelving erected in the center of the laboratory. Boxes are simply stacked on the floor. Space-saving shelving units would not alleviate the lack of space since the floor of the building could not support the added weight.

### **Environment**

The repository is heated with a forced-air, natural gas furnace and cooled with two window-unit air conditioners. These units, however, are only operated when staff are working in the building. Humidity is not controlled or monitored. There is no system for dust control. The room is illuminated by fluorescent lights as well as high intensity bulbs hanging from overhead conduits.

### **Pest Management**

Although the repository is sprayed for insects on an as-needed basis, no integrated pest management program is in place. There has never been any evidence of rodent infestation.

### **Security**

The repository is protected by electronic motion detectors that are wired to the campus police department. Sensors are located in each room of the facility. The doors are also wired with alarms that detect unauthorized entry, but the windows are protected only by simple latches. A limited number of keys have been issued to staff members. As an additional security measure, the staff performs all maintenance functions rather than permitting unknown janitorial staff into the building.

### **Fire Detection and Suppression Systems**

There are no smoke or heat detectors in the repository. A small fire extinguisher is the only fire deterrent present. The use of the furnace room for storage of miscellaneous items is a fire hazard.

## **ARCHAEOLOGICAL MATERIAL STORAGE**

### **Storage Units**

Two types of storage units are used to store archaeological materials. Most materials are stored on a homemade, unsealed, wooden shelving unit, measuring 8 ft by 8 ft by 2 ft, (height, length, width) contains archaeological materials in the laboratory area. Boxes are stacked two to three high on these shelves. This unit is located in the center of the laboratory work area. Additional



archaeological materials are stacked six boxes high on the floor in the one room dedicated exclusively to collections storage.

### Primary Containers

Two types of primary containers are used to store archaeological materials from NAS North Island. Approximately one-half of the containers are acidic-cardboard boxes with telescoping lids, each approximately 1 ft<sup>3</sup> in capacity. The remaining containers are also acidic cardboard, but these have folded-flap lids and are only approximately 0.5 ft<sup>3</sup> in capacity. Both types of boxes are secured with strapping tape. The adhesive on the tape has dried on some boxes, rendering the tape useless for securing the boxes. Minor compression damage caused by stacking and overpacking was observed on approximately 10% of the boxes stacked on the floor. The flap-top boxes are directly labeled in marking ink, whereas the boxes with telescoping lids are directly labeled with marking ink and/or with computer generated labels. All label information is legible and consistent, providing site number, box number, catalog number, provenience, and material class information.

### Secondary Containers

A variety of containers is used to store the NAS North Island archaeological materials. Most materials are sorted and individually packaged in zip-lock bags that are enclosed in larger zip-lock bags. Others are contained in small, acidic-cardboard boxes, prescription vials, and newspaper. Computer generated container labels, consistent in style and content, are inserted into the individual containers rather than being affixed to the outside (Figure 10). Label information includes accession, catalog, and feature numbers, artifact measurements, material class, and artifact type. The larger bags, into which the individual archaeological materials are sorted, are labeled in marking ink with site number, catalog number, and provenience information.



**Figure 10.** Container labels used for archaeological materials.



### **Laboratory Processing and Labeling**

All artifacts were partially washed in the field and are sorted according to site number and material class. Not all of these artifacts are labeled. Those that have been labeled have the catalog number directly applied in India ink.

### **HUMAN SKELETAL REMAINS**

Human skeletal remains from San Clemente Island have been transferred to the University of California, Santa Barbara. The collections are being inventoried in fulfillment of the requirements of the Native American Graves Protection and Repatriation Act and will remain there until their ultimate disposition is determined. However, all original documentation on the burials is still at California State University, Northridge and at the NAS North Island.

### **RECORDS STORAGE**

Approximately 15 linear feet of documentation associated with the San Clemente Island collections are stored at California State University, Northridge. A duplicate copy of these records has not been made however, dramatically reducing the research value of the artifacts in the event of an accidental loss of the documents.

#### ***Paper Records***

The majority of the paper records are maintained in three-ring, plastic binders which are stored on a painted, wooden bookcase located in the foyer of the repository. The records are organized by project year and include artifact catalogs, auger test forms, unit/level forms, laboratory forms, field notes, plan and profile maps, feature forms, and student field analysis notebooks. The exteriors of the three-ring binders are directly labeled in black marker with the year and excavator's name. Some information is recorded in pencil, that is now fading. None of the records have been duplicated on acid-free paper or preserved in archival folders.

#### ***Photographic Records***

Color slides taken during the field research on San Clemente Island are stored at the home of Dr. Raab and were not available for our review. Dr. Raab reported that the slides were in inert plastic sleeves and stored in three-ring binders.

#### ***Maps and/or Oversized Documents***

The majority of oversized maps are stored folded or rolled in acidic cardboard map tubes, with the minority in flat drawers in metal map cabinets.



## COLLECTIONS MANAGEMENT STANDARDS

### Registration Procedures

#### *Accession Files*

All artifacts and records are accessioned upon receipt.

#### *Location Identification*

The location of the collections within the repository is not identified within the accession file.

#### *Cross-indexed Files*

The files are not cross-indexed.

#### *Published Guide to Collections*

There is no published guide to the collections.

#### *Site Record Administration*

The Smithsonian Institution trinomial system is employed.

#### *Computerized Database Management*

There is a database management system in use.

### Written Polices and Procedures

#### *Minimum Standards for Acceptance*

There are no minimum standards for the acceptance of archaeological collections.

#### *Curation Policy*

There is a written plan for curation that addresses the receipt of materials, processing of materials, use of materials, and future preservation of materials.

#### *Records Management Policy*

The repository does not have written guidelines and standards for the curation of associated records.

#### *Field-Curation Guidelines*

None exists.

#### *Loan Procedures*

There are no loan procedures as the facility has never loaned any material.

#### *Deaccessioning Policy*

The facility does not have a written deaccessioning policy.



***Inventory Policy***

None exists.

***Latest Collection Inventory***

The collections have never been inventoried.

**Curation Personnel**

There is no full-time curator for archaeological collections. Dr. Raab is responsible for the collections. He is assisted by four part-time research assistants.

**Curation Financing**

The only financing for curatorial activities comes from cultural resource management contracts. There are no funds for collection maintenance and rehabilitation.

**Access to Collections**

Direct access to the collections is limited to Dr. Raab and the four research assistants. Collections will be made available to outside researchers with demonstrated needs and interests.

**Future Plans**

A proposal for a new curation facility was submitted to the CSU in 1988. The proposal outlined the deficiencies of the existing repository and suggested the requirements of an adequate facility. The associated documentation may be transferred to the university archives.

**COMMENTS**

1. The archaeological repository at CSU Northridge, does not meet federal requirements for the curation of federal archaeological collections. Major facility deficiencies exist in available space, fire safety, environmental controls, and security.
2. All primary and secondary containers are made from acidic materials. This allows for rapid decay of the containers and deterioration of archaeological materials stored inside.
3. Unsealed wooden storage units are adequate for temporarily storing collections, but this type of shelving does not meet the standards in 36 CFR Part 79 for long term curation of archaeological collections.

## RECOMMENDATIONS

1. All archaeological collections should be removed from the CSU Northridge facility. Environmental controls are absent. A small fire extinguisher is the only means of fire suppression. The windows are a security risk since they are only protected by window locks.
2. All collections should be reboxed in acid-free quality boxes. Archaeological materials should be reboxed into archival quality four-mil, zip-lock plastic bags.
3. If collections are to remain in the facility, steel shelving units should be purchased. If this is not possible, the existing wooden shelving should be sealed. Additional shelving should be constructed to store collections that are stacked on the floor.
4. When the NAGPRA compliance work is completed at UCSB, all human skeletal remains should be returned to CSU Northridge, and reintegrated into the appropriate collections.



**9**  
**DAMES AND MOORE**  
**SAN DIEGO, CALIFORNIA**

**REPOSITORY SUMMARY**

**(1) Volume of Archaeological Material:** None

Compliance Status: Dames and Moore does not have any archaeological material from Fort Irwin.

**(2) Linear Feet of Records:** 14.0 linear feet

Compliance Status: Documentation requires partial rehabilitation to comply with existing federal guidelines and standards for archival preservation. All associated records should be duplicated on acid-free paper or microfilm and stored in acid-free folders, envelopes, and archival quality photographic sleeves. A duplicate copy should be stored in a separate fire-safe location.

**(3) Human Skeletal Remains:** No known human skeletal remains recovered from Fort Irwin are stored at Dames and Moore.

**(4) Status of Curation Funding:** Curation is financed through cultural resource management contracts.

## INTRODUCTION

DATE OF VISIT: September 15, 1993

PERSON CONTACTED: Andrew York

Approximately 14.0 linear feet of records from Fort Irwin are stored at the San Diego office of Dames and Moore (Table 8). No artifacts associated with these projects are stored at Dames and Moore. Artifacts from Fort Irwin have been returned to the installation.

**Table 8.**  
**Type of Records from Fort Irwin Housed at Dames and Moore**

<b>Record Type</b>	<b>l.f.</b>
Reports	7.2
Analysis	0.1
Photographs	0.4
Administrative	6.1
Other	0.2
<b>Total</b>	<b>14.0</b>

Note: l.f. refers to linear feet

## REPOSITORY

Records are stored in two repositories three separate archaeological material storage areas. Two of these areas are in the same building, whereas the third is in a separate facility. The library and records processing area are located in the Dames and Moore office complex. The permanent records storage area is located at the COR-O-VAN records storage facility approximately 13 miles north. The building in which the offices of Dames and Moore are located is a four story glass, steel frame facility located in San Diego, California. The office complex is located on the second floor of the building and includes a library, records storage room, offices, staff lounge, and restrooms. The COR-O-VAN records storage facility is a concrete block building in Poway, California. It includes a receiving/loading dock, a records storage area, materials/supplies room, offices, and restrooms.

### *Repository 1—Archaeological Material Storage Area 1 (Library)*

Included in the Dames and Moore office complex is the 150 ft<sup>2</sup> contract report library.

### *Repository 1—Archaeological Material Storage Area 2 (Records Processing Area)*

The records processing area occupies approximately 450 ft<sup>2</sup>. Several offices are located here. Records are kept in-house for two years before being transferred to long-term storage at the COR-O-VAN records storage facility.



***Repository 2—Archaeological Material Storage Area 3 (COR-O-VAN Records Storage Facility)***

This 76,000 ft<sup>2</sup> single story records storage facility is located approximately 13 miles north of Dames and Moore in Poway, California.

**Structural Adequacy**

***Repository 1—Archaeological Material Storage Area 1 (Library)***

The office building in which Dames and Moore is located was constructed in 1988. The building is a four-story glass and steel-framed structure with a concrete foundation. The 150 ft<sup>2</sup> library has a carpeted concrete floor. The interior walls are sheetrock. There is a drop Celotex ceiling. There are no windows in the library. A single panel wood door on the west side of the room opens onto a hallway. An exit is located in the southeast corner of the room and leads to a hallway containing other offices. The plumbing and electrical systems are original to the building.

***Repository 1—Archaeological Material Storage Area 2 (Records Processing Area)***

The 450 ft<sup>2</sup> records processing area is located on the second floor. It has a carpeted concrete floor. The interior walls are sheetrock and there is a drop Celotex ceiling. Along the south wall of the room are six windows with blinds. Two single panel wood doors, one located on the north wall and one on the east wall, provide access to the records processing area. Both exit onto hallways containing offices. The plumbing and electrical systems are original to the building.

***Repository 2—Archaeological Material Storage Area 3 (COR-O-VAN Records Storage Facility)***

This 76,000 ft<sup>2</sup> records storage facility is located in Poway, California, approximately 13 miles north of Dames and Moore. The facility is approximately five years old. The north one third is two stories high and contains offices, restrooms, and a reception area. Although the south two-thirds is the same height as the north, it is used as a records warehouse without any permanent floors separating levels. Instead, metal mesh floors have been constructed in the aisles between the metal shelving units and are approximately 25 feet high and occur at 10 foot intervals. All interior walls are covered with sheetrock. The ceiling in the records storage area is covered with insulation. Two skylights provide natural light to the records storage area. There are three exterior metal overhead loading doors in the east wall and one interior wood panel door in the north wall that leads to the office areas. The plumbing and electrical systems are original to the facility. The records storage facility is filled to 90% capacity. However, additional shelving units are being constructed.

**Environment**

***Repository 1—Archaeological Material Storage Area 1 (Library)***

Temperature in the library is controlled by means of a central heating and air conditioning system equipped with dust filters. Humidity is not monitored or controlled. Light is provided by uncovered fluorescent tubes. The library is maintained on an as-needed basis by the building janitorial staff.



***Repository 1—Archaeological Material Storage Area 2 (Records Processing Area)***

Temperature is controlled by means of a central heating and air conditioning system equipped with dust filters. Humidity is not monitored or controlled. Light is provided by uncovered fluorescent tubes. The area is maintained on an as-needed basis by the building janitorial staff.

***Repository 2—Archaeological Material Storage Area 3 (COR-O-VAN Records Storage Facility)***

Temperature in the records storage area is controlled by a central heating and air conditioning system. The targeted temperature range is between 60° and 65°F. Humidity is not monitored or controlled. Natural light is provided by two skylights. There are also incandescent bulbs hanging from the ceiling. The warehouse records storage area is maintained on a daily basis by COR-O-VAN employees as a security measure, whereas the office area is cleaned daily by a professional cleaning company.

**Pest Management*****Repository 1—Archaeological Material Storage Area 1 (Library)***

No integrated pest management is in place. If any type of infestation occurs the building manager is notified. The building manager will then contact a professional pest management company. No evidence of pests was apparent during our visit.

***Repository 1—Archaeological Material Storage Area 2 (Records Processing Area)***

No integrated pest management is in place. If any type of infestation occurs the building manager is notified. The building manager will then contact a professional pest management company. No evidence of pests was apparent during our visit.

***Repository 2—Archaeological Material Storage Area 2 (COR-O-VAN Records Storage Facility)***

A partial pest management program exists COR-O-VAN and includes pest control. A professional pest management company visits the facility monthly to eliminate any pest problems that may have arisen. No evidence of pests was evident during our visit.

**Security*****Repository 1—Archaeological Material Storage Area 1 (Library)***

The building is protected by a private security company. Dead-bolt and key locks are present on the exterior doors and access is controlled. The library itself is protected only by a key lock on the west door.



***Repository 1—Archaeological Material Storage Area 2 (Records Processing Area)***

No security system other than dead-bolt locks on both the north and east doors exist. However, the second floor windows do not open. The windows height above the ground makes forced entry less of a concern.

***Repository 2—Archaeological Material Storage Area 3 (COR-O-VAN Records Storage Facility)***

The COR-O-VAN facility is protected by intrusion alarms wired into the San Diego Alarm Company, dead-bolt and key locks on doors, and controlled access through an electronic key card system.

**Fire Detection and Suppression Systems*****Repository 1—Archaeological Material Storage Area 1 (Library)***

There is no fire detection system. Fire suppression consists of a sprinkler system.

***Repository 1—Archaeological Material Storage Area 2 (Records Processing Area)***

There is no fire detection system. Fire suppression consists of a sprinkler system.

***Repository 2—Archaeological Material Storage Area 3 (COR-O-VAN Records Storage Facility)***

The fire suppression system consists of a sprinkler system and approximately 25 fire extinguishers that are located on all levels of the records storage area. The extinguishers are regularly checked.

**ARCHAEOLOGICAL MATERIAL STORAGE**

No artifacts are stored at Dames and Moore. They only have records.

**HUMAN SKELETAL REMAINS**

No human skeletal remains associated with Fort Irwin are stored at Dames and Moore.

**RECORDS STORAGE**

There are approximately 14 linear feet of records associated with work carried out at Fort Irwin, in the three archaeological material storage areas.



### ***Repository 1—Archaeological Material Storage Area 1 (Library)***

#### ***Reports***

All Fort Irwin project reports are stored on sealed, adjustable wooden shelving units measuring approximately 2.9 feet by 0.9 feet by 7 feet (length, width, height). All reports are bound with plastic binding or are in plastic three-ring binders. Most are grouped together by project in acidic cardboard magazine holders. The magazine holders have adhesive labels listing project name written in black marker.

### ***Repository 1—Archaeological Material Storage Area 2 (Records Processing Area)***

#### ***Paper Records***

The majority of the records in the records processing area are paper. Paper records are arranged by job number. They are processed and kept on-site for two years before being transferred to COR-O-VAN. All are stored in acidic manila file and hanging folders that are in acidic cardboard banker's boxes one ft<sup>3</sup> in size with telescoping lids. The boxes are stacked three to six high on the floor. Boxes contain post-it note adhesive labels with box number and job number information written in marker. File folders include typed adhesive labels listing job number, project name, and folder contents. Types of paper records include correspondence, scopes of work, accounting and background records, and field notes. None were duplicated.

#### ***Reports***

Draft reports and copies of final reports from Fort Irwin are stored in the records processing area. The storage methods are the same as those for paper records.

### ***Repository 2—Archaeological Material Storage Area 3 (COR-O-VAN Records Storage Facility)***

Records from Dames and Moore remain on-site for two years before they are transferred to this facility for long term storage.

#### ***Paper Records***

Paper records are stored in cardboard bankers boxes one cubic foot in size with telescoping lids. The boxes are stored on enameled metal shelving units approximately thirty feet in height. Boxes are organized according to a bar-code system. Records are arranged by job number within the boxes. The arrangement of the records within the boxes is not altered by COR-O-VAN upon receipt for storage. Paper records are stored in acidic manila file folders with typed adhesive labels with the job number, project name, and folder contents. Types of paper records include correspondence, proposals, accounting records, and analysis records. None of these records have been duplicated.

#### ***Photographic Records***

The 0.42 linear feet of photographic records consists of a photo log, negatives, slides, and contact print sheets relating to work carried out at Fort Irwin. All are stored in acidic manila folders with the paper records. The negatives and slides are contained in non-archival plastic sleeves. The individual slides have been directly labeled with marker, and include roll and frame numbers. The contact print sheets have adhesive labels listing roll and site numbers.



***Reports***

There are 7.2 linear feet of project reports from work at Fort Irwin. All are stored in acidic manila folders or loose in boxes, and have been separated from the paper records by folders only.

## COLLECTIONS MANAGEMENT STANDARDS

### Registration Procedures

***Accession Files***

All materials are assigned a catalog number(s) using the numbering system of the curation facility where the collections will eventually be transferred.

***Location Identification***

Not Applicable.

***Cross-indexed files***

The files are cross-indexed by job number and project/site name.

***Published Guide to Collections***

Not Applicable.

***Site-Record Administration***

The Smithsonian Institution trinomial system is used.

***Computerized Database Management***

Some of the cataloging is done using DBASE.

### Written Policies and Procedures

***Minimum Standards for Acceptance***

No minimum standards exist.

***Curation Policy***

No curation policy exists.

***Records-Management Policy***

Dames and Moore has created guidelines for the maintenance of the project files .

***Field-Curation Guidelines***

No field curation guidelines exist.

***Loan Procedures***

Not Applicable.

***Deaccessioning Policy***

Portions of certain classes of archaeological materials such as soil samples and historic bottle fragments (e.g. bulk items that are redundant) are sometimes excluded from curation. All material is brought in from the field and a decision to discard is made at this point.

***Inventory Policy***

No inventory policy exists.

***Latest Collection Inventory***

The staff state that the collections currently at Dames and Moore for analysis were inventoried in 1992.

**Curation Personnel*****Repository 1***

As Dames and Moore is not a long-term curation facility there is no full-time curator for the archaeological collections.

***Repository 2***

It is unknown how many employees work at COR-O-VAN.

**Curation Financing*****Repository 1***

Dames and Moore is not a long-term curation facility, but the funds to process the collections are included in contracts. The staff feel that financing is adequate.

***Repository 2***

COR-O-VAN Records Storage Division is a commercial business that provides supervised long-term records storage. Storage fees are incorporated into the contracts between parties.

**Access to Collections*****Repository 1***

Access to the records at Dames and Moore is controlled. All permanent employees can gain access through two individuals. There is an informal check-out system for the records that includes leaving a file insert in the space where a file was removed. Dames and Moore does not have a policy on access to collections by researchers. However, should the case arise, Dames and Moore would let researchers examine material only if permission has been granted from the funding agency.



### *Repository 2*

Authorized personnel (administrators and warehouse supervisors) have access to the records storage area through an electronic key card. Records storage warehouse floor employees are supervised daily. To use the records, permission must be obtained from the agency whose records are stored at COR-O-VAN.

### **Future Plans**

Future plans include assembling additional enameled metal shelving units.

## **COMMENTS**

1. None of the associated records have been duplicated or placed in archivally stable materials.
2. There is no means for monitoring humidity at Dames and Moore or the COR-O-VAN facility.
3. Neither Dames and Moore or COR-O-VAN have fire detection systems.

## **RECOMMENDATIONS**

1. All records need to be stored in acid-free folders. Photographic material should be stored in archival quality sleeves. Records should be duplicated on acid-free paper and a copy stored at a separate and secure location.
2. Humidity-monitoring devices should be installed at Dames and Moore and COR-O-VAN. Dehumidifiers should be purchased and monitored.
3. The fire detection and suppression systems should be upgraded to include smoke alarms at each facility.