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FINAL REPORT: NATIONAL REGISTER OF HISTORIC PLACES/CALIFORNIA REGISTER OF HISTORICAL RESOURCES EVALUATION FOR THE POINT SUR NAVFAC, POINT SUR STATE HISTORIC PARK, CALIFORNIA

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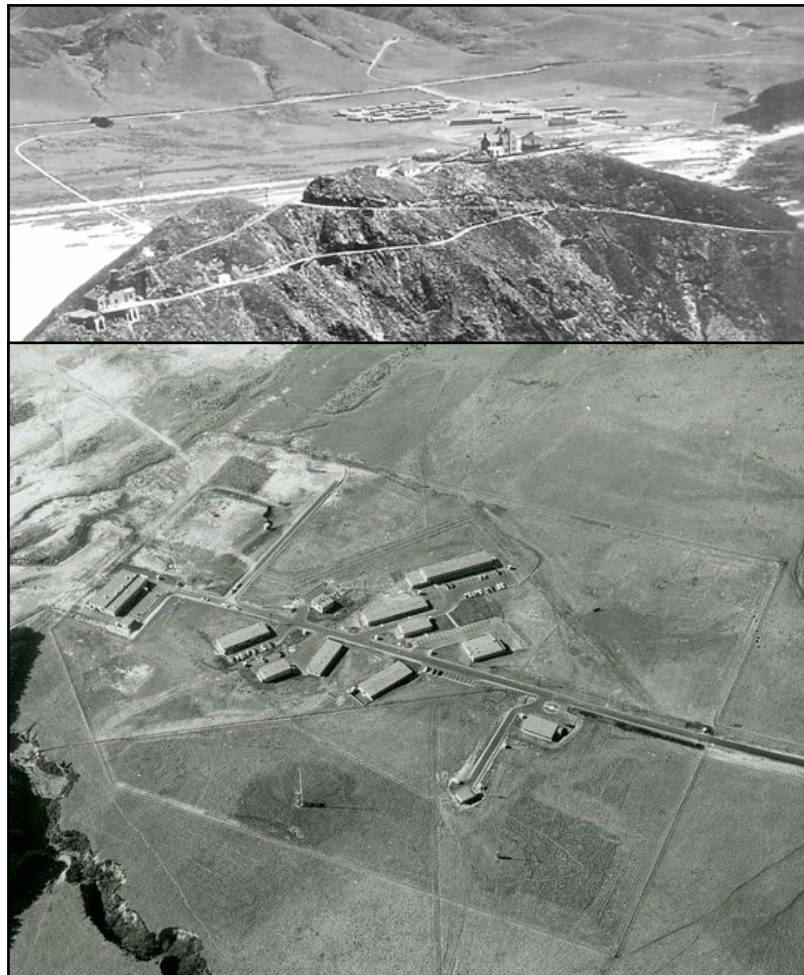


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Cover Photographs: Courtesy of Matt C. Bischoff, California State Parks

I. EXECUTIVE SUMMARY

The Central Coast Lighthouse Keepers (CCLK), with project support from the State of California Department of Parks and Recreation, contracted with PAST Consultants, LLC (PAST) and Kent Seavey, architectural historian, to produce a National Register of Historic Places/California Register of Historical Resources Evaluation for the Naval Facility at Point Sur State Historic Park (Point Sur NAVFAC), California. This evaluation is intended to provide California State Parks planners and the Central Coast Lighthouse Keepers information regarding the potential for this complex of buildings to be eligible for inclusion to the National Register of Historic Places (NR) and the California Register of Historical Resources (CR).

The Point Sur NAVFAC is significant under *NR Criterion A/CR Criterion 1* for its association with the development of SOSUS (Sound Surveillance System), a Cold War technological advancement that greatly enhanced the protection of the United States from the threat of Soviet Union submarine attack. An intricate system of underwater hydrophone arrays linked to top secret United States Navy bases along the east and west coasts of the United States and along key coastal locations of other Western countries, the SOSUS system could identify, track and provide early warning of Soviet submarine movements worldwide. When Fleet Admiral Chester W. Nimitz became Chief of Naval Operations (CNO) in December of 1945, he made the development of anti-submarine warfare (ASW) technology a top priority. The SOSUS system would become the mainstay of ASW technology for the United States throughout the Cold War. When it was fully developed by the late 1950s, SOSUS generated the construction of over 30 Naval Facilities, or NAVFACs. Each NAVFAC was linked to the larger SOSUS system, providing continuous surveillance of Soviet submarine movements throughout the Cold War.

Constructed in 1957 and operational from 1958 until 1984, The Point Sur NAVFAC was a vital cog in the worldwide SOSUS network, protecting the United States from the threat of Soviet submarine attack throughout the Cold War. The Point Sur NAVFAC is the only remaining intact SOSUS Naval Facility on the West Coast that is available for public interpretation, because of its ownership by the State of California Department of Parks and Recreation. Many of the SOSUS naval facilities were part of larger Navy bases. The Point Sur NAVFAC is unique because it is a standalone base whose building inventory dating from the facility's Period of Significance (1958 – 1984) is largely intact.

The Point Sur NAVFAC is significant under *NR Criterion C/CR Criterion 3* because the complex embodies the distinctive characteristics of a type, period, or method of construction. Constructed as a cohesive group of buildings, the base's architecture bears a postwar military aesthetic comprised of simplified buildings designed in a low-profile, flat-roofed style intended to blend into the surrounding landscape and provide the secrecy required for the highly sensitive operations occurring within the base.

In addition, the Capehart housing neighborhood located on the base is also eligible under *NR Criterion C/CR Criterion 3* as an intact example of a housing development that followed the

design guidelines developed under the Capehart Housing Program. Named after Senator Homer E. Capehart, who sponsored the bill with Senator Kenneth Wherry, the Capehart Housing Program was a comprehensive housing development initiative intended to solve the Cold War military housing shortage. Working with civilian architects and builders, the Capehart Housing Program developed a series of standard architectural designs for single and multi-family housing. Constructed in 1960, the single-family and duplex housing units on the Point Sur NAVFAC exemplify the standardized designs utilized as part of the Capehart Housing Program.

The Point Sur NAVFAC is considered an exceptional historic resource, based on the definition presented in the 1993 document, *Interim Guidance*, because it possesses “exceptional historic importance to the Nation” and is an “outstanding example of technological or scientific achievement.”¹ During its 26 years of operation, the Point Sur NAVFAC tracked, identified and monitored Soviet submarine movements, protecting the United States from Soviet nuclear submarine attack throughout the Cold War. For its integral role in the SOSUS system and the protection of the United States during the Cold War, the facility won three Meritorious Unit Commendations (MUCs) in 1969, 1970 and 1971.

The Point Sur NAVFAC played a continuous and vital role on the frontline of the Cold War from its commissioning in 1958 until its closure in 1984. It remains one of the last surviving examples of an intact SOSUS base and serves as a reminder of the importance of United States’ technological advancement in combating and defeating the Soviet Union during the Cold War.

¹ U.S. Air Force, *Interim Guidance Treatment of Cold War Historic Properties for U.S. Air Force Installations* (AFD 070828-060), 1993, 3.

II. INTRODUCTION

Introduction

In 1984 the State of California acquired the U.S. Coast Guard Point Sur Lightstation, which became Point Sur State Historic Park in 1987, to preserve and protect a self-sufficient, late nineteenth-century light station in California with the full complement of its associated facilities. The original acquisition consisted of 24.58 acres, which included Moro Rock, a two-acre parcel adjacent to State Highway 1, a 6.5 acre parcel to the east of Highway 1 and a right-of-way connecting the first two of these parcels. In 1991, this complex was listed on the National Register of Historic Places and later designated State Historical Landmark #951. The remaining buildings, including the lighthouse, the oil house, and the barracks, were acquired in 2005 under the National Historic Lighthouse Preservation Act of 2000.²

During the same year as the State's acquisition of these parcels, the Point Sur NAVFAC was decommissioned. The Point Sur NAVFAC operated from 1958 to 1984, when the operational elements of the facility were removed and relocated to the NAVFAC at Centerville Beach, California. The site remained largely unused and subject to decay and vandalism, despite occupation of the housing units by various governmental agencies in subsequent years.

In 2000, the Point Sur NAVFAC site, a 38.54-acre parcel, was acquired by the State of California, Department of Parks and Recreation. At this time, the purpose of the acquisition was to provide employee housing for State Park Employees, allowing for the removal of inappropriate housing in other nearby parks; provide a staging area for tours of the Point Sur Light Station; and to improve the State Highway 1 viewshed. At the time of acquisition, the NAVFAC had not reached 50 years of age and had been determined ineligible for listing on the National Register of Historic Places (NR) and the California Register of Historical Resources (CR), largely because the site had not reached 50 years of age. A discussion of previous evaluations appears later in this chapter.³

In 2004, California State Parks completed the *Point Sur State Historic Park General Plan* and included the NAVFAC as part of Point Sur State Historic Park. The document's Executive Summary provided this Declaration of Purpose:

The purpose of Point Sur State Historic Park is to preserve a rare example of an intact and self-sufficient late nineteenth century light station and to utilize and tell the story of one of the few remaining self-sufficient submarine listening stations on the west coast. These facilities present a continuum of maritime and military history at Point Sur. The

²California State Parks Central Service Center, *Point Sur State Historic Park General Plan (PSSHPPG)*, February 2004, 1-2.

³ *PSSHPPG*, p. 1-5. The General Plan states: "Since acquisition and incorporation of this parcel into Point Sur SHP, there has been increased awareness of the cultural significance of the site itself."

significant aspects of this history and the Park's unique natural, cultural, and scenic resources will be preserved, protected, and interpreted for visitor enjoyment and education.

Project Description

Point Sur State Historic Park is located on the coast of Monterey County, approximately 23 miles south of the City of Monterey. The Park is currently part of the State Park System's Monterey District. The Point Sur NAVFAC rests on a coastal bluff to the east of Moro Rock (the light station site) between the shoreline and State Highway 1. As the *Point Sur State Historic Park General Plan (PSSPGP)* states:

NAVFAC is currently the only defensive Cold War era submarine listening station now within State holdings and a significant component of Point Sur SHP's history. The rehabilitation and potential adaptive re-use of selected NAVFAC buildings provides State Parks with an unprecedented opportunity to give the public access and to interpret this important facet of Cold War history within the context of the changing operations of the Light Station.⁴

A location map of the project site appears as **Figure 1**.



Figure 1. Location map for Point Sur State Historic Park (Courtesy: *Point Sur State Historic Park General Plan, February 2004*).

⁴ PSSHPGP, 3-4.

This historical evaluation applies to the Point Sur NAVFAC site only. Extant resources on the NAVFAC site consist of 21 buildings on the facility proper, with an additional 24 housing units designed under the standards of the Capehart Housing projects developed by the U.S. Government for purposes of housing military personnel. The Point Sur NAVFAC is the only remaining intact submarine listening station on the west coast of the United States and contains most of its original buildings and structures, including the Capehart housing. Although the buildings have been subjected to neglect and vandalism, the site as a whole retains sufficient historic integrity to communicate its historic significance. It should be noted that one of the most significant operations buildings on the site, Building 114: Terminal Equipment Building (known as the Naval Research Center) is not owned by California State Parks and is therefore out of the Scope of Work of this evaluation.

Project Team

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Principal Seth Bergstein & Kent Seavey, Architectural Historian both meet the Secretary of the Interior's Professional Qualifications Standards in Architectural History and History.

Organization of the Report

The report is divided into six chapters. Following the *Executive Summary* and this *Introduction*, *Chapter III: Historic Context of the Point Sur NAVFAC* develops the historic context in which the Point Sur NAVFAC was constructed and served as an integral base in the worldwide SOSUS network. This chapter emphasizes the technological advancements that gave rise to the SOSUS system and the development of the system of NAVFAC bases at key coastal locations of America and its Cold War allies. *Chapter IV: Architectural Inventory of the Point Sur NAVFAC* describes the NAVFAC site and individual buildings that comprise the base. Photographs and summary architectural information are provided for each building. A list of character-defining features for the NAVFAC site and buildings is provided at the end of this chapter. *Chapter V: Evaluation of Historic Significance* evaluates the historic significance of the Point Sur NAVFAC

based on National Register and California Register criteria. Lastly, *Chapter VI: Bibliography* lists the works cited for this evaluation.

The report contains three appendices. *Appendix A: Point Sur NAVFAC Command History 1958 – 1984* provides the base commander names for the NAVFAC from 1958 to 1984.

Appendix B: SOSUS and Oral History Timeline 1950 – 2010, uses an available timeline published by the Integrated Undersea Surveillance System (IUSS) and places oral history interviews within the time frame in which the subject served at the Point Sur NAVFAC. In 1985, all SOSUS operations and later technological advancements in underwater surveillance became controlled by the United States Navy's Integrated Undersea Surveillance System (IUSS). The IUSS provided the timeline used in Appendix B and has an informative website that is listed in the *Bibliography* of this report.

Appendix C: Point Sur NAVFAC Research Contact List provides the names and contact information of archivists, researchers and former naval personnel contacted for this report.

Methodology and Research Materials

The project commenced on February 29, 2012, with a meeting attended by representatives of the Central Coast Lighthouse Keepers (CCLK): John O'Neil, Carol O'Neil, Point Sur Volunteer Historian and Douglas Williams; California State Parks Project Manager Matt Bischoff; and PAST representatives Seth A. Bergstein and Kent Seavey, held at the offices of California State Parks, Monterey District, in Monterey, California. At this time, CCLK representatives forwarded all historical information, much of it proving invaluable to this evaluation.

Site visits to document the existing conditions of the individual buildings on the NAVFAC site occurred on May 7 – 9, 2012 with subsequent site visits to observe site conditions occurring on subsequent days in May, 2012.

PAST reviewed primary and secondary research material in libraries and repositories of public record in the following institutions:

- ***Central Coast Lighthouse Keepers Archives, Carmel, California***
This information was presented to PAST at the kickoff meeting.
- ***California History Room, Monterey Public Library, Monterey, California***
Clippings files and secondary sources were examined at this repository.
- ***State of California, Department of Parks and Recreation, Monterey District, Monterey, California***
This information was presented to PAST at the kickoff meeting.

- ***National Archives at San Francisco, San Bruno, California***
Archivist Robert Glass provided relevant files of secondary source material.
- ***National Archives at Riverside, Riverside California***
John Howells, Archives Technician was contacted via electronic correspondence. His archives did not have information related to the Point Sur NAVFAC.
- ***Naval History and Heritage Command, Washington, D.C.***
Chief Archivist Curtis Utz and Archivist John Greco located two files on the Point Sur NAVFAC, containing command histories from 1967 – 1968; and 1969 – 1973. However, information within these files remains classified and requires special permission for access.
- ***The Seabee Museum, Port Hueneme, California***
Archivist Gina Nichols was contacted via telephone and electronic correspondence. Correspondence regarding the construction of the Capehart housing at Point Sur NAVFAC was forwarded to PAST.
- ***NAVFAC Southwest, San Diego, California***
NAVFAC Historian Alexander Bethke was contacted via telephone and electronic correspondence.
- ***State of California, Office of Historic Preservation, Sacramento, California***
William Burg, State Historian I, was contacted regarding previous evaluations of the Point Sur NAVFAC.
- ***Naval Postgraduate School, Monterey, California***
Mikhail Tsyarkin, Associate Professor, was contacted via electronic correspondence. Professor Tsyarkin has done photo documentation of the buildings on the NAVFAC site. He had no historical information, but referred PAST to retired U.S. Navy Captain, Robert Simeral, who reportedly was knowledgeable about the base. Mr. Simeral did not respond to PAST'S request for an interview.
- ***Telephone Interviews and Electronic Correspondence***
PAST contacted and interviewed numerous personnel who served at the Point Sur NAVFAC. Their correspondence is presented in Appendix B: SOSUS and Oral History Timeline 1950 – 2010, which places the interviews within the dates that personnel served at the Point Sur NAVFAC.

For a complete list of research contacts, see *Appendix C: Point Sur NAVFAC Research Contact List*.

Previous Evaluations and Correspondence

Previous historical studies and correspondence regarding the historic significance of the Point Sur NAVFAC:

- William Self Associates, *Historic Resources Assessment Naval Facility Point Sur, Monterey, California* (1993). This assessment consisted of data prepared for State Inventory Forms (although no DPR 523a or b forms were completed) and an evaluation of historic significance. The report listed the architect and builder of the Point Sur NAVFAC as unknown. This report concluded that the site was not eligible for listing on the National Register, largely because the properties have not yet achieved 50 years of age and that the NAVFAC site was not of “exceptional significance.”
- Uribe & Associates, *Review Environmental Assessment The Disposal and Reuse of Naval Facility Centerville Beach, California and Naval Facility Point Sur, California* (1994). Using the William Self Associates report listed above, this document drew the same conclusions regarding historic significance.
- *Letter from Cheryl Widell, State Historic Preservation Officer, California Office of Historic Preservation to Louis S. Wall, Cultural Resources Coordinator, Department of the Navy* (1994). Drawing upon the conclusions of the William Self Associates and Uribe & Associates reports, this letter concluded that: “None of the structures meet the age criteria for eligibility on the NRHP, nor are any of the buildings exceptional architecturally. There are no strong associations with significant historical events or persons.” It should be noted that neither of the two above-mentioned reports developed a thorough historic context linking Cold War associations with the NAVFAC, likely for two reasons: the information was classified and the properties had not achieved 50 years of age.
- California State Parks Central Service Center, *Point Sur State Historic Park General Plan* (2004). Recommendations for retention and interpretation of the NAVFAC are discussed in this document. At the time of release, the existing Capehart housing neighborhood was the proposed location for desperately-needed employee housing. The General Plan notes: “Point Sur NAVFAC is a historic link to the Light Station’s mid-20th century technological growth and development... NAVFAC is currently the only defensive Cold War era submarine listening station now within state holdings and a significant component of Point Sur SHP’s history. (page 3-4)”
- *Letter from Jennifer M. Gates, Field Services Director, California Preservation Foundation, to Louis Nastro, Assistant to the Commission, California State Park & Recreation Commission* (2010). This letter requested halting an amendment to the 2004 *General Plan* that proposed the demolition of the Capehart housing neighborhood, until “a historic assessment of the Naval Facility and the housing structures is completed...”
- *Letter from John O’Neil, Chairman, Central Coast Lighthouse Keepers, to California State Park & Recreation Commission* (2010). This letter requested that the Commission delay approval of the General Plan amendment proposing demolition of the Capehart housing neighborhood, stating “The NAVFAC is the only complete, stand-alone NAVFAC on the west coast which can be opened and interpreted to the public.”

- *Letter from Susan Brandt-Hawley, Brandt-Hawley Law Group, to Ruth Coleman, Director California State Park & Recreation Commission (2010).* This letter also recommended that demolition of the Capehart housing not be included in the amendments to the General Plan. The letter states: “Since the adoption of the General Plan, there has been significant new information developed about the historic significance of the site during the Cold War era. Further historic study is required prior to consideration of demolition.”

Federal Guidelines for the Documentation and Historical Evaluation of Cold War Properties

In 1990, the United States Congress passed the Legacy Resource Management Program (Legacy), under the United States Department of Defense, Office of the Deputy for the Secretary of Defense, in an effort to enhance natural and cultural resources management on Department of Defense (DOD) lands. Four documents pertinent to the documentation of Cold War properties, of which the Point Sur NAVFAC is a prime example, were produced as part of this program:

- U.S. Air Force, *Interim Guidance Treatment of Cold War Historic Properties for U.S. Air Force Installations*, United States Air Force, 1993 (*Interim Guidance AFD 070828-060*)
- *Coming in From the Cold: Military Heritage in the Cold War*, U.S. Department of Defense Legacy Cold War Project, 1994 (*Coming in from the Cold*)
- *Recording the Cold War: Identifying and Collecting Cold War Resource Data on Military Installations*, by Carrie J. Gregory and Martyn Tagg, Legacy Project 07-285, 2008 (*Recording the Cold War*)
- *Design Guidelines for Department of Defense Historic Buildings and Districts*, by Heather McDonald and Michelle Michael, Legacy Project 07-382, 2008 (*DOD Design Guidelines*)

These documents define Cold War era properties as those constructed between September 1945 (end of World War II) and December 1991 (collapse of the Soviet Union).⁵ This definition for Cold War properties will be used in this evaluation.

Interim Guidance

Produced in 1993, *Interim Guidance* uses established National Register criteria and language as a basis for documenting, analyzing and potentially listing Cold War era properties. The document defines historically significant *Cold War properties* as:

Cold War historic properties are *buildings, structures, sites, objects, and districts* built, used, or associated with critical events or persons during this period and that possess

⁵ Gregory, Carrie J. and Martyn Tagg, *Recording the Cold War: Identifying and Collecting Cold War Resource Data on Military Installations* (Legacy Project 07-285), 2008, 5.

exceptional historic importance to the Nation or that are outstanding examples of technological or scientific achievement.⁶

The document defines *districts* as:

a "district" possesses a significant concentration of buildings, structures, etc. united historically or aesthetically by plan or physical development. An Air Force example could include a block of buildings, lacking any significant architectural or engineering merit, that hosted a crucial code breaking or intelligence gathering activity during the Cold War, a group of buildings built for nuclear weapon testing (laboratories), or an entire installation constructed for a specific Cold War mission.⁷

This evaluation will demonstrate that the Point Sur NAVFAC fits both descriptions given in *Interim Guidance*. Individual NAVFAC buildings qualify as historic buildings because of their exceptional historic importance in supporting critical United States national defensive efforts during the Cold War. In addition, the Point Sur NAVFAC site was a center for crucial intelligence gathering activity during the Cold War and that the site qualifies as a historic district.

Coming in from the Cold

The Executive Summary of the Document states:

Coming in from the Cold: Military Heritage of the Cold War summarizes the efforts that the Department of Defense (DOD) has undertaken in response to the Congressional mandate to "inventory, protect, and conserve" the heritage of DOD during the Cold War. These activities were conducted by the Cold War Task Area, one of the major study groups of DOD'S Legacy Resource Management Program, established by Congress in the Department of Defense Appropriations Act, 1991.

Coming in from the Cold provides a typology of Cold War resources and makes recommendations for the identification, preservation and management of Cold War-era historic resources. The document contains a timeline of major Cold War events, from 1945 to 1991. It also provides a list of recommendations to increase efforts in the identification of Cold War properties and to step up the effort to declassify Cold War documents that are no longer pertinent to national security.⁸

⁶ U.S. Air Force, *Interim Guidance Treatment of Cold War Historic Properties for U.S. Air Force Installations* (AFD 070828-060), 1993, 3.

⁷ U.S. Air Force, *Interim Guidance*, p. 5.

⁸ Recommendations begin on page 59 of this document. On page 29, the document states that "as of the date of this Report (1994), the system to declassify national security records is hopelessly clogged."

Recording the Cold War

This document builds upon the 1993 U.S. Air Force document *Interim Guidance*, to further guide the cultural resource management of Cold War properties. *Recording the Cold War* gathered data related to the type, presence and numbers of Cold War-era properties located at four Air Force bases: Davis-Monthan AFB in Tucson, Arizona; Hill AFB near Ogden, Utah; Kirtland AFB in Albuquerque, New Mexico; and Vandenberg AFB near Lompoc, California. By identifying the types and proliferation of these properties on four representative bases, the objective of the study was to develop a model for data gathering methods for identifying significant properties and to provide an approximate scope and cost for the effort that could be applied to U.S. military bases nationwide. For purposes of this evaluation, the document provides a good overview of Cold War property studies performed in the United States dating to the document's publication.⁹ This document did not present a methodology for determining the historic significance of Cold War properties.

DOD Design Guidelines

A comprehensive document, the *DOD Design Guidelines* present a historic context of military architecture from 1775 to 1989, discuss military building function types and architecture, and provide a set of design guidelines that essentially follow the format of the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The guidelines also discuss views and viewsheds, site and setting and the mothballing of historic buildings. The *DOD Design Guidelines* define the Cold War era as spanning the dates 1946 to 1989. It should be noted that the focus of this document was to categorize military building types and architecture, provide a broad historic context for military architecture and apply the *Secretary of the Interior's Standards* to military architecture. The historic context for Cold War properties was summary in nature. The document states: "this handbook provides DoD installations with the necessary tools to assist in the proper preservation and rehabilitation of their historic districts, buildings, sites, landscapes, structures and objects."¹⁰

Report Limitations and Suggestions for Further Research

Limitations to the Historic Research

PAST conducted an extensive survey, through site visits, telephone calls and email correspondence, of local and national archives, including the National Archives at various branches and other Federal archives of the Armed Forces. The location of primary source information has proven to be a daunting task, particularly given the highly classified nature of

⁹ Gregory, Carrie J. and Martyn Tagg, *Recording the Cold War*, 5.

¹⁰ McDonald, Heather and Michelle Michael, *Design Guidelines for Department of Defense Historic Buildings and Districts*, 2008, 1.

the operations occurring at the Point Sur NAVFAC. Individual files, if their locations are known at all, are likely scattered in various Federal and U.S. military archives around the country. The best location discovered so far is at the Naval History and Heritage Command in Washington, D.C. where two files containing “Command History” have been located. However, these documents remain classified and special permission from U.S. governmental officials is required to view these files.¹¹ This instance again illustrates the highly classified nature of the operations occurring at the Point Sur NAVFAC and the difficulty in obtaining classified material; or having such material determined eligible for declassification.

Suggestions for further research would include acquiring permission to view files at the Naval History and Heritage Command. In addition, the continued compilation of oral histories from servicemen and servicewomen stationed at the base would be a valuable exercise. These people and/or their families may still be in the Monterey area, as many of them lived in and raised families in the communities near the Point Sur NAVFAC.

Limitations to the Architectural Inventory

This report and subsequent architectural inventory focuses on the extant buildings, roads, utilities and hardscape features of the NAVFAC. A botanist was not included in this study and an analysis of the Point Sur NAVFAC’s plant community was not part of this Scope of Work. While it is obvious that several planted varieties, such as the Monterey Pine/Monterey Cypress windbreak surrounding the Capehart housing neighborhood and the use of the exotic Kikuyu Grass as a ground cover around buildings is part of the developed landscape, the origins and extent of the planted varieties on the NAVFAC should be determined by a botanist experienced in evaluating introduced plant communities into a historic landscape.

¹¹ Electronic correspondence between Kent Seavey and John Greco, Archivist, Naval History and Heritage Command, July 19, 2012. John Greco informed Mr. Seavey that the two Command History files are marked classified and require viewing permission from the Mandatory Declassification Review Board. For future researchers, the location of these two files is listed here. Collection Name: Post 1946 Command File, Shore Establishment: Folder 1. Point Sur Naval Facility, Command History, 1967-1968; Folder 2: Point Sur Naval Facility, Command History, 1969-1973. Location: Naval History and Heritage Command, Washington Navy Yard, SE, Washington DC 20374. Contact information for John Greco, Archivist provided in Appendix C.

III. HISTORIC CONTEXT OF THE POINT SUR NAVFAC

Introduction

The following presents a concise history of the technological advancements in submarine detection that led to the construction of the Point Sur NAVFAC as one of a series of military installations built for the specific purpose of submarine detection. It is not intended to provide a comprehensive history of the SOFAR and SOSUS technologies that prompted the development of the base, but to place the Point Sur NAVFAC into its historic context as a representative historic resource that illustrates the historic contexts of technological development for Cold War warfare and residential suburban development in a military base environment. Please consult the Bibliography for references that provide more comprehensive histories of the technological advancements in submarine surveillance and the development of suburban housing for the military.

The Cold War (1946 – 1991) received its name because it never was a conflict of direct military action. Rather, the world’s great superpowers, the United States and the Soviet Union, waged this war primarily through the formation of military coalitions, such as NATO (1949) and the Warsaw Pact (1955), espionage, the fighting of proxy wars, and the intensive buildup of conventional and nuclear armaments. The United States considered the spread of communism to be a substantial and direct threat to its democratic political and ideological systems. With the successful detonation of the first Soviet atomic bomb in 1949, the greatest threat to the United States became its destruction by the use of enemy nuclear weapons.¹² As the Cold War progressed, three delivery systems for nuclear weapons were constantly being developed, maintained and advanced: land-based bombers, land-based missiles and submarines. These offensive weapons systems were known as the Strategic Triad. The two sides raced to develop technological advancements in both the offensive delivery and the homeland’s defense of nuclear weapons.

In the early years following the end of World War II, the ability to keep the sea safe for the transport of men and material was of paramount importance. The United States Navy recognized that the growing strength of the Soviet submarine force posed the greatest threat to American security. Fleet Admiral Chester W. Nimitz became Chief of Naval Operations (CNO) in December of 1945. Although the Soviet Union had not developed submarines with a nuclear strike capability yet, Nimitz recognized the importance of anti-submarine warfare (ASW) to keep shipping lanes open. Nimitz knew that the Soviets had captured a number of advanced German U-boats at the end of World War II and feared that the Russians would quickly develop a fleet of advanced submarines using the German technology. In June 1946, Nimitz initiated Project Girder, a program that prioritized submarine detection and anti-submarine warfare. Following the Soviet Union’s successful development of nuclear weapons in 1949, it became clear that

¹² Goodwin and Associates, *Housing an Air Force and a Navy: The Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1940 – 1962)*, June 2007, 16.

submarines posed a substantial threat to United States security. A submarine could travel undetected to within sight of United States shores and launch its nuclear weapons from such close distances as to prevent early warning of the incoming threat. By the 1950s it became clear that Nimitz was correct: the Soviet Union was developing its submarine fleet rapidly. Anti-submarine warfare technology became the U.S. Navy's research and development priority.¹³

SOFAR: The First Development in Underwater Sound Surveillance

The study of underwater acoustics was underway prior to World War II. In 1937 Lehigh University professor Maurice Ewing discovered that explosive charges buried at great ocean depths were perceptible on-board his ocean vessel. Ewing determined that underwater sound could travel at great distances with minimal attenuation. At roughly the same time, the invention of the bathythermograph by scientists at the Massachusetts Institute of Technology (MIT) and the Woods Hole Oceanographic Institution made it possible to measure the variation of both ocean temperature and underwater sound velocity with depth. These experiments led to the understanding of the *Deep Sound Channel*, an underwater phenomenon that enables the propagation of sound over long horizontal distances. Underwater sound speeds are higher near the ocean surface, as the water is warmer. With increasing depth, sound velocity decreases to a minimum until pressure effects take over and cause sound velocities to again increase with depth. The Deep Sound Channel is the underwater layer where the sound velocity is at its minimum. Sound rays entering the channel from both above and below the Deep Sound Channel's axis become refracted back, causing them to weave along the channel's axis. These sounds become trapped in this deep ocean layer and can travel long horizontal distances.

In 1944, Ewing and his colleagues further proved their theories of sound propagation in the Deep Sound Channel by confirming the location of explosive charges dropped into the channel by the *USS Buckley*. The team postulated that a system of underwater hydrophones placed along the channel could be connected to listening stations that could triangulate the sound's location. The earliest system was known as SOFAR (Sound Fixing And Ranging). The system worked in the following manner: a downed pilot would drop an explosive charge into the Deep Sound Channel where its sound would travel thousands of miles and be picked up by a system of hydrophones mounted to the sea floor and triangulated to give the pilot's location. By the end of World War II, SOFAR had been fully developed for air-sea rescue.¹⁴

By 1946, SOFAR was the buzzword in popular scientific journals. The journal *Science News Letter* stated that SOFAR "will save lives of civilians ditched or wrecked on across-the-ocean trips by locating exactly the position of the plane or life raft."¹⁵ In 1947, the same journal

¹³ Hurley, Alfred F. and Robert C. Ehrhart, *Air Power and Warfare: The Proceedings of the 8th Military History Symposium, United States Air Force Academy, 18-20 October 1978*, 250.

¹⁴ Whitman, Edward C., "SOSUS: The 'Secret Weapon' of Undersea Surveillance," *Undersea Warfare*, Vol. 7, No. 2, Winter 2005, 3.

¹⁵ "Peacetime SOFAR," *Science News Letter*, Vol. 49, No. 21, May 25, 1946.

announced the development of the first SOFAR network to be constructed on the West Coast, noting that the first SOFAR receiving station will be located in Monterey, California.¹⁶ In 1949, *Popular Mechanics* published a detailed article on SOFAR, describing the development and methodology of the system to a lay audience. The article indicates that Point Sur became the location of the first SOFAR listening station:

Under exhaustive tests by the Navy since first announced in 1946, the Pacific SOFAR network has now been set up and is expected to be in full operation next year. Stations are located at Kaneohe Bay in the Hawaiian Islands and at Point Arena and Point Sur along the California coast. ...Originally, for example, it was decided to put one of the monitoring stations at Monterey, California. But a deep and twisting submarine canyon just offshore made it impossible to find a suitable location for the hydrophones. So the station was moved south to Point Sur.¹⁷

These early SOFAR experiments appear to have been conducted in the concrete building that now serves as the Point Sur State Historic Park Visitor's Center, shown below (**Figure 2**).¹⁸

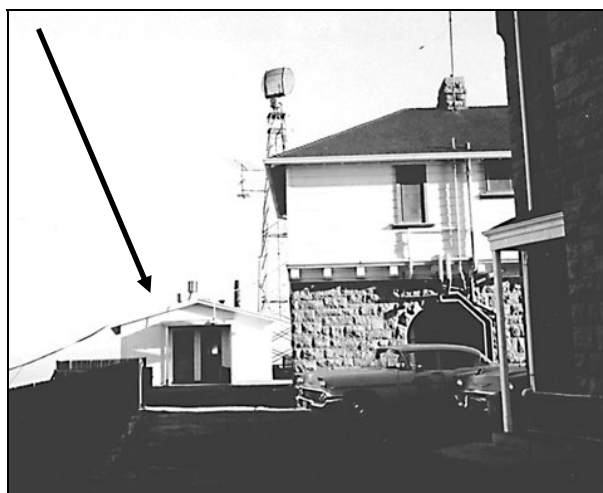


Figure 2. First location of SOFAR experiments occurred on Moro Rock, located in the small building to the left and indicated by an arrow (*Courtesy: Central Coast Lighthouse Keepers*).

¹⁶ "First SOFAR Station," *Science News Letter*, Vol. 52, No. 2, July 12, 1947.

¹⁷ "SOFAR – the Navy's Lost and Found," *Popular Mechanics*, Vol. 92, No. 6, December 1949. When the SOFAR system was ready for operation, the United States Navy released articles to the popular scientific journals promoting SOFAR technology and applications.

¹⁸ Conversation between Carol O'Neil, Point Sur Volunteer Historian, and park visitor while viewing the concrete building, 1996. Carol O'Neil relates, "An older man came up to me and said that he was a doctor. He said that in the early '50s he treated several cases of black lung disease in sailors who worked at Point Sur. He said they worked in the 'small concrete building,' watching a drum with a graphite stylus going around. He thought they got the black lung from the graphite." The "graphite stylus" was likely one of the early SOFAR gram writers located at Point Sur and supports that the early experiments in SOFAR technology occurred within this building. Constructed in 1945, this building was completed after World War II and was the only unoccupied building on Point Sur at that time.

Following this early development, a group of top academic scientists known as the Committee on Undersea Warfare (CUW) was formed to study the possibility of expanding SOFAR into a system of undersea surveillance, explicitly designed to track the movements of enemy submarines. Out of the earliest CUW meetings developed Project Hartwell, a series of technical meetings of the nation's top scientists and naval officials designed to take SOFAR to the next level. The Hartwell Committee sought American talent to develop the technology for a successful undersea surveillance program. Dr. Marvin Kelly, president of Bell Telephone Laboratories, took the lead in assisting the United States government. In 1950, Dr. Kelly met with Admiral C.B. Momsen, Assistant Chief of Naval Operations, Admiral Solberg, Chief of Naval Research and Dr. Julius Stratton, provost of MIT to discuss the problem. The Hartwell Committee postulated that the existing SOFAR system could be expanded to support the passive detection of submarines at long ranges regardless of depth.¹⁹

The result was the development of SOSUS, which would necessitate the construction of a series of naval facilities or "NAVFACs" to serve as the receiving and analyses hubs of a worldwide anti-submarine surveillance system.

The Development of SOSUS

International developments placed new urgency on the Project Hartwell findings by 1950. First, the Soviet Union exploded its first nuclear weapon in 1949. Second, the outbreak of the Korean War in 1950 caused the United States to increase defense spending significantly, and continue this priority in defense spending throughout the Cold War. The Hartwell Committee was tasked with prioritizing anti-submarine warfare (ASW), initially to protect ships bearing men and material for the Korean conflict from enemy submarines. However, the committee quickly concluded that Soviet submarine technology was advancing rapidly and that the submarine, with its ability to travel in complete secrecy and surface at will, posed the greatest threat to National Security once the enemy had developed the means to make it a nuclear weapons carrier.²⁰

In 1950 the Office of Naval Research initiated a highly secret and collaborative project, known as "Jezebel," again employing the technical services of Dr. Kelly and Bell Telephone Laboratories. Jezebel worked on the development of undersea listening arrays adapted to the recently invented sound spectrograph, a tool for analyzing speech sounds. Titled LOFAR (Low Frequency Analysis and Recording), the device was designed to analyze low-frequency underwater signals in near-real time. Together, LOFAR and the spectrograph "generated a frequency-versus-time representation of an incoming sound bite on which the time history of its spectral content was indicated by the blackening of specially-sensitized paper by an electrostatic stylus (called a 'gram writer') that swept repeatedly along the frequency axis. In this way, the

¹⁹ Commander, Undersea Surveillance (CUS), *Origins of SOSUS*, www.public.navy.mil/subfor/cus/Pages/sosus_origins.aspx.

²⁰ Cote, Jr., Owen, *The Third Battle: Innovation in the U.S. Navy's Silent Cold War Struggle with Soviet Submarines*, 2000, www.navy.mil/navydata/cno/n87/history/cold-war-asw.html.

presence of distinctive submarine sound signatures could be discerned against the ocean background in the composite signal picked up by an array.”²¹

In the coming months it became evident that a submarine’s sound spectrum produced low-frequency sounds that could be detected using the developing technology. In May 1951, Jezebel developed its first LOFAR scheme for undersea detection, consisting of the LOFAR spectrum analyzer connected to a series of underwater hydrophones, cables, delay lines and networks for triangulating the location of the undersea noise. In collaboration with the British government, the first LOFAR deep-water array was installed at Eleuthera Island in the Bahamas.

In 1952, the Navy put the new LOFAR technology to the test at Eleuthera Island. Captain Joseph P. Kelly (no relation to Dr. Marvin Kelly of Bell Laboratories) became project manager of Jezebel. He assigned a U.S. submarine to perform detectable maneuvers offshore of Eleuthera to determine if the movements were detectable using the new LOFAR system. LOFAR gram writers plotted the submarine’s maneuvers accurately. The long-awaited technological breakthrough in submarine detection had finally occurred.²²

Project Michael, was another collaborative project initiated by the Office of Naval Research and a prestigious academic institution in 1950. In collaboration with Columbia University, Project Michael studied the general phenomenology of low-frequency underwater sound. Both the Woods Hole Oceanographic Institution (Massachusetts) and the Scripps Institute of Oceanography (California) assisted in focusing on establishing a solid understanding of long-range sound transmission. The products of projects Jezebel and Michael were brought together for design, engineering and deployment of the broad-area surveillance system initiated in Project Hartwell. These projects formed the scientific basis for the next generation of submarine detection: SOSUS (Sound Surveillance System), which made long-range undersea surveillance possible early in the postwar era. In time the highly classified SOSUS system was given the unclassified name Project Caesar.²³

²¹ Whitman, Edward C., 4.

²² Morris, Michael R., CTOCS, USN (Retired), *Naval Facility (NAVFAC) Station History*, <http://groups.msn.com/CTOSeaDogs>, 4. Captain Joseph Kelly (1915-1988) became known as “the father of SOSUS.” After serving in the Navy during World War II, Kelly worked as an engineer for the Westinghouse Electric Corporation, one of the primary companies sought by the United States government to develop its ASW system. At the start of the Korean War, Kelly was recalled by the Navy and worked tirelessly in the effort to develop SOSUS and maintain its edge over the developing Soviet submarine technology. He remained in the Navy until 1973. A posthumous tribute to Joseph Kelly, held at AT&T Bell Laboratories on April 15, 1989 notes, “For some forty years, a generation of dedicated Navy personnel and civilian contractors have worked tirelessly to keep apace of an increasingly sophisticated submarine threat.” Quoted from a self-published biography of Joseph Kelly: *Listening for Leviathan: The life of Captain Joseph Paul Kelly, the United States Navy’s Father of Project Caesar & SOSUS*, written by Kelly’s daughter, Dr. Mary Joe Kelly Wilhelm, 2011. This document notes that Kelly accumulated a vast archive on SOSUS during his 20-year career developing and managing the SOSUS network.

²³ Wilhelm, Dr. Mary Joe Kelly, *Listening for Leviathan: The life of Captain Joseph Paul Kelly, the United States Navy’s Father of Project Caesar & SOSUS* (Smashwords Edition), 2011, 31.

A passive defense system, SOSUS, could detect radiated acoustic power of less than one watt at ranges of several hundred kilometers, and was completely undetectable by the submarines being tracked. Skilled military operators employing LOFAR “gram writers” could both detect and differentiate a submarine from other ocean noises, and identify specific vessel types which made the sounds. SOSUS provided early warning of hostile submarines entering the North Atlantic and Eastern Pacific, and generated accurate target information for patrol aircraft, surface ships and friendly submarines. The system's key technical characteristic of broad frequency coverage enabled it to adapt to the changing technology of Soviet submarines, proving equally effective when deep-running nuclear-powered submarines were introduced after 1958. The system's technology was the mainstay of anti-submarine warfare during the Cold War, and led to the development of a system of defensive naval facilities (NAVFACs) spread around the coastlines of the United States and its western allies. At the height of the Cold War, over thirty SOSUS bases worldwide maintained an undersea web of ocean listening devices as the first line of defense against Soviet submarine warfare.

Development of the Worldwide NAVFAC System

With the effectiveness of SOSUS confirmed, the United States Navy's Bureau of Ships (BUSHIPS) with Joseph Kelly in command contracted with Bell Laboratories to initiate construction of Phase One of the NAVFAC program. Nine stations were constructed to cover the Atlantic Ocean: Ramey Air Force Base (Puerto Rico), San Salvador (British West Indies), Grand Turks Island (British West Indies), Shelburne, Nova Scotia (Canada), Bermuda (two locations: north and south), Nantucket Island (Massachusetts), Cape May (New Jersey), and Cape Hatteras (North Carolina). All bases were operational by the end of 1955.

Each facility consisted of a small naval station that provided the nexus for a bank of LOFAR gram writers housed in a structure located on the shoreline. Buried offshore cables, hundreds of miles in length, connected the ocean floor-mounted hydrophones to the building containing the LOFAR gram writers. Sounds transmitted by passing enemy submarines would be picked up by the hydrophones and carried by the sound cables to the naval facility for processing and identification. As time passed during the Cold War, individual “signatures” of countless Soviet submarines and surface vessels were developed, enabling the LOFAR analyzers to differentiate the ships based on their unique sound signature.²⁴

Establishment of the worldwide NAVFAC system became the highest priority for the United States Navy. Joe Kelly and his team received the green light for every supply or manpower requisition that came to mind. The target was the construction of one NAVFAC base per month, until the system was fully operational.²⁵

²⁴ Wilhelm, Dr. Mary Joe Kelly, 33.

²⁵ Morris, 5. Please see Appendix B for a timeline of SOSUS and NAVFAC base development, prepared by the Integrated Undersea Surveillance System (IUSS).

Phase Two included the construction of 12 additional stations between 1955 and 1959: Antigua (British West Indies), Cape Hatteras (second array – North Carolina), Barbados (British West Indies), Eleuthera (British West Indies), San Nicolas Island (California), Point Sur (California), Centerville Beach (California), Coos Bay (Oregon), Pacific Beach (two arrays – Washington), Argentia, Newfoundland (Canada), Shelburne, Nova Scotia (second array – Canada).

Phase Three was designed to close the north and south “corners” of the East and West coast systems. Additional cables and arrays terminated at existing NAVFACs in Eleuthera, Newfoundland and Bermuda. This phase was completed in the early 1960s.²⁶ The United States Navy gave construction of the NAVFAC system the highest National Security priority and enabled rapid construction and operational placement of each base to occur relatively quickly. Constructed as part of Phase Two, the Point Sur Naval Facility (NAVFAC) became an integral station in the West Coast SOSUS network.

Construction of the Point Sur NAVFAC

The Point Sur Light Station site was already the location of early radar and SOFAR experiments. Point Sur provided the ideal location for these experiments: it was remote, yet accessible on State Highway One and its position jutting into Pacific Ocean offered a 270-degree view of the surrounding shoreline.²⁷

Construction of the NAVFAC Operational Buildings

United States Navy, Commander, Undersea Surveillance (CUS) provides a concise description of the Point Sur NAVFAC and its efficient operation:

Naval Facility Point Sur, California was commissioned 8 January 1958. During its twenty-six years of operation, it provided continuous support to Undersea Surveillance. Located twenty-five miles south of Monterey, California along scenic Highway 1, the facility was manned by ten officers, ninety-six enlisted and 18 civilians. The command was awarded the Meritorious Unit Commendation in 1969, The Efficiency “E” in both 1977 and 1983, and was also rated as the top Naval Facility in 1983 by COSP, achieving the systems first “clean sweep” of operations, maintenance, and efficiency awards given by the task group commander. NAVFAC Point Sur was decommissioned 1 October 1984 upon remoting to NAVFAC Centerville Beach.”²⁸

²⁶ Wilhelm, Dr. Mary Joe Kelly, *Listening for Leviathan*. Appendix E summarizes the various phases of NAVFAC base construction.

²⁷ O’Neil, Carol, “World War to Cold War: Point Sur’s Role,” *Central Coast Lighthouse Keepers: Lighthouse Quarterly*, Fall 2006, 1.

²⁸ United States Navy, Commander, Undersea Surveillance (CUS), www.cus.navy.mil/NAVFAC%20point%20Sur.htm.

Constructed in 1957 and commissioned in January 1958, the Point Sur NAVFAC was a large self-contained and self-sufficient entity, with a full complement of support and recreational facilities for its isolated personnel. Ostensibly an ocean research facility, its real mission was submarine surveillance, and its construction was predicated on a high level of security. As noted in the Point Sur State Historic Park General Plan: “Its architectural design was indebted to a post-war industrial and military aesthetic. Buildings at the base were designed in a low profile, flat-roofed style, which were particularly suited to blend into the surrounding landscape, with minimal details.”²⁹

Buildings were laid out along a central axis, an arterial roadway that linked the station to its primary access point on State Highway One. Buildings were grouped in logical arrangements off of this axis, based on their function. Security and administration buildings were located nearest to the Highway One entrance; personnel buildings clustered north of the axis, including housing for enlisted personnel and recreation buildings; officer’s quarters were located apart from and south of the axis to maintain separation of officers and enlisted personnel; public works buildings were set in a logical cluster south of the axis and away from where personnel lived; the high-security SOSUS operations (located in the Terminal Equipment Building) were placed at the end of the axis, adjacent to the ocean, and connecting to the SOSUS cables (**Figure 3**).

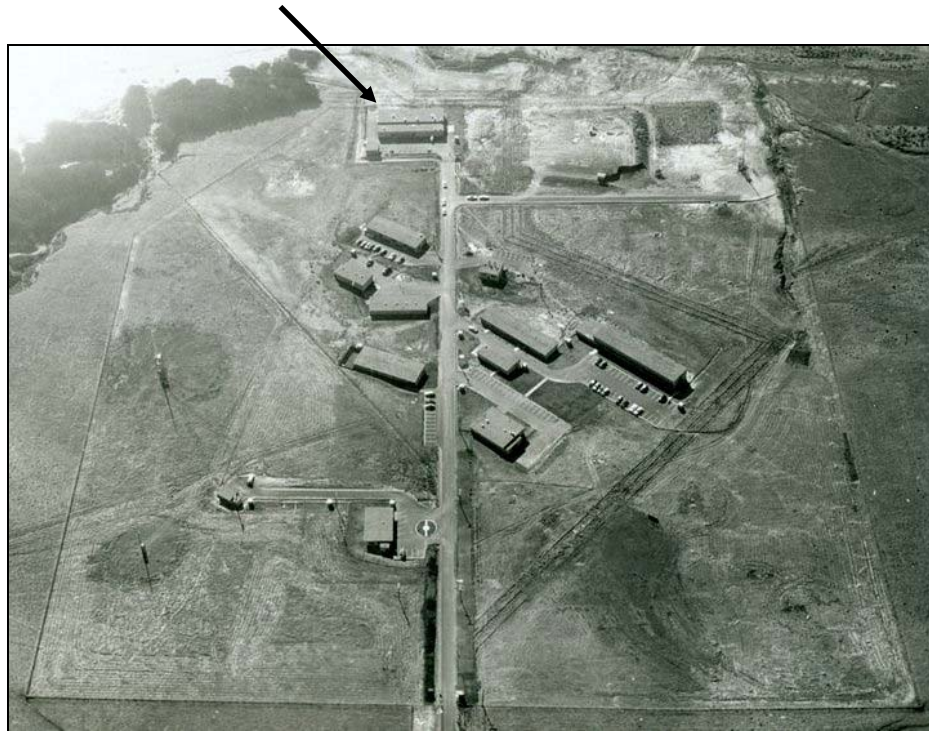


Figure 3. Circa 1958 view of the NAVFAC, looking west, with the arterial road or central axis leading to the Terminal Equipment Building (arrow), seen at the top center of the image (Courtesy: California State Parks).

²⁹ PSSHPGP, 2-37.

At the Point Sur NAVFAC buildings were organized into five basic sectors: Administration (Bldg. 100, 165); Personnel (Bldg. 102, 103, 104, 105, 107, 109); Operations (Bldg. 113 and Bldg. 114 Naval Research Center – not in the Scope of Work for this evaluation); Public Works (Bldg. 106, 108, 110, 111, 138, 148, 166 – demolished in 2003, 169); Utilities (Bldg. 146 & 2 redwood water storage tanks east of Highway 1); and Housing (the Capehart housing neighborhood, Bldg. 1 thru 24, Bldg. 168). Two recreational facilities, consisting of Quonset buildings (Bldg. 144 Bowling Alley and Bldg. 145 Gym), were demolished in 2003. A tennis court, identified as Bldg. 167, remains adjacent to the cul-de-sac within the Capehart housing neighborhood. A covered pool was present on the site; its location has not been verified.³⁰

The NAVFAC was operational by 1958 and contained housing designed primarily for single naval personnel. Like so many military bases constructed during the Cold War era, the NAVFAC lacked sufficient housing for military personnel and their families. Several key pieces of federal legislation would lead to an ambitious military housing construction campaign in the 1950s, with a representative example of military housing constructed on the Point Sur NAVFAC.

Military Housing Development

Housing for military families in the post-World War II era was a significant problem as America was building up its peacetime fighting force to confront the threats of the Cold War. Increasing dependence on new technological capabilities to address Soviet expansion in a nuclear era required highly trained and skilled technical experts, especially within the framework of the NAVFAC mission. An unprecedented family housing shortage affected Navy morale and impacted personnel retention rates. The uniformed services actively sought to address the family housing shortage through construction programs that provided dwellings that were on a par with those found in the civilian market.

In 1949, Secretary of Defense Louis A. Johnson noted:

Rather than be separated from their families because of lack of government quarters and scarcity of adequate rental housing at their place of assignment, many of the service personnel have accepted disgraceful living conditions in shacks, trailer camps and overcrowded buildings, many at extortionate rents. It cannot be expected that competent individuals will long endure such conditions... There is nothing more vital or pressing in the interest of morale and the security of America than proper housing for our Armed Forces.

In response to the family housing need, Senator Kenneth Wherry introduced a successful bill in Congress on March 5, 1949 to provide for construction of family housing “on or around military installations.” Wherry Housing provided for developers to obtain low interest loans insured by the FHA on leased land from the Army. The military had to ensure the installations where the

³⁰ Telephone correspondence with Lee Otter, former Watch Officer, Point Sur NAVFAC, June 27, 2012.

Wherry housing was constructed would be designated permanent bases. The developers, called “sponsors” would build, own, and maintain the housing, giving rent priority to military families. At the end of a forty year period the “sponsors” were to turn the housing over to the government.

Wherry housing saw the construction of 264 projects involving all three military services.³¹ However, problems within the program were common, particularly the small size, poor quality of construction, and a continuing shortfall of units produced.

Congress enacted a second bill, the Capehart Housing Act in 1955, to expedite the construction of needed military housing. Sponsored by Senator Homer E. Capehart, with backing by Senator Kenneth Wherry, the Capehart Housing Act provided a more comprehensive solution to the military housing shortage. Capehart housing addressed the problems associated with the Wherry projects, including size and quality of construction. It also moved toward more single-family and duplex type housing while introducing concepts from contemporary civilian planning principles, like integration of the housing neighborhood into existing facilities, preservation of the environment and privacy, all of which are clearly expressed in the Point Sur NAVFAC Capehart housing.

Oversight was an important aspect of the Capehart program’s implementation. Base Commanders provided basic information to sponsors on their specific housing needs and were generally involved in the preliminary design and site selection for the proposed housing. For U.S. Navy projects, the Navy Bureau of Yards and Docks (BYD) acted as construction managers, consulting with the Federal Housing Administration (FHA) as the latter’s guidelines were employed in the program. BYD also provided project oversight, applying program criteria and department policies and instructions for Capehart proposals.

The Capehart designs adopted standardized plans and materials to keep construction costs down, particularly given the sheer number of housing units required at the height of construction. Uniformity of exterior design in either single-family or duplex arrangements characterized the neighborhoods; as did the use of inexpensive, commonly available materials. Houses possessed minimal architectural detail and ornament. Typical neighborhoods have both single-family and duplex housing types that were the reflection of contemporaneous civilian suburban neighborhood design with regards to the street layout, placement of lots and landscaping.³²

As constructed in the 1950s and 1960s, Wherry and Capehart housing and their neighborhoods reflected their mid-century suburban planning principles and construction materials through their historic character-defining features, such as street layout and lot placement; simplified massing and roof form; common construction materials like cinder block, concrete, plywood and asphalt roof shingles; simplified fenestration using aluminum or steel slider and/or casement windows; and minimal architectural detail.

³¹ Advisory Council on Historic Preservation Website, <http://www.achp.gov/army-capehartwherry.html>.

³² Goodwin and Associates, *Housing an Air Force and a Navy*, 3.

Construction of the NAVFAC Capehart Housing Neighborhood

The Point Sur NAVFAC provided on-site military housing in the form of one bachelor enlisted quarters (Bldg. 109), and one bachelor officers quarters (Bldg. 104), sufficient for the basic operation of the post. When the NAVFAC was initially constructed, accompanied married personnel, and civilian staff had to live off base and commute for duty from the Monterey Peninsula or Big Sur areas. The area where the Capehart housing neighborhood would be constructed was vacant (**Figure 4**).



Figure 4. Circa 1958 view of the NAVFAC, looking northwest, before construction of the Capehart housing neighborhood. The neighborhood was constructed in the area shown by an arrow (*Courtesy: California State Parks*).

Constructed in 1960, the Point Sur NAVFAC's Capehart housing neighborhood is an intact representation of typical, standardized Capehart designs (**Figure 5**). Associated construction to service the neighborhood includes the Bus Shelter (Bldg. 162).



Figure 5. Circa 1960 view of the Point Sur light station, with the NAVFAC seen behind. The Capehart housing neighborhood is complete, without the Monterey Pine/Cypress windbreak at the top center of the image and shown by an arrow. (Courtesy: *Point Sur State Historic Park General Plan*, February 2004).

Point Sur NAVFAC housing and that at NAVFAC Centerville, California were produced by the same sponsor/architect team. The sponsor/contractor for the two bases was the James E. Roberts Co., and Aloha Construction Co. & Associates. The architects came from the West America Engineering Co., Inc.³³

³³ The principal source for information on the builders for Wherry and Capehart era military housing in the Navy is *Housing An Air Force and A Navy: The Wherry And Capehart Solutions to The Postwar Family Housing Shortage (1949-1962)*. The extensive study identifies the sponsor/architect team cited above, but has no biographical information on any of them. Biographical information appears below.

Research to date on the sponsor/contractor teams for the Point Sur NAVFAC has not produced biographical information on James E. Roberts, the sponsor. The contractor, Aloha Construction Co., was a subsidiary of the Len Co., owned by Sam N. Len out of Los Angeles. Len built Capehart housing for the Naval Ammunition Depot, Lualualei Quarters in Hawaii and at Lemoore Naval Air Station in California, as well as at Point Sur and Centerville. A native of Kingston, New York, Samuel Len moved to Los Angeles after service in the Army Air Corps in World War II. He then established a decades-long career in residential, commercial and industrial real estate development. He moved the family firm to Sacramento in the 1980s (Samuel N. Len obituary *Sacramento Bee*, January 17, 2012).

Clearly, Secretary of Defense Louis Johnson's 1949 mandate for proper housing for American armed forces was still a significant issue in personnel retention into the 1970s. The Capehart housing neighborhood at the Point Sur NAVFAC is an intact representation of the principles of Capehart housing design intended to provide proper housing for armed forces personnel.

Construction of Minor Additions to NAVFAC Buildings

A building campaign in the early 1970s resulted in the additions to various NAVFAC buildings and improvements to the Capehart housing neighborhood. The additions are noted for each building in *Chapter IV: Architectural Inventory of the Point Sur NAVFAC*. Documentation on the exact nature and timing of these building modifications remains classified, but it appears that the various minor additions were constructed using 1970s design and materials. Additions to the Capehart housing neighborhood in the 1970s include construction of the Tennis Court (Bldg. 167) in 1973; and construction of Public Works Housing Maintenance (Bldg. 168) in 1975. In addition, the carports in the Capehart housing neighborhood were all enclosed.

It is likely that the United States Navy Commander, Oceanographic System Pacific (COSOP) Seabees provided the manpower for the 1970s building campaign. The Seabees were United States Navy construction battalions (CBs) responsible for base construction and base improvements to naval installations worldwide. The 1970s improvements to various NAVFAC buildings became part of the United States Navy's "Self-help" program, in which manpower and materials from regional military bases were mustered to install base improvements.³⁴

In July 1970, The Chief of Naval Operations (CNO) initiated a program of personnel support facilities improvement to address issues with personnel retention, seen by the CNO as "the single greatest problem in the Navy today." He noted that a Navy Self Help program could make significant morale, career enhancing, and habitability improvements to the Navy Shore Establishment. He tasked the Navy's Seabee personnel with the project, instructing the Navy Chief of Civil Engineers to execute the program as Project Manager.

Specific areas of attention included living facilities. Construction Battalion Units (CBUs) Ashore, including the Reserve Naval Construction Force (NCF) led the program. By September 1970, *SEABEE ASHORE Dope Sheet Number Two* noted that while the use of military construction units was primarily to construct, rehabilitate, expand and maintain military bases and facilities to support operations of the military in time of war or emergency, they may also

³³ (Continued) The West America Engineering Company, responsible for the architectural design of the Point Sur NAVFAC Capehart housing neighborhood was led by Harold P. Norton. The firm was "a financial management firm responsible for building construction." Norton was described as "a colorful figure" in State service. He worked for the California Department of Public Works for two decades before forming a private practice. He joined the West America Engineering Company sometime around 1953 (Harold Norton obituary, *Sacramento Bee*, March 22, 1977).

³⁴ Integrated Undersea Surveillance System (IUSS) Site Awards History, <http://www.iusscaa.org/history.htm>.

provide peacetime projects “that will attain and maintain technical unit proficiency, or on projects restricted by security.”³⁵

That same year, *SEABEES ASHORE: Dope Sheet Number Three*, issued September 24, 1970, established a NAVFAC Seabees Ashore/Self-Help/ CBU organization whose role was to improve living conditions ashore for all Navy men and their dependents. No new sources of funding were appropriated for the task. Navy Seabees were mandated to build, repair and rehabilitate at the lowest cost to project funds. A number of CBU units were to be established in the United States by the end of 1970. CBU 409 at Alameda, California is a potential candidate for the work done on the Point Sur NAVFAC base improvements in the early 1970s.³⁶

The Decline of SOSUS

Beginning in 1967 disgruntled United States Navy officer John Walker began selling classified naval information to the Soviet Union. Beginning his career as a radioman, Walker qualified for submarine school and upon successful completion, was assigned to the submarine *Razorback* serving in the Pacific. During this assignment Walker received top secret cryptographic clearance and found himself on the *Andrew Jackson*, one of the earliest nuclear, Polaris-missile carrying submarines. He achieved the rank of Chief Petty Officer and qualified for maintenance of cryptographic equipment in 1963. However by 1967, Chief Warrant Officer Walker was disgruntled with the United States’ politics regarding the Cold War and life in the Navy. He began selling information to the Soviets in 1967 and enlisted his friend and Senior Chief Petty Officer Jerry Whitworth to join him.³⁷

For the next 18 years, the Walker-Whitworth spy ring sold numerous classified documents to the Soviet Union. Although it is not certain exactly which documents were the most damaging to United States’ national security, it is clear that the Walker-Whitworth spy ring revealed numerous secrets related to the SOSUS system. Starting in the 1970s and continuing into the 1980s, the Soviet Union embarked on a submarine-quieting program that compromised the effectiveness of SOSUS. By the time Walker and Whitworth were arrested in 1985, the Soviet Union had devoted considerable cost and effort to beat SOSUS. It also changed its methodology of submarine deployment, choosing to no longer deploy vessels to the East Coast of the United States. Less than a decade later, the Soviet Union collapsed.³⁸

Changes in Soviet submarine deployment tactics and advances in satellite tracking technology, combined with the effects of the Walker-Whitworth spy ring led to decommissioning and closure of the system of NAVFAC bases. Modernization of the system using computer technology also

³⁵ Department of the Navy, *SEABEE ASHORE: Dope Sheet Number Two*, FAC-PC-31/SAM: mer, September 3, 1970, Seabee Museum Archives, Port Hueneme, California.

³⁶ Department of the Navy, *SEABEE ASHORE: Dope Sheet Number Three*, September 24, 1970, Seabee Museum Archives, Port Hueneme, California.

³⁷ Prados, John, “The Navy’s Biggest Betrayal,” *Naval History Magazine*, Vol. 24, No. 3, June 2010.

³⁸ Morris, 7.

led to the reduction in the number of necessary facilities required to keep SOSUS operational. Closing of the facilities began in 1976, with a steady rate of closure continuing into the 1980s. The Point Sur NAVFAC was decommissioned in 1984.

The SOSUS technology remains valuable in both civilian and military contexts. In 1993, the Navy reduced the level of secrecy of SOSUS, which allowed for civilian use. Present scientific applications of the system include the study of migrating whales and listening to the eruption of underwater volcanoes.³⁹ Currently, SOSUS is being used to track vessels plying ocean waters again: merchant vessels. Considered a potential vehicle for terrorist exploitation, the sound signatures of over 121,000 merchant vessels are being developed using SOSUS technology in much the same manner as Soviet submarines were identified and tracked during the Cold War.⁴⁰

Point Sur NAVFAC and the Importance of SOSUS

The Point Sur NAVFAC was a vital cog in an intricate network of SOSUS bases on the coastlines of the United States and its Cold War allies. For over 25 years, the facility played a key role in defending the United States West Coast from Soviet nuclear attack by submarines. The Point Sur NAVFAC also played a crucial role in several key historic events and received three Meritorious Unit Commendations (MUCs).

In April 1968 movement of the Soviet Union surface and air assets to the North Pacific suggested a search operation was underway. United States intelligence confirmed that the Soviet Golf II Class strategic missile submarine K-129 sank in the North Pacific. At a time when the gathering of intelligence about top-secret enemy weaponry was of paramount importance, the location and study of this submarine became a high priority for the United States.

The American SOSUS network in the North Pacific was tasked with reviewing its recent recordings in hopes of finding some evidence of the sunken vessel. The Point Sur NAVFAC was the first to identify the event and its location, north of Hawaii, by isolating a sonic signature on its low frequency array (LOFAR) recordings of an undersea implosion that occurred on March 8, 1968. By using five separate bearing lines isolated at the Point Sur NAVFAC, Naval Intelligence was able to determine the location in which the Soviet submarine sank.⁴¹

³⁹ Broad, William, "Anti-Sub Seabed Grid Thrown Open to Research Uses," *New York Times*, July 2, 1996.

⁴⁰ Munns, David W., "121,000 Tracks," Navy League of the United States, July 2005, http://www.navyleague.org/sea_power/jul_05_10.php.

⁴¹ Sources that specifically list the Point Sur NAVFAC as the first base to locate the sunken Soviet submarine K-129 are difficult to find; not surprising, given the classified nature of this operation. A Wikipedia entry, located at http://en.wikipedia.org/wiki/Project_Azorian, lists the following information, but without citation: "Naval Facility (NAVFAC) Point Sur, south of Monterey, California, was able to isolate a sonic signature on its low frequency array (LOFAR) recordings of an implosion event that had occurred on March 8, 1968 (for which they received a Meritorious Unit Commendation in 1969). Using NAVFAC Point Sur's date and time of the event, NAVFAC Adak and the U.S. West Coast NAVFAC were also able to isolate the acoustic event. With five SOSUS lines-of-bearing, Naval Intelligence was able to localize the site of the K-129 wreck."

Over the next several years, the CIA launched “Project Azorian,” a Herculean effort to retrieve the Soviet submarine. It became one of the most extensive American maritime intelligence recovery efforts of the Cold War.⁴² It is probable that the Point Sur NAVFAC was awarded its first Meritorious Unit Commendation (MUC) in 1969 for its part in the initial discovery of the submarine’s location.⁴³

The Point Sur NAVFAC received two additional Meritorious Unit Commendations in 1970 and 1971. The exact nature of these commendations remains classified. Conversations with former naval personnel who served at the base have not revealed any details of these two awards. The official language for these two MUCs reads: “NAVFAC Point Sur awarded Meritorious Unit Commendation, in concert with other Pacific naval facilities, for undersea surveillance operations that made significant contributions to national defense.”⁴⁴

Captain John Parrish, who served as Commander Oceanographic Systems Pacific (COSP) and was intricately involved with the SOSUS system for over 25 years, provides an insightful summary of the role of SOSUS in maintaining national security during the Cold War:

I believe that those of us who were a part of IUSS (Integrated Undersea Surveillance System) in the 80s were the front line warriors of the Cold War. Every day we encountered the enemy and kept him at bay. We often had more exposure to the enemy in one week (sometimes in one day) than most others in the Navy had in a 20-year career. We could take pride in knowing that every day we were directly contributing to the preservation of our country and the protection of our citizens. After the Cold War was over and our intelligence community debriefed many of the top admirals of the Soviet navy, the common comment was, “We just couldn’t beat SOSUS.”⁴⁵

The Point Sur NAVFAC played a continuous and vital role on the frontline of the Cold War from its commissioning in 1958 until its closure in 1984. It remains one of the last surviving examples of an intact SOSUS base and serves as a reminder of the importance of United States’ technological advancement in combating and defeating the Soviet Union during the Cold War.

⁴² Mathew Aid, William Burr and Thomas Blanton, “Project Azorian: The CIA’s Declassified History of the *Glomar Explorer*,” The National Security Archive – George Washington University, website: <http://www.gwu.edu/~nsarchiv/nukevault/ebb305/>.

⁴³ Official descriptions of the MUCs received by the Point Sur NAVFAC remain classified. However, given the timing of the 1968 discovery of the Soviet K-129 submarine and the 1969 MUC awarded to Point Sur, coordinated with the historical evidence, it is clear that the Point Sur NAVFAC played a critical role in locating the sunken Soviet submarine.

⁴⁴ In an email correspondence between Kent Seavey and Jack Holdzkom, August 1, 2012, Mr. Holdzkom provided the same MUC language. He also noted, “I believe it would be inappropriate to this project to discuss further details of those (MUC) awards.” Mr. Holdzkom served at the Point Sur NAVFAC from September 1971 through January 1975 as Operations Department Leading Chief and Senior Chief of Command.

⁴⁵ Captain John Parrish, *IUSS/SOSUS Dinner Speech, 50th Anniversary*, September 18, 2004.

IV. ARCHITECTURAL INVENTORY OF THE POINT SUR NAVFAC

Introduction

This section provides a physical description of the site and individual buildings that comprise the Point Sur NAVFAC. A site plan of the NAVFAC delineating the buildings appears on the next page (**Figure 6**). Following a description of the site, a table is included for each building that provides: exterior photographs; year constructed; description; condition; and additions and alterations. This presentation groups the buildings by historic uses in the same manner as the General Plan:

- Administration: Buildings 100 and 165;
- Operations: Building 113 and 114 (114 not in Scope of Work);
- Personnel: Buildings 102, 103, 104, 105, 107, 109, 162, 167, 168 and Capehart Housing (Units 1-24);
- Public Works: Buildings 106, 108, 110, 111, 138, 148, 169 and Paint Shed;
- Utilities: Buildings 131 and 132 (Redwood water storage tanks); Building 146.

SOSUS information from the Point Sur hydrophone array was processed and interpreted in the Terminal Equipment Building (known as OPS Bldg. 114). This building is not within California State Parks ownership and is out of the Scope of Work for this Evaluation.

In the General Plan, the Capehart housing was not placed in any of the above categories. For purposes of this Evaluation, the Capehart housing, Bus Shelter (Bldg 162), Tennis Court (167) and Public Works Housing Maintenance (Bldg. 168) will be grouped under “Personnel.” Four descriptions of the Capehart designs are provided: the two standard housing types constructed (single-family Bldg. 20 and duplex Bldg. 21/22) and the two anomalies to the standard designs (Bldgs. 2 and 3).

Taken as a whole, the NAVFAC buildings were designed as a cohesive unit, emphasizing function, security and low visibility. Designed in a low-profile, post-war industrial style, the buildings were intended to blend into the landscape, a criterion that indicated the highly-secret operations that occurred within the base. With the exception of the Capehart housing, the buildings all bear the same overall architectural design characteristics and building materials. Typical design elements include: long & low-slung rectangular massing; flat or low-pitched roof lines; horizontal bands or groupings of windows; symmetrical door placement; and post-war industrial building materials, including reinforced concrete, steel windows/doors, and tar/gravel roofs.

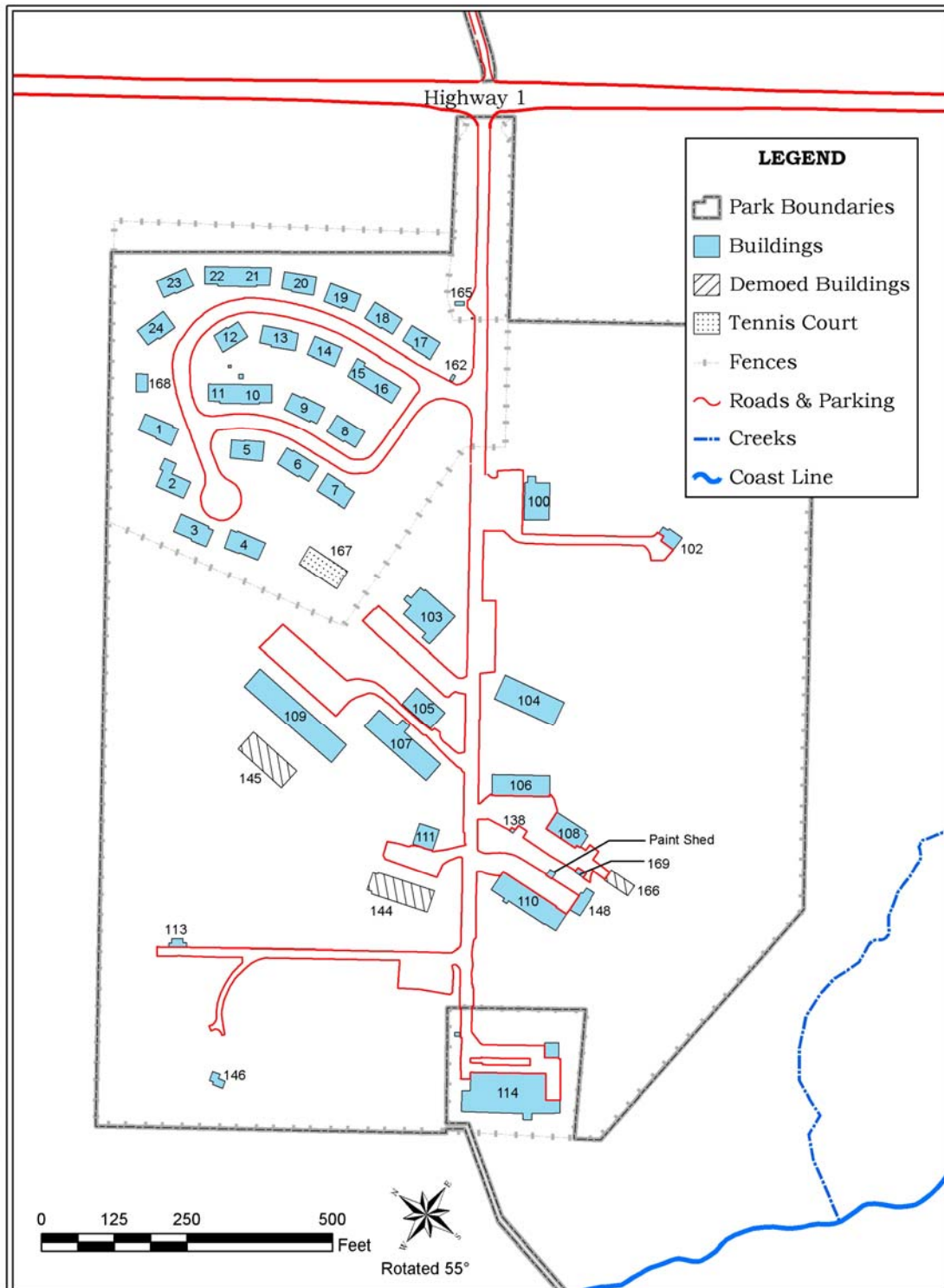


Figure 6. NAVFAC site plan (Courtesy: State of California, Department of Parks and Recreation, 2013)

NAVFAC Site

The NAVFAC site encompasses 38.54 acres, resting on the marine terrace between Moro Rock and State Highway One (**Figure 7**).



Figure 7. NAVFAC aerial photograph (Courtesy: Point Sur State Historic Park General Plan, February 2004).

Open ranchland in current use surrounds the site to the north and south. State Highway One forms the eastern boundary of the site, with the exception of the water storage tank site on the hill above and east of Highway One. A road easement through the ranchland connects the site to the highway. The Pacific Ocean and Moro Rock form a natural western boundary.

The NAVFAC site's circulation patterns consist of a primary, east-west arterial road that runs from State Highway One to the site's western edge on the Pacific Ocean. The two curvilinear roads serving the Capehart housing neighborhood are at the northeast end of the site nearest to Highway One. Short access roads running from the primary arterial road branch out to various clusters of buildings organized around a specific function.

Arrangement of the NAVFAC buildings along the arterial road followed a logical design. The SOSUS information was processed in the Terminal Equipment Building (Bldg. 114) located closest to the ocean. Working east and uphill, the central core area included public works, personnel, and administration functions. Utilities buildings were located outside the main core, as were recreational and personnel functions. Lastly, the Capehart housing neighborhood, constructed several years after the base opened, is situated nearest to the highway, with the

planting of a continuous row of Monterey Cypress and Monterey Pine trees to provide a windbreak and conceal the housing from the highway's view (**Figure 8**).



Figure 8. Current NAVFAC view taken from the hillside east of Highway One. The primary access road bisects the site, with the core buildings to the left and the windbreak surrounding the Capehart housing to the right.

The extant Capehart housing neighborhood consists of 21 residential buildings, in a combination of single-family and duplex structures, providing a total of 24 residential units. Associated structures include a public works building (Bldg. 168), a bus shelter (Bldg. 162), and a tennis court (Bldg. 167). The houses are arranged in a circular pattern with officers' houses on a cul-de-sac located northwest of the two circular roads. Garages for each unit faced the neighboring unit to provide privacy. The tennis court was set in an open grassy area to the south of the houses. The circular road network and placement of houses reflect suburban house patterning and design prevalent in contemporaneous suburban civilian designs and are a clear illustration of Capehart housing principles standardized by the Armed Forces (**Figures 9 and 10**).



Figures 9 and 10. Two views of Capehart housing. Left: looking north down circular road leading from the main arterial road. Right: View of single-family housing with garages facing each other for privacy.

Site hardscape features include the road network linking the buildings, paved areas centered within the public works core, paved parking areas adjacent to the officers and enlisted quarters, concrete paths and stairs leading to and from buildings, concrete stormwater swales and culverts, utility poles and fencing.

Site drainage systems include concrete swales running parallel to roads; culverts at road crossings, and buried outfall pipes running parallel to side roads, linking with the primary arterial road, and running downhill and to the ocean. Buried underground steam lines run from the Boiler House (Bldg. 111) to various buildings on the site. Sewer mains are present in the Capehart housing area and may connect to the personnel quarters (Bldg. 104 and Bldg. 109), before running to the Sewage Treatment Plant (Bldg. 146) and outfall structures. The Capehart area also has telephone service, a central propane gas system, a central septic system and a water system.

Water storage and distribution consists of a well and pump near the Big Sur River in Andrew Molera State Park and a supply line from this location to two Redwood water storage tanks (Bldgs. 131 and 132) located on the hillside parcel east of Highway One (**Figure 11**).



Figure 11. Redwood water storage tanks on the hillside parcel east Highway One.

Introduced vegetation includes the native species, Monterey Cypress and Monterey Pine, planted to provide a windbreak for the Capehart housing and to screen other buildings. In addition, grasses have been introduced to the NAVFAC site. The non-native, African Kikuyu Grass was introduced to the site to stabilize soil and provide a quick-growing ground cover. Presently the Kikuyu Grass is overgrown extensively, covering much of the asphalt hardscape on the site. It is not clear the extent of planting when the site was originally developed. Additional analysis from an experienced botanist is recommended to determine the extent of the Kikuyu Grass on the site during the Period of Significance.

NAVFAC Buildings

This section describes the extant buildings on the NAVFAC by grouping them into the following functions:

- Administration: Buildings 100 and 165;
- Operations: Building 113 and 114 (114 not in Scope of Work);
- Personnel: Buildings. 102, 103, 104, 105, 107, 109, 162, 167, 168 and Capehart Housing (1-24);
- Public Works: Buildings 106, 108, 110, 111, 138, 148, 169 and Paint Shed;
- Utilities: 146 and Redwood water storage tanks (131 & 132).

The following pages present each building grouped within the above five categories. Each building is described with notes on condition and any additions or alterations that have been installed. It should be noted that construction plans and records either have not been located or remain classified.

Since original plans, construction documents and maintenance records have not been located, notes on building alterations are based on evidence gathered in the field. Dates given are approximate and are based on the fabric evidence found on the building additions. Based on the fabric evidence, it appears that most of the additions were installed during modifications made to the base in the early 1970s. This includes enclosures of the carports in the Capehart housing neighborhood, construction of minor alterations to various buildings and construction of Building 168 in the Capehart housing neighborhood.

Administration

Building 100. Administration (1957)



North Elevation



West Elevation

Description:

A 2,628 square-foot reinforced concrete structure with concrete-block walls, Building 100 housed the administrative offices for the facility. The building has a shallow-pitched gable roof with wood fascia boards covered with metal flashing and roofed with tar and gravel. Fenestration consists of paired, steel industrial sash windows with operable center panes and concrete window sills. Recessed steel doors are centered on the north and west elevations.

Condition:

The building is in good condition with nearly all sash present. The building exhibits peeling paint, warped and missing fascia flashing and deteriorated fascia boards.

Additions/Alterations:

A flat-roofed wood, concrete block structure was constructed adjacent to and east of the original building. The addition has a wood roof structure.

Administration

Building 165. Gate/Sentry House (1970)



South Elevation

Description:

A 30 square-foot, wood-framed structure, Building 165 served as the gate sentry's shelter. The building has a shallow-pitched shed roof with plywood fascia boards and exposed rafters, finished with tar and gravel. Fenestration consists of fixed, sash windows on the east and west elevations. Entry faced the access driveway on the south elevation. Horizontal V-groove siding finishes the walls.

Condition:

The building is in fair condition with peeling paint, warped and damaged siding boards. The entry door is missing.

Additions/Alterations:

None.

Operations

Building 113. Bunker (1957)



South Elevation



West Elevation

Description:

A 100 square-foot, concrete and concrete-block structure, Building 113 stored small arms and munitions. The structure has a concrete block wall, with a concrete slab and the bulk of the structure constructed into the sand dune. A single entry door is centered in the west elevation.

Condition:

The building is in fair condition with peeling paint and cracks to the masonry wall, notably on the south side of the structure. The steel entry door is missing.

Additions/Alterations:

None.

Personnel

Building 102. Chief Petty Officer Club (1957)



West Elevation



Interior View

Description:

A 486 square-foot reinforced concrete structure with concrete-block walls, Building 102 was used by the base Chief and for gatherings and parties. The building has a shallow-pitched shed roof with wood fascia boards covered with metal flashing and roofed with tar and gravel. A flat-roofed wing to the north housed the restrooms. Minimal fenestration (to maintain privacy) consists of fixed sash windows with concrete window sills. A steel door with sidelight is present on the west elevation. Paired steel doors access the north wing.

Original finishes include the bar, paneling, flooring and dropped ceiling.

Condition:

The building is in good condition with peeling paint, warped and missing fascia flashing and deteriorated fascia boards. Several of the sash have been replaced with fixed panes. Original interior finishes are present, but in fair to poor condition.

Additions/Alterations:

None.

Personnel

Building 103. Galley (1957)



West Elevation



East Elevation

Description:

A 3,675 square-foot, reinforced concrete structure with concrete-block walls, Building 103 provided food for the base. The daily menu included a main entrée, sandwiches, a salad bar, beverage bar, and dessert bar. The building has a shallow-pitched gable roof with wood fascia boards covered with metal flashing and roofed with tar and gravel. Fenestration consists of grouped, steel industrial sash windows with tilting lower panes and concrete window sills. Entry is through paired sliding glass doors in a flat-roofed entry addition on the west elevation. An additional entrance with steel door is present on the north elevation.

Condition:

The building is in good condition with all sash present. The building exhibits peeling paint, warped and missing fascia flashing and deteriorated fascia boards. Scattered cracking exists through the concrete block. Original kitchen infrastructure and wall finishes remains inside the building.

Additions/Alterations:

A flat-roofed wood, concrete block structure was constructed into the southernmost bay of the west elevation and serves as a new entrance. A shed-roofed addition with wood rafters was installed to the north façade. Dates of these additions are not confirmed, but are likely during the early 1970s, based on the materials and construction techniques used for the additions.

Personnel

Building 104. Bachelor Officer's Quarters (1957)



West Elevation



Interior View

Description:

A 4,144 square-foot, concrete-block structure, Building 104 provided housing for five single officers and contained a lounge, kitchenette, laundry, bathrooms and a rear patio for entertaining. The building has a shallow-pitched gable roof with wood fascia boards covered with metal flashing and roofed with tar and gravel. Fenestration consists of single and grouped steel industrial sash windows with operable center panes and concrete sills. Entry is through a single steel door centered in the west elevation and paired steel doors with wire glass in the north end of the east elevation.

Condition:

The building is in good condition with all sash present and scattered broken panes. The building exhibits peeling paint, warped and missing fascia flashing, and deteriorated fascia boards. Extant interior finishes include the bar, wall finishes, flooring and dropped ceiling.

Additions/Alterations:

None.

Personnel

Building 105. Theater (1957)



North and west elevations



South and west elevations

Description:

A 1,940 square-foot, reinforced concrete frame structure with concrete-block walls, Building 105 served as a gathering and training facility and showed recent movies and visual entertainment. The building has a shallow-pitched gable roof with wood fascia boards and metal flashing. A recessed primary entrance with paired steel doors is in the south elevation. Additional single-door exits are located on the north, east and west elevations. The building has no windows.

Condition:

The building is in good condition with peeling paint, warped and missing fascia flashing and deteriorated fascia boards. The single steel doors are missing on all elevations except the east elevation.

Additions/Alterations:

None.

Personnel

Building 107. Club (1957)



West Elevation



Partial East Elevation

Description:

A 4,219 square-foot, reinforced concrete frame structure with concrete-block walls, Building 107 housed the Exchange Retail Store in the southern section, the enlisted men's mess in the northern section and the Club Oasis, a bar and gathering place for enlisted personnel in the middle section. The building has a shallow-pitched gable roof with wood fascia boards covered with metal flashing and roofed with tar and gravel. Fenestration consists of grouped, steel industrial sash windows with operable center panes and concrete window sills, located on the northern 3 bays of the building. The remaining sections do not have windows. Entry to the club is north of the Naval Exchange through a shallow, gable-roofed portal on the east elevation. A utility room entrance with steel door is present on the west elevation.

Condition:

The building is in good condition with all sash present, with scattered broken panes. The building exhibits peeling paint, warped and missing fascia flashing and deteriorated fascia boards. The original bar, wall finishes and some furnishings are present in the Club, but in poor condition.

Additions/Alterations:

None.

Personnel

Building 109. Bachelor's Enlisted Quarters (1957)



East Elevation



West Elevation

Description:

An 11,979 square-foot, two-story reinforced concrete frame structure with concrete-block walls, Building 109 provided housing for enlisted personnel. The building contained twenty-four 2-person rooms, two single-occupancy rooms (in the single-story bays to the south), a television room, recreation room, two laundry rooms and head. The building has a shallow-pitched gable roof with wood fascia boards covered with metal flashing and roofed with tar and gravel. Fenestration consists of grouped, steel industrial sash windows with tilting lower panes and concrete window sills. The primary entrance is through paired aluminum doors in the third southern bay of the east elevation. Additional single-door exits exist on the west and south elevations. The north elevation has an exit from the second floor and down a set of concrete steps to the parking lot east of the building.

Condition:

The building is in fair condition with bent steel sash, numerous broken window panes, warped, bent and missing flashing and dislocated fascia boards. Upper story windows on the southeast elevation have been removed and covered with plywood. Original room partitions and head infrastructure remains inside the building and is in poor condition.

Additions/Alterations:

None.

Personnel

Building 162. Bus Shelter (1961)



West Elevation

Description:

A 36 square-foot, reinforced concrete block structure with concrete bond-beam, Building 162 served as a bus shelter for the Capehart housing neighborhood. The building has a shallow-pitched shed roof with wood fascia boards flashed at the edges and roofed with tar and gravel. It is open to the west side, facing the entrance to the Capehart neighborhood.

Condition:

The building is in good condition with peeling paint and paint missing from the wood fascia boards. Original benches remain inside the structure.

Additions/Alterations:

None.

Personnel

Building 167. Tennis Court (1961)



Looking south from Cul De Sac. Court is left of Building 4 (arrow).

Description:

An asphalt playing court likely used for multiple sports, such as tennis and basketball. A chain-link fence surrounds the playing surface.

Condition:

The asphalt playing surface is cracked and worn in many locations. The surrounding fence is in good condition with scattered rust and corrosion.

Additions/Alterations:

Tennis nets and/or other recreational features missing.

Personnel

Building 168. Public Works Housing Maintenance (1975)



South Elevation

Description:

A 600 square-foot, concrete-block structure, Building 168 served as a maintenance and public works building for the Capehart neighborhood. The building has a shallow-pitched gable roof with wood fascia boards and edge flashing. The building contains a roll-up door and two single metal doors in the south elevation. A single-pane window is located on the east, west and south elevations.

Condition:

The building is in good condition with peeling paint, warped and missing fascia flashing and deteriorated fascia boards. Window sash have been removed and covered with plywood.

Additions/Alterations:

None.

Personnel

Capehart Housing. Building 20: Single Family Example (1960)



Front Elevation



Rear Elevation

Description:

One of two primary house types in the Capehart housing neighborhood, the single-family example is a California Ranch design with a garage at the far end of the house. Houses were sited so that garage elevations faced each other on adjacent lots to provide privacy. The primary elevation contains an entrance door flanked by aluminum picture windows with sliding transoms on one side and narrow aluminum sliders on the other. Rear elevations have more numerous window openings and a screen door opening out to the back yard. The buildings are wood-framed with stucco wall finishes and have narrowly-pitched gable roofs with tar-and-gravel roofing. Minimalist exterior decoration consists of porch light fixtures in a Colonial Revival style.

Condition:

The building exteriors are in good condition with scattered missing and broken sash. The interiors of many buildings are intact but are in poor condition with mold, pest guano and vandalism present.

Additions/Alterations:

Garages with small rear storage rooms were added to all Capehart housing by enclosing the carports, circa 1970s. Housing types examined display the same separations between earlier and newer slabs inside the garages, as well as the full-height stucco cracks on the exteriors elevations surrounding the garages.

Personnel

Capehart Housing. Building 21/22: Duplex Housing Example (1960)



Front Elevation



Rear Elevation

Description:

One of two primary house types in the Capehart housing neighborhood, the duplex example is a California Ranch design expressed as a symmetrical, mirror-image composition with the garage as the common wall for added privacy. The primary elevation contains an entrance door flanked by aluminum picture windows with sliding transoms on one side and narrow aluminum sliders on the other. Rear elevations have more numerous window openings and a screen door opening out to the back yard. Window types and arrangement are similar to the single-family designs. The buildings are wood-framed with stucco wall finishes and have narrowly-pitched gable roofs with tar-and-gravel roofing. Minimalist exterior decoration consists of porch light fixtures in a Colonial Revival style.

Condition:

The building exteriors are in good condition with scattered missing and broken sash. The interiors of many buildings are intact but are in poor condition with mold, pest guano and vandalism present.

Additions/Alterations:

Several buildings have rear patio additions. Duplex carports were likely converted to garages during the early 1970s when the single-family houses had their garages enclosed.

Personnel

Capehart Housing. Building 2: Single Family Anomaly (1960)



South and East Elevations



West Elevation

Description:

Building 2 is an anomaly to the standard single-family Capehart design, due to its siting on the cul-de-sac, which necessitated placing the garage addition to the east of the building, creating an L-shape. The house maintains similar California Ranch-design details, with fenestration to match the other houses. House framing, roofing and finishes match the remaining designs of the Capehart neighborhood. The south elevation has no windows to increase privacy, since it faces the cul-de-sac.

Condition:

The building exterior is in good condition with peeling paint and several broken window panes. The interior is present, but in poor condition with mold, pest guano and vandalism present.

Additions/Alterations:

The carport was enclosed circa 1970 with the rest of the garage upgrades to the Capehart neighborhood.

Personnel

Capehart Housing. Building 3: Single Family Anomaly (1960)



East Elevation

Description:

Building 3 is an anomaly to the standard single-family Capehart design, and contains an additional bay in the center of the house. The house maintains similar California Ranch-design details, with fenestration to match the other houses. House framing, roofing and finishes match the remaining designs of the Capehart neighborhood. Garages of neighboring houses face each other to maintain privacy.

Condition:

The building exterior is in good condition with peeling paint and several broken window panes. The interior is present, but in poor condition with mold, pest guano and vandalism present.

Additions/Alterations:

The carport was enclosed circa 1970 with the rest of the garage upgrades to the Capehart neighborhood.

Public Works

Building 106. Supply (1957)



West Elevation



East Elevation

Description:

A 2,758 square-foot reinforced concrete frame structure with concrete-block walls, Building 106 housed the supply for the facility. The building has a shallow-pitched gable roof with concrete rafters; and wood fascia boards covered with metal flashing and roofed with tar and gravel. Fenestration consists of paired, steel industrial sash windows with operable center panes and concrete window sills. Three pairs steel doors access a loading dock on the west elevation.

Condition:

The building is in fair condition. The building exhibits missing and bent steel doors, bent door frames, peeling paint, warped and missing fascia flashing and deteriorated fascia boards. Window frames are intact, but missing most of their glass. The south side of the building contains a wood-paneled office in poor condition.

Additions/Alterations:

None.

Public Works

Building 108. Garage (1957)



West Elevation



East Elevation

Description:

A 1,994 square-foot reinforced concrete structure with concrete-block walls, Building 108 housed the vehicular maintenance repair facility. The building has a shallow-pitched gable roof with concrete rafters; and wood fascia boards covered with metal flashing and roofed with tar and gravel. Fenestration consists of two, steel industrial sash windows located in a flat-roofed entrance bay to the south of the primary structure. Four steel roll-up doors serve four separate repair bays on the west elevation. The east elevation is windowless and contains a single steel door centered in the façade.

Condition:

The building is in good condition with peeling paint, warped and missing fascia flashing and deteriorated fascia boards. The concrete structural framing exhibits scattered chips and spalls.

Additions/Alterations:

None.

Public Works

Building 110. Public Works Shop (1957)



East Elevation



West Elevation

Description:

A 4,439 square-foot reinforced concrete structure with concrete-block walls, Building 110 was the public works shop. The building has a shallow-pitched gable roof with wood fascia boards covered with metal flashing and roofed with tar and gravel. Fenestration consists of grouped, steel industrial sash windows with operable center panes and concrete window sills on the west elevation and steel slider windows at the roof/wall junction on the east elevation. Paired steel doors are located on the east elevation. A rectangular entrance bay for utilities protrudes from the west elevation.

Condition:

The building is in good condition with all windows and doors secure. One pair of steel slider windows on the west elevation is covered with plywood. The building exhibits peeling paint, warped and missing fascia flashing and several deteriorated fascia boards.

Additions/Alterations:

A garage addition was installed to the south elevation. The addition has wood roof framing and a steel roll-up door on the east elevation.

Public Works

Building 111. Boiler House (1957)



West Elevation



East Elevation

Description:

A 1,188 square-foot reinforced concrete structure with concrete-block walls, Building 111 was the heating plant. The building has a shallow-pitched gable roof with concrete rafters, wood fascia boards covered with metal flashing and roofed with tar and gravel. Two large boiler stacks penetrate the center of the roof. Fenestration consists of paired, steel industrial sash windows with operable center panes and concrete sills on the north, south and east elevations. The west elevation has two steel roll-up doors and a single steel industrial sash window. Single-door entries are set on the southwest corner and centered in the east elevation. The building has louvered vents on the north, south and east elevations.

Condition:

The building is in poor condition with all windows broken and numerous bent and corroded frames. Single entry doors are missing with severely bent and deteriorated door frames. One of the louvered vents has been removed and the opening covered. The building exhibits peeling paint, severely warped and/or missing fascia flashing and deteriorated fascia boards. The boiler stacks are severely corroded, with significant section loss near the tops of the stacks.

Additions/Alterations:

None.

Public Works

138 Dispatch/Security (ca. 1957)



East Elevation

Description:

A 30 square-foot concrete-block structure, the Dispatch/Security building provided communications for the public works operations of the facility. The building has a shallow-pitched, wood-framed shed roof with metal flashing, windows on the south and east elevations and a single entry on the north elevation.

Condition:

The building is in poor condition with peeling paint, warped fascia flashing, deteriorated fascia boards, and all windows missing. The entry door is missing.

Additions/Alterations:

None.

Public Works

Building 148. Storage Shed (1962)



North Elevation



East Elevation

Description:

A 456 square-foot concrete-block structure, Building 148 provided storage for the public works operations. The building has a shallow-pitched shed roof with wood fascia boards covered with metal flashing and roofed with tar and gravel. A steel roll-up door is the only opening on the north elevation. The door opens onto a concrete loading dock that runs the length of the north elevation. The building has no windows. A wing to the east with a single entry and no windows is likely an addition to the original structure.

Condition:

The building is in good condition with peeling paint, scattered concrete spalls and warped fascia flashing.

Additions/Alterations:

The east wing constructed adjacent and into the east façade appears to have been added at a later date. The addition has exposed wood rafters and a single entrance with paired wood doors.

Public Works

Building 169. Hazardous Storage Shed (1977)



East Elevation

Description:

A 180 square-foot concrete-block structure, Building 169 provided storage for hazardous and flammable materials. The building has a flat roof, a single entry in the east façade and no windows. The exterior block is finished with cement plaster.

Condition:

The building is in poor condition with an open roof partially covered with corrugated metal, missing entry doors and a warped and deteriorated steel door frame.

Additions/Alterations:

None.

Public Works

Paint Shed (ca. 1970)



West Elevation

Description:

A 450 square-foot concrete-block structure, the Paint Shed provided additional storage for the public works operations. The building has a shallow-pitched shed roof with wood fascia boards covered with metal flashing and roofed with tar and gravel. Paired steel doors on the west elevation provide the only opening into the building. The building has no windows. Four open concrete-block storage bays run to the south of the shed.

Condition:

The building is in good condition with peeling paint and warped fascia flashing.

Additions/Alterations:

None.

Utilities

Buildings 131 & 132. Redwood Water Storage Tanks (1957)



North Elevation



West Elevation

Description:

Two 100,000-gallon redwood storage tanks provided the water supply for the facility. The tanks rest on concrete foundations and are constructed of unpainted vertical Redwood boards wrapped in steel cabling with a steel tie-back system. The tanks have a conical roof finished with rolled roofing. A small, shed-roofed structure is adjacent to and north of the tanks. A chain-link fence surrounds the site. A paved access road leads from the tank site to State Highway One.

Condition:

The tanks are in fair condition. The wood appears to be sound, however, the steel tie-back system appears loose, with corrosion and missing plates.

Additions/Alterations:

None.

Utilities

Building 146. Sewage Treatment Plant (1962)



East Elevation



West Elevation

Description:

A 275 square-foot concrete-block structure with cement plaster finish, Building 146 provided wastewater and industrial waste treatment for the facility. The L-shaped building has a flat, wood-framed roof with wood fascia boards covered with metal flashing. One wing appears to have had a standing-seam roof repair. Entrances are located on the east elevation, with single wood doors. Window openings with metal slider windows are located on the north, south and west elevations.

Condition:

The building is in poor condition with leaning walls, open roof, and various non-compatible wall repairs. Nearly all sash are missing. One of the east entry doors is missing. A chain-link fence surrounds the building.

Additions/Alterations:

A number of repairs with non-compatible materials may indicate that one of the wings was added at a later date.

Character-Defining Features

The following lists the character-defining features for the NAVFAC site. Hardscape elements and architectural elements are the focus of this list. Introduced landscape vegetation is mentioned only to the extent it is currently understood. A detailed study of the site's vegetation and origins of introduced species was not part of this project's Scope of Work.

Site

- Paved circulation patterns, consisting of the primary arterial road, side roads and streets within the Capehart housing neighborhood.
- Orientation of buildings into functional sectors arranged along arterial and side roads.
- Paved parking and vehicle areas within the utility core, personnel core and all paved areas associated with buildings.
- Stairs and paved walking paths connecting various buildings to roads and parking areas.
- Concrete drainage swales, culverts and associated stormwater drainage elements.
- Chain link fences surrounding the site.
- Monterey Cypress and Monterey Pine windbreak surrounding the Capehart housing neighborhood.
- Introduced grasses, including Kikuyu Grass surrounding NAVFAC operational buildings and non-native grass for Capehart lawns, extent of which to be determined by a botanist.
- Redwood water storage tanks, paved access road and drainage swale located east of Highway One.

Operational Buildings

- Low-profile, rectangular massing.
- Shallow-pitched gable/shed roofs or flat roofs.
- Reinforced concrete masonry block walls with concrete-block pilasters on longer elevations.
- Beamed concrete ceilings with exposed rafter tails.
- Smaller buildings and small building additions commonly with wood-framed roofs.
- Tar and gravel roofs with wood fascia boards and metal flashing. No gutters or downspouts.
- Concrete loading docks and stairs leading to Public Works buildings.
- Paired and single steel doors, placed symmetrically within building facades.
- Steel roll-up doors on Public Works buildings.
- Wood entry doors into office areas and smaller buildings.
- Paired or grouped steel industrial sash windows with concrete sills.
- Metal wall vents in building walls.

Caphart Housing Neighborhood

- Circular street pattern with cul de sac servicing the houses.
- Arrangement of single-family and duplex houses along the circular street pattern with driveway connecting to street.
- Larger, single-family officer's quarters located on cul de sac.
- Houses designed in a minimalist Ranch style with minimal architectural detail.
- Houses are rectangular in plan with gable roofs and garages that replaced original carports.
- Garages face each other from lot to lot or within duplex arrangement to enhance privacy.
- Wood-framed construction with stucco walls.
- Tar and gravel roofs with overhanging boxed eaves with metal flashing and metal chimneys.
- Front facades contain three-part, metal-clad picture windows with operable transoms and paired rectangular slider windows. Variations of window pattern on rear façade.
- Solid wood entry door with mail slot. Solid or single-glazed entry doors on rear façade.
- Single exterior metal light fixture above front door in a simplified Colonial Revival style.
- Tilt-up wood garage door.
- Landscape improvements including lawns, shrubs and fencing.

V. EVALUATION OF HISTORIC SIGNIFICANCE

Introduction

This chapter provides an evaluation of historic significance based on the National Register of Historic Places (NR) and the California Register of Historical Resources (CR). The chapter begins with a summary discussion of National- and State of California-register criteria, along with a discussion of historic integrity. Following these sections, this chapter evaluates the historic significance of the Point Sur NAVFAC based on the National and California criteria. It should be noted that these two sets of criteria are essentially the same, with the exception of their designations. The National Register criteria uses an A – D format; the California Register uses a 1 – 4 format.

National and California Registration Criteria

Historic resources may be designated on the federal, state or local level. Generally, to be eligible for listing, a resource must be historically significant and retain enough historic integrity to convey that significance. The criteria for listing in the National Register of Historic Places, and California Register of Historical Resources are described below.

National Register of Historic Places (NR)

The National Historic Preservation Act of 1966 authorized the Secretary of the Interior to create the National Register of Historic Places. Districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering and culture are eligible for listing if they meet at least one of four criteria.⁴⁶ Eligible resources are those

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.

Eligible resources must also retain sufficient integrity of location, design, setting, materials, workmanship, feeling, and association to convey the relevant historic significance.⁴⁷ The seven aspects of integrity are described later in this section.

⁴⁶ 16 U.S.C. 470, *et seq.*, as amended. 36 C.F.R. § 60.1(a).

⁴⁷ 36 C.F.R. § 60.4.

California Register of Historical Resources (CR)

A resource is eligible for listing in the California Register of Historical Resources if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Is associated with the lives of persons important in our past.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history.⁴⁸

The California Code of Regulations notes that integrity is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Resources eligible for listing in the California Register must retain enough of their historic character or appearance to be recognizable as historic resources and convey the reasons for their significance.

The same seven aspects of integrity are considered when evaluating resources for listing in the National Register and California Register: location, design, setting, materials, workmanship, feeling, and association. Alterations over time or historic changes in use may themselves be significant.

Historic Integrity

National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation defines **historic integrity** as "the ability of a property to convey its significance." Historic properties either retain their integrity or they do not. To retain integrity, a resource will always retain several and usually most of the seven aspects of integrity:

1. **Location:** the place where the historic property was constructed or the place where the historic event occurred.
2. **Design:** the combination of elements that create the form, plan, space, structure, and style of a property.
3. **Setting:** the physical environment of a historic property.
4. **Materials:** the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
5. **Workmanship:** the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
6. **Feeling:** a property's expression of the aesthetic or historic sense of a particular period of time.
7. **Association:** the direct link between an important historic event or person and a historic property.

⁴⁸ California Public Resources Code § 5024.1(c).

National Register Bulletin 15 notes that evaluating historic integrity may be a subjective analysis, but is always based on understanding the property's physical features and how they relate to the property's historic significance. The integrity evaluation can begin only after the evaluator establishes the property's significance: *why* it is significant (identifying its area of significance and how it meets the relevant National, State or Local designation criteria), *where* it is important (location), and *when* the resource is significant (its "period of significance").

Period of Significance

The National Register of Historic Places and The California Register of Historical Resources define the **Period of Significance** as: "the span of time in which a property attained the significance for which it meets the National (or California) Register criteria."⁴⁹ Typically, this would span the dates from which the resource was in use when the significant association or event took place.

National Register (NR) and California Register (CR) Significance

The Point Sur NAVFAC is significant under *NR Criterion A/CR Criterion 1* for its association with the development of the SOSUS network, a defensive Cold War anti-submarine warfare (ASW) system vital to the protection of the United States from Soviet submarine nuclear attack. At the onset of the Cold War, it became clear to top United States military officials that the Soviet Union was developing an ambitious submarine fleet. When the Soviet Union demonstrated nuclear capability by detonating their first atomic bomb in 1949, the submarine became one of the United States' greatest threats. The following describes the effectiveness of the United States SOSUS network:

By 1962, the Navy had perfected SOSUS to the point that a Soviet submarine could not leave its home port on the Barents Sea or the Sea of Okhotsk and head for deep water without being detected by SOSUS ears. By the mid-sixties, the U.S. Navy had so thoroughly bugged the continental shelf that it was impossible for a foreign submarine to approach the U.S. coast without each mile of its voyage being carefully tracked by SOSUS. The hydrophones, later enhanced by computers, worked so well that SOSUS operators could tell from the sound of propeller wash not only the location of a submarine but also its type.⁵⁰

When the SOSUS technology was ready for deployment, the United States Navy embarked on an extensive construction program of underwater hydrophones, thousands of miles of transmission cables, associated infrastructure, and the network of naval facilities that processed and

⁴⁹ United States Department of the Interior, National Park Service, *National Register Bulletin 16A: How to Complete the National Register Registration Form*, 1997.

⁵⁰ Earley, Pete, *Family of Spies: Inside the John Walker Spy Ring*, 1989, 59.

interpreted the sound information gathered by a given SOSUS array. Each NAVFAC fulfilled a critical role in obtaining, processing and tracking the movement of enemy submarines. The monitoring of all submarine movements worldwide was a formidable task and each NAVFAC provided around-the-clock surveillance of its given SOSUS array.

The Point Sur NAVFAC was an integral cog in a series of NAVFACs placed up and down the east and west coasts of the United States and along key coastal locations of other western countries. Part of phase two of the NAVFAC construction campaign, the Point Sur NAVFAC was a vital base in the West Coast SOSUS system. Bases constructed along the West Coast were located on San Nicolas Island, Point Sur, and Centerville Beach (all in California); Coos Bay, Oregon; and at Pacific Beach and Whidbey Island, Washington. All California NAVFACs have been closed and the bases either demolished or in an advanced state of decay. Operational from 1957 to 1984, NAVFAC San Nicolas Island, located in the Channel Islands off of the Santa Barbara Coast, was part of larger United States Navy facility. While the naval facility is now closed, San Nicolas Island remains an active United States Navy base and the disposition of the NAVFAC buildings is uncertain. Part of Centerville Naval Station and the Eureka Airport, NAVFAC Centerville Beach (1958 - 1993) contains some extant buildings, but not a complete facility. The Point Sur NAVFAC is the only virtually intact example of a West Coast NAVFAC. It was constructed as a standalone facility and not part of a larger naval base, giving the Point Sur NAVFAC particular importance in interpretation as an intact SOSUS base. It is also the only complete standalone facility in the United States in public ownership and thus possesses the ability to be interpreted to the public.

Point Sur was also the location of earlier experiments in underwater sound transmission. Experiments in the development of SOFAR, the predecessor of SOSUS, occurred on Moro Rock, reportedly in the present Visitor's Center. When the SOFAR technology was ready for deployment for locating downed pilots at sea, Point Sur was the location of the first SOFAR base, as part of a network of locations designed to serve the West Coast of the United States.

The Point Sur NAVFAC is considered an exceptional historic resource, based on the definition presented in the 1993 document, *Interim Guidance*, because it possesses "exceptional historic importance to the Nation" and is an "outstanding example of technological or scientific achievement."⁵¹ During its 26 years of operation, the Point Sur NAVFAC tracked, identified and monitored Soviet submarine movements, protecting the United States from Soviet nuclear submarine attack throughout the Cold War. For its integral role in the SOSUS system and protection of the United States, the facility won three Meritorious Unit Commendations (MUCs) in 1969, 1970 and 1971. While the exact nature of operations leading to these awards remains classified, the official language for each award reads, "NAVFAC Point Sur awarded Meritorious Unit Commendation, in concert with other Pacific naval facilities, for undersea surveillance operations that made significant contributions to national defense."⁵²

⁵¹ U.S. Air Force, *Interim Guidance Treatment of Cold War Historic Properties for U.S. Air Force Installations* (AFD 070828-060), 1993, 3.

⁵² Appeals for release of classified information regarding the three MUCs are ongoing.

Details of the 1969 MUC remain classified; however, it is likely that Point Sur was the first NAVFAC to locate the sunken Soviet K-129 submarine.⁵³ Requiring a Herculean effort in technological development and logistics, the location and partial recovery of K-129 was a significant event in Cold War espionage that involved the SOSUS network and the Point Sur NAVFAC. The story of Project Azorian has been chronicled in several recent books.⁵⁴ The Point Sur NAVFAC was likely awarded its 1969 Meritorious Unit Commendation for its role in this historic event.

The Point Sur NAVFAC is significant under *NR Criterion C/CR Criterion 3* because it embodies the distinctive characteristics of a type, period, or method of construction. The facility achieves this significance on two levels: the design of the operational facility itself; and the design of the Capehart housing neighborhood. Taken as a whole, the operational buildings are designed in a cohesive, unified post-war architectural style that emphasized secrecy, utilitarianism and minimal architectural detail. The buildings exhibit low-slung horizontal lines, with flat or nearly flat roofs, and common construction materials of reinforced concrete, concrete block, and steel windows and doors. The buildings were intended to blend into the surrounding landscape and be less visible, thus communicating architecturally the highly secretive nature of the operations going on within the base. These features and the construction materials employed make the overall architectural design of the Point Sur NAVFAC a distinctive example of a type (top-secret military facility), period (Cold War military architecture) and method (common post-war industrial materials) of construction.

The Capehart housing neighborhood also qualifies the Point Sur NAVFAC under *NR Criterion C/CR Criterion 3*. It is an intact example of a housing development that followed the design guidelines and features that developed under the Capehart housing program at the height of its activity between 1960 and 1962. It possesses all the salient features of the program from its California Ranch Style single-family and duplex housing and planned neighborhood design to its informal natural landscape setting of Cypress trees, which still screens the neighborhood and affords privacy from both the NAVFAC installation, and State Highway One.

The Capehart military housing component is significant in the context of the nationwide construction campaign to provide livable housing for service members and their families during the Cold War. It remains as a physical expression of, and response to Secretary of Defense Louis A. Johnson's 1949 pronouncement that "there can be nothing more vital and pressing in the interest of morale and the security of America than proper housing of our armed services." The Navy has identified only one in-service housing facility on the West Coast, the Catalina Heights neighborhood at Naval Base Ventura County, as a collection of Capehart program dwellings that collectively convey the principles of postwar suburbanization adapted to a military context. The intact Capehart neighborhood at Point Sur also clearly conveys these principles;

⁵³ See footnotes 41 and 43.

⁵⁴ Book titles and documents related to Project Azorian can be found here: Mathew Aid, William Burr and Thomas Blanton, "Project Azorian: The CIA's Declassified History of the *Glomar Explorer*," The National Security Archive – George Washington University, website: <http://www.gwu.edu/~nsarchiv/nukevault/ebb305/>.

and as part of a California State Parks historic unit, its significance as a key component of America's military response to the Cold War is available for interpretation to the general public.

The 2007 document *Housing an Air Force and a Navy: The Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1949-1962)*, provides guidance for identifying, evaluating and establishing the historic significance of extant Wherry and Capehart housing located on military installations. The document lists seven criteria to determine if the housing qualifies as a property of particular importance. The document states:

Generally, for a Capehart, Wherry, or appropriated funds housing area to merit consideration as a property of particular importance it must satisfy several of the following criteria:

- ability to physically convey the broad social history of military housing during the 1950s and 1960s;
- ability to represent the work of important architects, designers, developers, or contractors;
- ability to illustrate the range of contemporary housing types and styles;
- ability to represent the greatest number of units;
- ability to demonstrate post-World War II planning principles and suburbanization themes;
- ability to represent change over time; and
- ability to retain integrity to the period of significance.⁵⁵

The Capehart housing neighborhood at Point Sur NAVFAC satisfies all of these criteria, with the exception of the second, as the architect's significance has not yet been determined.

Period of Significance

The period of significance for the Point Sur NAVFAC spans the operational years of the facility, 1958 to 1984.

⁵⁵ Goodwin and Associates (prepared for the United States Departments of the Air Force and Navy), *Housing an Air Force and a Navy: The Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1940 – 1962)*, June 2007, Appendix F, F-2.

Evaluation of Historic Integrity

According to National Register and California Register criteria, as well as the definition of a *district* given in the 1993 document *Interim Guidance*, the Point Sur NAVFAC would qualify as a historic district. *Interim Guidance* defines a *district* as:

a "district" possesses a significant concentration of buildings, structures, etc. united historically or aesthetically by plan or physical development. An Air Force example could include a block of buildings, lacking any significant architectural or engineering merit, that hosted a crucial code breaking or intelligence gathering activity during the Cold War, a group of buildings built for nuclear weapon testing (laboratories), or an entire installation constructed for a specific Cold War mission.⁵⁶

For a district to maintain historic integrity it must possess enough of its contributing elements and character-defining features to communicate the district's historic significance. For the Point Sur NAVFAC all extant site features and buildings contribute to the historic significance of the district, because these buildings and features were part of the base's functional daily operations. Although several buildings have been removed (Bldgs. 144, 145, and 166) and associated communications infrastructure has been removed, the site is largely intact, as shown on **Figures 12 and 13**, below.



Figures 12 and 13. Left: historic, circa 1958 view looking west. Right: Present view taken from the hillside east of State Highway One from similar perspective. Nearly all operational buildings are intact and in their original locations (except Bldgs. 144, 145 and 166), as is the Capehart housing neighborhood located behind the screen of trees to the right of the right-hand image.

⁵⁶ U.S. Air Force, *Interim Guidance Treatment of Cold War Historic Properties for U.S. Air Force Installations* (AFD 070828-060), 1993, 5.

To maintain historic significance the site and individual buildings should retain as many of their historic character-defining features as possible. These site features are summarized in the list of character-defining features located at the end of *Chapter IV: Architectural Inventory of the Point Sur NAVFAC*. Rehabilitation plans should prioritize the maximum retention of as many character-defining features as possible.

The following summarizes the seven aspects of historic integrity for the Point Sur NAVFAC as a potential historic district:

- **Setting:** The Point Sur NAVFAC remains in its original coastal setting on the bluff west of State Highway One and immediately east of Moro Rock and the Point Sur Light Station, with minimal alteration to the district. In addition, the Capehart housing neighborhood maintains its original setting, including the layout of streets, houses and the Monterey Cypress/Monterey Pine windbreak. The Point Sur NAVFAC maintains integrity of setting.
- **Location:** None of the extant buildings on the facility have been moved from their original locations. The Point Sur NAVFAC retains integrity of location.
- **Design:** Individual buildings of the NAVFAC operational facility maintain their original postwar minimalist industrial design, form, massing and materials. The Capehart housing neighborhood maintains its original arrangement of houses; and form, massing and materials of individual houses. The Point Sur NAVFAC possesses integrity of design.
- **Workmanship:** As revealed by the retention of historic construction materials and methods, such as reinforced concrete, concrete block, steel industrial sash windows and roofing materials, individual operational buildings retain integrity of workmanship. The common construction materials used in the standardized plans for the Capehart housing neighborhood remain on the buildings. The Point Sur NAVFAC retains integrity of workmanship.
- **Materials:** The construction materials used for both the operational buildings and the Capehart housing neighborhood are extant on the buildings. Because of this, the Point Sur NAVFAC retains integrity of materials.
- **Feeling:** The location, building layout, and design aesthetic of the operational buildings and the Capehart housing neighborhood exist for each of the individual buildings of the potential district. The Point Sur NAVFAC retains enough of its historic character-defining features to give it integrity of feeling.
- **Association:** Because the extant individual buildings and relationship to other buildings and are the same as they were historically; and nearly all of the site's character-defining features are present, the Point Sur NAVFAC retains integrity of association.

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APPENDICES

APPENDIX A. POINT SUR NAVFAC COMMAND HISTORY 1958 – 1984*

Commander	Begin Service	End Service
LT D.E. Chapman, OIC	1958	1958
LCDR S.P. Dornblaser	1958	1960
LCDR D.E. McGrath	1960	1962
LCDR M. Gaydos	1962	1964
LCDR L.L. Andrews	1964	1967
LCDR D. Trimble	1967	1970
LDCR S.W. Richards	1970	1972
LCDR E.K. Dalrymple	1972	1974
LCDR C.E. Asher	1974	1976
LCDR R.W. Vandergrift	1976	1978
CDR S.H. Elliot	1978	1982
CDR T.Y. Eversole	1982	1984

* Source: Laura Waayers, Archivist, Naval History and Heritage Command, obtained via electronic correspondence

APPENDIX B. SOSUS AND ORAL HISTORY TIMELINE 1950 – 2010

The following summarizes the Point Sur NAVFAC oral history by placing it along the Integrated Undersea Surveillance System (IUSS) timeline. Oral history taken from telephone interviews and correspondence is placed in italics under the appropriate year of the timeline.

Source: *Integrated Undersea Surveillance System (IUSS) History 1950 – 2010*,
<http://www.iussca.org/idn.htm>.

1950

The Hartwell Committee recommended approximately \$10 million of R&D funding per year to be applied to the development of an effective long range acoustic detection sensor system using bottomed arrays. The evolution of undersea surveillance had begun.

- 29 October: Western Electric and ONR reps meet to rough WECOs proposal into a contract. A letter contract was issued 13 November.

1951

A 6-element test array is installed at Eleuthera and Ensign Joe Kelly is assigned as BUSHIPS Code 849 to oversee this high priority project; named Project Jezebel.

- Project Jezebel was Bell Labs effort and Project Michael was the Columbia University effort.

1952

CNO Directs BUSHIPS to procure six sets of LOFAR station components for deployment in the North Atlantic basin in a Top Secret letter.

- Classified name SOSUS is established.
- Unclassified name CAESAR established to cover installation and production. An Unclassified Cover Story is established to explain the mission.
- Number of stations planned is increased to nine.
- HMS Alert installs initial 40-element operational array off Eleuthera, Bahamas (2-19 January) total cost for 50-day charter is \$56,400 (\$840/day plus fuel).
- Cable ships Neptune and Myer assigned to Project CAESAR: the humble beginnings of the "CAESAR Fleet" to later include: Thor, Aeolus, Mizar, Huddell, Zeus and a cameo appearance by USNS Waters.

1953

Part of Project Jezebel was the study of short range, high frequency, upward looking sets of bottomed, active sources located in a strait as a complement to SOSUS; this was known as Project Colossus.

1954

Ten additional CAESAR stations (3 Atlantic, 6 Pacific and 1 in Hawaii) are authorized.

- Sound Search Course 572 "Green Door" established at FSS, Key West, FL.
- September - First NAVFAC, NAVFAC Ramey, Puerto Rico, commissioned followed by NAVFAC Grand Turk in October and San Salvador in December.

1955

NAVFACs established in Bermuda, Shelburne Nova Scotia, Nantucket MA, and Cape May NJ.

1956

NAVFACs Cape Hatteras NC, Antigua, and data Evaluation Centers in New York and Norfolk VA become operational.

- ***Email from Douglas Williams, CCLK, referencing an entry in the Official U.S. Coast Guard Light Station Point Sur Log Record, dated October 9, 1956:***

U.S. Navy officers, enlisted and civilian employees arrived to conduct tests and experiments in connection with a naval experimental project. Estimated time of departure about 11-9-56.

1957

NAVFACs Eleuthera Bahamas and Barbados in the Atlantic, and San Nicolas Island in the Pacific are established.

- ***Interview. Lt. Robert Kneedler, USN (Ret):***

Lt. Kneedler's job was coordinating hydrography for project with Coast and Geodetic Survey. He worked with LCDR Herbert "Bert" Wilder and Lt. Jon Lindberg as construction supervisors for the three SOSUS NAVFACs in California in 1957-1958: San Nicolas Island (First) Point Sur

(Second); and Centerville in Northern California (third). Strict secrecy was maintained as to the purpose of the NAVFACs - strictly "need to know" basis for both Navy and civilian contractors.

Facility at Pt. Sur built by Western Electric (WECO), out of Durham, NC (overall control) contracts by Naval Postgraduate School (NPS) at Monterey. Civilian contractors worked through Navy Public Works office at San Bruno. Wiring for Terminal Equipment Building (TEB) done by Bell Laboratory, and AT&T through WECO.

Cable trenches were blasted out by Lt. Lindberg's men from UDT Team II (blast damaged buildings on Moro Rock).

Cable was spliced by expert British craftsmen brought to San Francisco by Navy. Cable laid at Pt. Sur by U.S.S. Neptune and U.S.S. Aeolus, cable ships brought from East Coast through the Panama Canal to do the work.

Kneedler was part of a very small staff, including engineer John Lawrence of WECO. The work had the highest priority. They could get anything they needed, including special fabrication, with a phone call. The West Coast CESAR (SOSUS) project came in on time and under budget in six months.

Kneedler noted that at this time (1957) the three main priorities of the military of the Cold War were:

- 1. Development of missile research.*
- 2. Polaris missiles.*
- 3. NAVFAC SOSUS program (CESAR).*

• ***Email from Capt. Jon Byron, USN (Ret) July 17, 2012:***

Byron was an enlisted man posted to NAVFAC Centerville in the winter of 1957. As Centerville was not completed, Jon and his contingent of sonarmen were stationed at the NPS in Monterey to be used as guards at the developing Point Sur NAVFAC while the TEB was under construction by WECO. The men all had security and need-to-know clearances. As the acoustical equipment was being installed in the technical building, their duty consisted of one day on sentry duty at Point Sur and two days off. They bunked in the transmitter hut at Pt. Sur. Byron moonlighted as a guard for WECO on his days off.

• ***Interview with Sonarman Joe Turk by Susan Doniger August 30, 2001:***

Sonarman Joe Turk was posted to NAVFAC Point Sur in the winter of 1957. He and others were billeted at NPS in Monterey until the commissioning of the new base. Turk served at Point Sur until discharged in August 1959. He stated "Until the station became operational, personnel assigned to the base laid sod, dug ditches, cut grass, moved equipment, stood guard duty (armed) and just prepared for commissioning. After commissioning, worked in the TEB."

- ***Email from Les Sturges, USN (Ret) September 22, 2012:***

I arrived at Pt. Sur in early April of 1957 with a detachment of about 15 members of Underwater Demolition Team #11 under the command of Lt. John Lindbergh. There was also an engineer with Western Electric overseeing our work.

We finished the (cable) trenches in about one and a half months. The cable laying ship was still a month from arrival. Myself and one other person were picked to stay and watch tents and equipment.

A company called Fresno Marble and Tile were starting the concrete block buildings to house the cable.

A month later the rest of the team returned and the ship carrying the cable arrived. The cable was placed into the trenches and into the block buildings by our team. A detachment of Seabees arrived from Coronado to mix a sand and cement mixture to be placed into burlap bags. The Underwater Demolition Team then placed these bags over the cable for protection.

The entire process and stay at Pt. Sur was about four months.

1958

Commander, Oceanographic System Atlantic established. Oceanographic units in New York, San Juan, Puerto Rico and Norfolk VA. disestablished.

- NAVFACs Point Sur, California; Centerville Beach, California; Pacific Beach, Washington; Coos Head, Oregon established.
- Naval Facility Point Sur: 08 Jan 1958 - 01 Oct 1984. Source: Naval History & Heritage Command, Washington, D.C.

1958-1960

Project supports installation of Atlantic and Pacific Missile Impact Location System.

- ***Interview with Capt. Stanley P. Dornblaser, USN (Ret). May 15, 2012:***

Dornblaser was CO of NAVFAC Point Sur from 1958-1960. He states: "Capelharts [housing] were there and under construction when I arrived. Only enough furniture at the time for twelve households." Seabees from NPS did most on-site construction. Seabees went up to Mare Island [Naval Base near Vallejo, California] and dismantled a bowling alley in an Elephant building. Brought both to NAVFAC Point Sur and rebuilt it there. Bowling alley also served as theater.

Seabees built a pool as well. NAVFAC established TV station in concert with light station as well.

- **Telephone Interview with Commander (Cdr.) Edward Dalrymple, USN (Ret). July 26, 2012:**

Dalrymple was CO of NAVFAC Point Sur from 1972 to 1974. According to Dalrymple "No missile building ever done at Sur. Sur had its own public works department. No water provided to CG Hill. Some East and West Coast NAVFACS participated in the Air Force MILS (Missile Impact Location System). There was special equipment at Point Sur to detect splash point and send to the Air Force. No in-air tracking.

1959

NAVFAC Argentia, Newfoundland established.

1960

Shallow Water system installed and terminated at NACFAC Argentia: Ten 8-element arrays on two 40-pair cables: counter against Hudson Bay submarine patrols by Soviets.

- First and only curved array terminated at Shelburne, Nova Scotia.

1961

SOSUS tracks USS George Washington from continental US to United Kingdom.

1962

- NAVFAC Adak established.
- NAVFAC Lewes DE established after NAVFAC Cape May destroyed by "Ash Wednesday/Good Friday" storm.
- 26 June, Cape Hatteras NC makes first SOSUS detection of a Soviet Diesel submarine.
- 6 July, NAVFAC Barbados makes first detection of a Soviet Nuclear submarine as it crossed over the Greenland-Iceland-United Kingdom (GIUK) gap.
- 26 October, first positive correlation and sighting of a SOSUS contact (NAVFAC Grand Turks) and VP contact on a Soviet Foxtrot Class submarine during the Cuban Missile Crisis; designated Charlie-20.
- First major shore processing system upgrade installed at NAVFAC Lewes DE. 9" grams (DSA) replace 4" grams; Roman Numeral time calibration marks remain.

1963

- First 2x20 array installed at NAVFAC Argentia, Nfld.
- April, The USS Thresher sinks; SOSUS plays critical role in pinpointing location of incident.

1964

- Commander, Oceanographic System Pacific established.
- Project CAESAR transferred from BUSHIPS to Industrial Manager, Potomac River Command; to Naval District Washington the following year.
- OP-95, Director ASW Programs established under VADM Charles B. Martell.

1966

NAVFAC Keflavik Iceland established exactly one year after decision made to deploy SOSUS to the Norwegian Sea.

- Land-line Data Relay systems installed in OCEANSYSLANT and OCEANSYPAC by Western Electric Co; UQM-4 analyzer/displays.
- Project transferred to Naval Electronics Systems Command, (CODE EPO-3) located at Main Navy (now the site of the Vietnam Veterans Memorial).
- First 3x16 array system terminated at Keflavik.

1968

March, Soviet Golf SSB (K-129) sinks NW of Hawaii; May, USS SCORPION (SSN 589) sinks SW of Azores. SOSUS supports Air Force AFTAC system in localizing both vessels.

- NAVFAC Midway Island became operational.
- NAVFAC Argentia, Nfld Shallow Water Complex deactivated.
- NAVFAC Guam, Mariana Islands commissioned.
- COMOCEANSYPAC relocated from Naval Station, Treasure Island, CA to Ford Island, Hawaii.
- First detection of Victor and Charlie Class Soviet submarines by NAVFAC Keflavik.

1969

- NAVFAC Point Sur awarded its first Meritorious Unit Commendation (MUC), in concert with other Pacific naval facilities, for undersea surveillance operations that made significant contributions to National defense.

1970

- NAVFAC Point Sur awarded second Meritorious Unit Commendation (MUC), in concert with other Pacific naval facilities, for undersea surveillance operations that made significant contributions to National defense.

First USN women assigned to operational billets at NAVFAC Eleuthera (Norah Taylor-Brown).

CNO designates COMOCEANSYSLANT & COMOCEANSYSPAC as "Major Commands."

- Ocean Systems Technician (OT) rating established; formerly SONAR Technicians (ST) and Electronics Technicians (ET).
- NAVFAC Barbers Point, HI commissioned.
- NAVFAC San Salvador is first NAVFAC to be decommissioned.

1971

First Naval Aviator to command an Oceanographic System, CAPT Richard A. Hoffman, USN becomes COSP. He assumed title of Commodore (not heretofore used in the Pacific System) in order to emphasize real-time operational role of SOSUS.

- NAVFAC Point Sur awarded third Meritorious Unit Commendation (MUC), in concert with other Pacific naval facilities, for undersea surveillance operations that made significant contributions to National defense.
- COSP SeaBees begin upgrades to COSP and NAVFAC enlisted quarters. These efforts become model for a Navy-wide "Self-help" program.
- ***Email from Chief Petty Officer (CPO) Jack Holdzkom July 31, 2012:***

CPO Jack Holdzkom became senior Chief Petty Officer of the command during his tour at NAVFAC Point Sur between 1971 and 1975. There was a resident WECO engineer as part of the base staff at that time who provided support for the specialized equipment in the Terminal Equipment Building. A civil engineer corps (CEC) with a staff of Seabees operated the Public Works Department. Chief Holdzkom lived in quarters 12 (Capehart housing) and noted that it was the best government/military housing he and his family ever occupied. Children on base attended Captain Cooper School in Big Sur. He also noted that there was a gym, a swimming pool, bowling alley, movie theater and club aboard the base. Holdzkom stated that "three Meritorious Unit Citations (MUCs) were awarded NAVFAC Point Sur, in concert with other Pacific Naval Facilities, for undersea surveillance operations that made significant contributions to national defense."

1972

- PMW 124 established and the modernization of SOSUS begins.
- Joint Canadian Forces/US Navy operational manning commenced at NAVFAC Argentina, Nfld.

1973

- Capt. Joe Kelly, "Father Of SOSUS" retires.
- ***Email from Cdr. Edward Dalrymple, USN (Ret). July 21, 2012:***

Former NAVFAC Commander, from 1972-1974, noted the following: Swimming pool on post was repaired in 1973; Enlisted Men's club remodeled; new tennis courts built; building interior painted, paneled, drop ceilings added, and exteriors painted. New tertiary system for sewage treatment plant added; building for fire truck erected. New security exterior security fence constructed. Chief Petty Officers quarters remodeled. This work continued into 1975.

- ***Telephone interview with Lt. Lee Otter, Former Watch Officer, NAVFAC Point. Sur, 1970 - 1975. 27 June 2012:***

Otter noted that there was an all male staff at the time and that a contingent of Seabees was part of the Public Works Department. Lt. Otter received a ribbon for the 1972 Meritorious Unit Citation and believed it was for an incident that occurred in the Gulf of Alaska.

1974

- NAVFAC Brawdy Wales established- First "Super NAVFAC."
- NAVFAC Keflavik makes first detection on a Soviet Delta Class Nuclear submarine.
- NAVFAC Ramey, PR changed to NAVFAC Punta Borinquen, PR.

MID-1970s

Capt. Dempster Jackson becomes PMW 124 and the rest is history.

1976

- NAVFACs Punta Borinquen, PR and Nantucket, MA disestablished.

1977

- NAVFAC Point Sur awarded the Efficiency 'E' Commendation (MUC), in concert with other Pacific naval facilities, for undersea surveillance operations that made significant contributions to National defense.
- First woman Commanding Officer of a NAVFAC as LCDR Peggy Frederick takes command of NAVFAC Lewes.
- CAPT Harry Cox relieves RADM Dempster Jackson as PMW 124.
- Readiness Training Facility, Centerville established at NAVFAC Centerville Beach, CA.

1979

- NAVFAC Barbados, TWI disestablished.

1980

- NAVFACs Eleuthera, Bahamas and Grand Turk, TWI disestablished.

1981

- NAVFAC Lewes, DE disestablished.
- NAVFAC Midway disestablished; acoustic data remoted to NAVFAC Barbers Point, HI.

1982

- NAVFAC Cape Hatteras, NC disestablished.

1983

- NAVFAC Point Sur awarded the second Efficiency 'E' Commendation and was also rated as the top Naval Facility in 1983 by Command Oceanographic Systems Pacific. (COMOCEANSYSPAC), achieving the system's first "clean sweep" of operations, maintenance, and efficiency awards given by the task group commander.

1984

- NAVFAC Point Sur was deactivated as an independent shore activity on October 1, 1984 and became a detachment of 25 personnel under NAVFAC Centerville Beach.

- USNS STALWART (T-AGOS 1), first of 18 monohull SURTASS ships, arrives at Little Creek.
- USNS Zeus commissioned- first navy cable ship built from the keel up.
- IUSS Operational Support Center (IOSC) established at Little Creek; IOSC Detachment, Pacific established at Pearl Harbor, HI.
- NAVFAC Antigua, TWI secured operations.
- NAVFAC Point Sur, CA disestablished; acoustic data remoted to NAVFAC Centerville Beach, CA.
- NAVFAC San Nicolas Island, CA disestablished.
- Readiness Training Facility, Centerville Beach, CA disestablished.

1985

- Readiness Training Facility established at Dam Neck.
- Fixed Distributed System (FDS) test array terminated at NAVFAC Brawdy.
- USNS STALWART (T-AGOS 1) began first operational SURTASS patrol; New System Name - Integrated Undersea Surveillance System (IUSS).
- NAVFAC Barbers Point, HI disestablished; acoustic data remoted to NOPF Ford Island, HI.

1987

- NAVFAC Whidbey Island, Washington established.
- NAVFAC Pacific Beach, WA disestablished; acoustic data remoted to NAVFAC Whidbey Island, WA.

1988

CAPT Joe Kelly passes away at Bethesda Naval Hospital.

1991

System mission is declassified after 41 years of secrecy. COMOCEANSYSLANT/PAC (COSL/COSP) changed to COMUNDERSEASURVLANT/PAC (CUSL/CUSP).

- NAVFAC Guam, Mariana Islands disestablished.

1992

- USNS Victorious, first SWATH hull SURTASS accepted by the Navy.

- USNS STALWART (T-AGOS 1) and USNS WORTHY (T-AGOS 14) removed from operational service as IUSS platforms.
- IUSS began reporting whale detections in response to CNO tasking.
- SOSUS Work Stations (SWS) replaced paper gram displays at NOPF Dam Neck.

1993

In September, The Naval Postgraduate School (NPS) request transfer of the Terminal Equipment Building (TEB) along with associated easements for the main road, the cable system and some utilities. The request was approved and NPS now owns the TEB and has the requested easement.

- First woman Commodore as Commander Undersea Surveillance Pacific: CAPT Marnee Finch.
- NAVFACs Centerville Beach, CA and Adak, AK decommissioned; acoustic data remoted to NAVFAC Whidbey Island, WA.

1994

Commander Undersea Surveillance Atlantic and Pacific consolidate into one command located in Norfolk, VA: Commander Undersea Surveillance and staff relocate to Dam Neck VA. Unfortunately, the downsizing of undersea surveillance is in full swing.

- HMCS Trinity established at Halifax Nova Scotia; CFS Shelburne, Nova Scotia disestablished.
- Readiness Training Facility, Dam Neck disestablished.
- NAVFAC Argentia, Nfld disestablished; operations turned over to Canadian Forces IUSS Centre (CFIC), Halifax, Nova Scotia.
- NAVOCEANPROFAC Ford Island, HI disestablished.
- NAVFAC Bermuda acoustic data secured at NOPF Dam Neck.

1995

- 19 April - Advanced Deployable System officially becomes the newest member of Integrated Undersea Surveillance System - designated a major program.
- NAVFAC Brawdy, Wales, UK ceased operations for equipment transition to JMF St Mawgan, UK.
- Joint Maritime Facility, St Mawgan, UK commissioned.

1996

- NAVFAC Keflavik Iceland ceases operations after 30 years.

- September- Fixed Distributed System Initial Operational Capability.

1997

On July 7, 1997 the General Services Administration issued notification that the Naval Support Activity, Monterey, would retain ownership of the 1.17-acre parcel that included the Terminal Equipment Building (TEB), two supporting structures and previous easements.

- NAVFAC Adak AK plug pulled; Reverts to "Wet Storage."
- Following the words of Horace Greeley Brac "Go West SPAWAR" SPAWAR moves to San Diego.
- OT Rating disestablished after 27 years; IUSS Watch in the Sea resumed by ST Rating.
- ATARFs and RAINFORMs are replaced by SITREPs and GOLDS.

1998

- COMUNDEREASURV administrative control realigned under Commander, Submarine Force, U.S. Atlantic Fleet.

1999

- CFIC Trinity mission responsibilities transferred to Commander, Maritime Forces Atlantic and Canadian Forces Ocean Operations personnel collocated at NOPF Whidbey Island.
- ADS Fleet Evaluation Test successful.

2000

The Point Sur NAVFAC property was transferred to California State Parks on March 10, 2000 as an addition to Point Sur State Historic Park.

- Military Detachment (MILDET) stands up at NOPF Dam Neck, Virginia Beach, VA.
- USNS Impeccable commissioned. First purpose-built SURTASS LFA SWATH vessel.

2001

- In an unprecedented first for both the IUSS Community and the Navy, CDR Katherine M. Donovan, USN assumed command at NOPF Dam Neck, relieving her husband, CDR Jim Donovan, USN.

2002

- SOSUS Work Station (SWS) removed from operations (1991-2002).

2003

- USNS IMPECCABLE and USNS LOYAL transferred to Pacific Fleet. No permanent SURTASS capability in the Atlantic or Mediterranean.
- R/V CORY CHOUEST becomes LFA operational asset.
- PMW 181 and PMW 182 combined into PMS 181, CAPT Pat Seidel is the new PMS 181 (PEO/LMW).
- Maritime Intelligence Fusion Center Atlantic (MIFCLANT) commissioned at NOPF Dam Neck, VA. IUSS and the United States Coast Guard are co-located and work side-by-side.
- Advanced Deployable System (ADS) successfully completes dual array testing.
- Lockheed Martin and General Dynamics officially begin working on the new IUSS Integrated Common Processor (ICP).

2004

- NAVSEA's PEO LMW combines all IUSS programs into one program office, PMS 485, Maritime Surveillance Systems, under CAPT Pat Seidel.
- IOSC Little Creek is decommissioned.
- On 18 September, IUSS celebrates its Golden Anniversary.

2005

- First delivery of the Integrated Common Processor (ICP) is installed.
- First delivery of the new SURTASS towed array, TL-29A, is installed.
- ADS system reaches milestone B status.

2006

- The final Reduced Diameter Array (RDA) on SURTASS is retired from service.
- Realizing a need to restore acoustic analysis skills to peak levels, the Lead Analyst course of instruction is created along with a commensurate watch position.

2007

- USNS ABLE brought out of Mobility B status and begins reactivation phase.
- ICP installed at NOPF Whidbey Island, WA.

- CUS administrative control realigned under Commander, Naval Meteorology and Oceanography Command (CNMOC).
- ADS System Integration Test successfully completed.

2008

- USNS ABLE transfers to the Pacific theater of operations.
- R/V CORY CHOUEST is deactivated.
- ICP begins installation on operational SURTASS platforms replacing ARCI-I.
- Professional Development Detachment (PDD) Dam Neck begins basic sensor operator courses at COMUNDERSEASURV.

2009

- CUS administrative control realigned under Commander, Submarine Force, U.S. Pacific Fleet.
- ICP installed at NOPF Dam Neck, Virginia Beach, VA. replacing SSIPS SDS and on USNS IMPECCABLE replacing SURTASS TX-NX0.
- JMF St. Mawgan remoted to NOPF Dam Neck and decommissioned after nearly fourteen years of operation.
British and US Forces begin joint, combined operations at NOPF Dam Neck, Virginia Beach, VA.
- USNS IMPECCABLE makes the news when aggressively shadowed by Chinese vessels.

2010

- CAPT Jim Donovan USN (RET) gives [unclassified brief](#) of IUSS at ASW Seminar hosted by the Submarine League and Naval Historical Foundation.

APPENDIX C. Point Sur NAVFAC Research Contact List

Arago, Alec. District Director. Rep. Sam Farr U.S. Congress:

alec.arago@mail.house.gov

Re: Command histories - MUC awards - NAVFAC Point Sur.

Outcome: pending.

Baker, Randall A. OTMC. Stationed at NAVFAC Point Sur, May 1981-May 1983.

Virginia Beach, VA:

rbaker@web.congo.net

Re: Personal experience/knowledge.

Outcome: No reply.

Berg, William. (telephone call 6 June 2012). California Office of Historic Preservation:

Re: Catalina Heights Naval Base, Ventura, CA.

Outcome: Not listed in OHP register for state or national register.

Bethke, Alexander. Archivist. (email - 29 July 2012) NAVFAC Southwest, San Diego, CA:

alexander.bethke@navy.mil

(619) 532-2789

Re: Closure of NAVFAC Centerville.

Outcome: Waiting for reply.

Bourke, Robert, Captain, USN RET. (31 May 2012 - phone interview) Former CO Reserve Unit, NAVFAC Point Sur:

(831) 372-8930

Re: Personal experience/knowledge.

Outcome: see Appendix B: Timeline.

Byron, John. Captain:

jbyron@cfl.rr.com

Re: Personal experience/knowledge

Outcome: see Appendix B: Timelline.

Cartographic Division, National Archives & Records Administration, Washington D.C.

(Email query sent 29 July 2012):

carto@nara.gov

Re: Facility master plan and Capehart housing construction records.

Outcome: pending reply.

Dalrymple, Ed. Commander (CO). USN RET. (email - 26 July 2012) Former CO - NAVFAC Point Sur:

ekiuss@comcast.net

Re: Missile tracking.

Outcome: Never done at NAVFAC - Point Sur.

Donovan, Jim, Captain. IUSS/CAESAR Alumni Association (President):

jim_donovan53@yahoo.com

(757) 376-2019

Re: Point of contact for former service members of NAVFAC Point Sur

Outcome: Supplied membership information.

Dornblaser, Stanley P. Captain. (Telephone interview - 15 May 2012) Former CO - NAVFAC Point Sur, 1958-1960:

(503) 304-2185

Re: see Appendix B: Timeline.

Glass, Robert. (email and site visit 13 June 2012) Archivist. National Archives & Records Administration, San Bruno:

sanbruno.archives@nara.gov

(301) 837-3510

Re: Facility construction records.

Outcome: Reviewed all records on Point Sur.

Greco, John. Archivist. Naval History and Heritage Command, Washington Navy Yard. (email - 18 June 2012):

john.greco1@navy.mil

Re: MUC awards - NAVFAC Point Sur.

Outcome: Records are classified - referral to Mandatory Declassification Review Board.

Hein, Mike. Point Sur Enlisted Personnel. (email - 18 July 2012):

hein@waterandair.com

Re: Personal experience/knowledge

Outcome: No swimming pool when he was there.

Holdzcom, Jack. Master Chief. Stationed at NAVFAC Point Sur, 1970s:

jholdzcom@verizon.net

Re: Personal experience/knowledge.

Outcome: see Appendix B: Timeline.

Howell, John. (email - 11 June 2012) Archives Technician. National Archives & Records Administration.:

john.howells@nara.gov

Re: Building and standard plans - NAVFAC Point Sur.

Outcome: Referral to NARA San Bruno.

Kneedler, Robert. Lt.. (Telephone interview 2 July 2012) Assistant Construction Supervisor for original buildings, NAVFAC Point Sur:

(818) 242-1621

Re: See Appendix B: Timeline.

Manthorpe, Bill. Historian. (email - 28 July 2012):

Re: National Register Nomination for NAVFAC Cape Henlopen

Outcome: Part of larger base. No National Register nomination written.

Miller, Chris. (email - 28 Feb 2012) Ocean Acoustics Laboratory, DePoint of Oceanography, Naval Postgraduate School, Monterey CA:

Re: Historical background - NAVFAC Point Sur.

Outcome: Presentation on Point Sur by Miller - showing SOSUS era.

Naval Research Laboratory:

nrl1030@ccs.nrl.navy.mil

(202) 767-2541

Re: SOSUS connection to NAVFAC - Point Sur

Outcome: No information.

Nichols, Gina. Seabees Command Historian. (21 June 2012 - email) Port Hueneme, CA:

gina.nichols@navy.mil

(805) 982-6497

Re: Seabee construction and Self-Help Program.

Outcome: Manuals sent.

Otter, Lee. Lt. (Telephone interview 27 June 2012) Former Watch Officer, NAVFAC Point Sur, 1970's:

(408) 300-1983/426-7663

Re: Recollections of serving at the Point Sur NAVFAC.

Outcome: See Appendix B: Timeline.

Patch, Nathaniel. (18 July 2012 - email), Archivist. National Archives & Records Administration. Archives II Reference Section (RD-DC), National Archives at College Park, MD.:

nathaniel.patch@nara.gov

Re: Facility construction records.

Outcome: No pertinent records found. Referrals made to NARA's cartographic section and Mr. Glass at NARA San Bruno.

Schwartz, Steven. Archeologist. Naval Aviation Warfare Center, Port Hueneme, CA:
(805) 989-0644

Re: NAVFAC San Nicholas Island

Outcome: Currently being used as a repository for archeological specimens.

California Department of Parks. Joseph Turk Oral History (interviewed in 2001 by Susan Doniger.):

jturk@tsm-pss.com

Uribe & Associates Environmental Consulting. (510) 436-4000. Did disposal and reuse study for NAVFAC Point Sur and NAVFAC Centerville, CA in 1993. The study did not identify builders for either facility.

Outcome: no longer in operation.

Utz, Curtis, Archivist. (18 May 2012 - email) Naval History & Heritage Command, Washington, D.C. (archives@navy.mil):

curtis.utz@navy.mil

Outcome: "Navy was somewhat lax in producing and maintaining command histories in 1950's."

Waayers, Laura. Archivist. (email - 24 June 2012) Naval History & Heritage Command, Washington, D.C.:

Re: MUC awards and Command Histories - NAVFAC Point Sur

Outcome: Command Histories Reports are classified - referral to Mandatory Declassification Review Board