STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, *Governor*

CALIFORNIA COASTAL COMMISSION
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200

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STAFF RECOMMENDATION

ON CONSISTENCY DETERMINATION

Consistency Determination No.	**CD-75-99**
Staff:	MPD-SF
File Date:	7/16/1999
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60th Day:	9/14/1999
Commission Meeting:	9/14/1999

FEDERAL AGENCY: **U.S. Navy**

PROJECT LOCATION: Surface Warfare Engineering Facility (SWEF), Naval Construction Battalion Center (NCBC), Port Hueneme, Ventura County (Exhibits 1-3)

PROJECT DESCRIPTION: Establishment of Virtual Test Capability (VTC)

SUBSTANTIVE FILE DOCUMENTS: See page 18

EXECUTIVE SUMMARY

The Navy has submitted a consistency determination for the development of a Virtual Test Capability at the Surface Warfare Engineering Facility (SWEF), which is part of the Naval Construction Battalion Center (NCBC) in Port Hueneme. The project would expand the Navy's radar capabilities at the SWEF and electronically integrate the functions at the SWEF with other military missions around the country. This review comes at a time when the Commission and the Navy are currently involved in informal mediation efforts through the Office of Ocean and Coastal Resource Management (OCRM) to determine whether the existing SWEF radar facilities are affecting coastal zone resources. These efforts include OCRM convening an expert review

panel to advise the Commission on highly technical issues, including classified information which some of the panel members have the security clearance to review. As of this date, most of the panel members have been selected and the Commission seeks finalization of the panel. The panel members already selected have received the initial materials they will be reviewing; however the panel has not yet met or provided its analysis.

In agreeing to enter mediation with the Commission and seek independent verification of its analysis and conclusions concerning existing SWEF operations, the Navy has implicitly understood that such a review process is needed before the Commission can determine the facility's impacts on coastal resources. In the absence of the panel deliberations that the Commission has determined are needed to advise it on the technically complex issues raised by radar facilities at the SWEF, it would be premature to determine the consistency of the proposed VTC additions to the SWEF. The Commission lacks the necessary information at this time to find the activity consistent with the public access and recreation policies (Sections 30210-30213 and 30220), fishing, boating and shipping (Sections 30234, 30234.5, 30240, 30255, and 30701) and habitat (Sections 30230 and 30240) policies of the Coastal Act. The Commission therefore objects to this consistency determination at this time. The Navy should re-submit this consistency determination at such time that the Commission will be able to take into consideration the panel deliberations prior to determining the project's consistency with the California Coastal Management Program (CCMP).

STAFF SUMMARY AND RECOMMENDATION

I. Project Description. The Navy proposes to develop a facility called the Virtual Test Capability (VTC) at the Surface Warfare Engineering Facility (SWEF) Complex, located the on the southwest corner of the Naval Construction Battalion Center (NCBC), adjacent to La Janelle Park and Silver Strand Beach in Port Hueneme. The proposed action would combine the continuation of existing activities at SWEF with: (1) installation of new equipment; and (2) increased operations to develop the VTC.

The VTC would electronically connect Navy facility assets (e.g., laboratories and ranges) with Navy fleet assets (e.g., aircraft and ships). The network that would be established would allow engineers and technicians to integrate the use of Navy systems hardware (radar, directors, and launchers), software (computer programs), and communications devices (satellites and radios). The VTC would allow the SWEF to be interconnected with other military facilities throughout the United States in order to conduct tests that could not be accomplished with the resources of a single facility, and specifically to emulate the assets of a battle group or battle force. The network would allow the "real-time" transference of data between these facilities, thus providing realistic simulations of warfare situations. The SWEF would be the key node, or center of operations for the network and would function essentially like a switching device, channeling information among the different facilities as needed to meet the requirements of a given test.

The VTC would provide the Navy with the capability to test equipment and warfare scenarios using a mix of real, prototype, and simulated equipment. Tests would be conducted in either areal environment (e.g., using Navy ships and aircraft on a test range), test environment (using laboratories), or a completely simulated environment, depending on the requirements of individual operations. Certain tests would use a combination of environments. This capability would allow the Navy to test new equipment without requiring the use of an expensive real test environment unless necessary. It also would allow the Navy to change the mix of equipment that is linked together to provide needed testing, training, or maintenance for configurations that otherwise would be very expensive and time consuming to accomplish using only real assets.

Key elements of the proposed action include:

(1) Additional components of the AEGIS SPY-1A would be installed, including a transmitter, waveguide and antenna. However, the system would be incapable of tracking targets and would not radiate out of the antenna or outside the building. Two additional radar systems are currently in development (the SPQ-9B Phased Array Radar and the Multi-Function Radar) and would be installed and operational in FY 2002 and FY 2004, respectively.

(2) A C4 I satellite transceiver (command, control, communications computer), new C4 I radios and telephones, a Cooperative Engagement Capability (CEC), and a microwave link for local communications capabilities.

(3) Both passive and active optical systems would be installed and would be used for targeting, tracking, and engaging systems to fire weapons. Active systems would use a laser for target designation (detecting and tracking targets) and to measure distance electronically. All lasers would be Class I, eye-safe lasers, comparable to those used by the police for speed checks. The Navy defines Class I lasers as "lasers which by inherent design normally cannot emit radiation levels in excess of the permissible exposure limits."

(4) Existing launcher systems (used for simulating missile launches) would be used for new integration tests, loading training and special fault tests. Modified or improved launcher canisters also would be tested at the launcher site. Two new launchers, a Quad Pack launcher and a Slant Pack launcher, are under development and would be installed at the SWEF when available and/or required. (Note: no actual launches would occur at SWEF.)

(5) A replacement or upgrade of a fiber optic cable may be required to support the VTC network.

In addition to the new facilities, operations currently ongoing at SWEF will increase in three areas: testing, maintenance and training. The Navy's submittal included the following Table 1 comparing existing and proposed systems and operations at the SWEF:

Table 1. Comparison of Proposed Project Elements to Current Operations

Element	*Current (FY 99)*	*Proposed Action*
	CAPABILITIES	
Radar Systems	12	3 new
Optical Systems	1	2 new
Communications Systems	6	5 new
Network Systems	2	1 new
Launcher Systems	5	2 new
	ACTIVITIES	
RF Radiation	218 hours per year	42 additional hours per year
Major Maintenance Operations	4 events per year	2 additional events per year
Aircraft Operations	10, 2-4 hours per event	10 additional, 2-4 hours per event
Boat Operations	10, 2-4 hours per events	10 additional, 2- 4 hours per event

The Navy further describes additional test activities as follows:

> *Testing. Testing would continue to involve the use of aircraft and boats to test radar detection and tracking capabilities. The proposed action requires 10 additional aircraft operations and 10 additional boat operations. These operations would continue to be conducted primarily on the Point Mugu Sea Range (Sea Range), which ends 3.5 nautical miles from shore. Flight profiles would continue to be within Federal Aviation Administration (FAA) controlled airspace. Flight profiles, trajectories and flight altitudes would continue to comply with local regulatory restrictions. Boats would normally be used in the open ocean, either on or off the Sea Range, although the small boats used to support Radiation Hazard surveys would remain close to the SWEF.*

Finally, the Navy is in the process of preparing an Environmental Assessment (EA) for the proposed activity; however as of the date of production of this staff report, the EA is not available. The Navy states the EA may be published in early September. In the interim, additional information is provided in the Navy's response to a Commission staff letter asking additional questions about the VTC (see Exhibits 6 and 7).

II. SWEF/Background. The primary function at the SWEF is to support the continued improvement of warfare, combat, and weapon systems in areas such as reliability, operational capabilities, maintenance, availability, safety, and performance. The SWEF has been in existence since the 1970s and currently consists of 14 buildings and one communications tower (structure 5217) (Exhibit 3); about 50 full time (and 25 part time) employees work at the complex. Most buildings serve as engineering laboratories, and Building 1386 is a classroom training facility. Radar/director systems are located on Buildings 5186 and 1384. Building 1384 is the largest and most recent addition to the SWEF complex (Main SWEF Building, Exhibit 3). Construction of Building 1384 began in 1983, equipment installation began in 1985, and the Navy assumed full control of the building in 1986. Today, Building 1384 is an essential element of PHD NSWC's mission and is sometimes referred to simply as the SWEF. It contains a variety

of fully operational systems, including sensors and launchers. The site affords clear paths for the installed radar systems to the open ocean and allows line-of-sight flight paths to the building. Building 1384 was designed to simulate the shape of the front of the superstructure of the Navy's most modern cruisers and destroyers in order to replicate conditions experienced at sea, including the elevation at which the radar antennas are placed. It also replicates these ships' phased array capability. ("Phased array" refers to a type of radar antenna that moves electronically and contains no moving parts. Since the antenna does not physically move, it can change directions almost instantaneously and is capable of tracking multiple targets at the same time.)

The SWEF is currently equipped with a variety of combat and weapons systems, including radar, computer and communications systems, as well as laboratory spaces. The equipment and spaces are similar to those found aboard ships. SWEF is used to perform test and evaluation exercises as well as to train personnel to maintain and operate the systems. SWEF provides a cost-effective means of providing realistic, verifiable surface combat and defense systems data to the fleet. As an example of the critical nature of the work that the SWEF performs, virtually all of the combat systems software used on Navy ships is tested at SWEF prior to installation and operation aboard those ships.

III. SWEF/History of Commission Review. In September 1995 the Commission staff expressed concerns over the Navy's 1985 construction of the main SWEF building[1]. That facility was built after federal certification of the CCMP (which triggered the requirement for consistency determinations). Historic documentation available in September 1995 led the staff to conclude that the Navy had been aware prior to its construction that the SWEF facility would affect the coastal zone and would conflict with several policies of the Coastal Act. Because the Commission staff believed the SWEF facility should have undergone federal consistency review prior to its construction, the Commission staff requested that the Navy submit an after-the-fact consistency determination for the facility.

Rather than agree to submit such a consistency determination, the Navy agreed to: (1) submit a "baseline" document describing the SWEF facilities and operations; and (2) coordinate modifications to the facility with the Commission for possible federal consistency review. Modifications to the SWEF to date, prior to the subject proposal, were submitted in the form of negative determinations (ND-26-98[2], ND-52-98[3], and ND-10-99[4]). The Executive Director objected to the first two of these; the third is still pending (the Navy has extended the review

[1] These concerns were initially raised during the Commission's review of a Navy-submitted negative determination for the establishment of a Special Use Airspace (ND-115-94). The Commission staff originally concurred with the negative determination; however the Commission subsequently determined that changed circumstances led to the conclusion that the activity would affect the coastal zone, and that a consistency determination was therefore necessary. The Navy subsequently withdrew the matter from Commission consideration and did not implement the proposal.

[2] Four Radar Systems: (1) Fire Control System (FCS) MK 99; (2) AN/SPQ-9B Surface Search Radar; (3) AEGIS AN/SPY-1A Antenna Array; and (4) AN/SAY-1 Thermal Imaging Sensor System (TISS)

[3] MK 74 Radar System

[4] MK 78 Mod 1 Director

period pending completion of the mediation efforts described below). The two objections, dated April 30, 1998, included statements informing the Navy of the Commission's position that consistency determinations would need to be submitted for these activities, and included concerns expressing frustration over project-by-project analysis in the absence of an adequate cumulative/baseline analysis establishing safe exposure levels for the overall SWEF radar systems. Concerns were also expressed over the need for overall safe separation distances in a manner that would allow a description of maximum or "worst case" emission levels, as well as concerns over possible exposure to shipboard personnel transiting the harbor mouth.

In response to these objections the Navy maintained its position (in a letter dated July 17, 1998) that the activities discussed in the two negative determinations do not affect the coastal zone and that:

> *"... because of the technical nature of the subject, ongoing correspondence and 'status briefings' before the Commission have done little to resolve our differences or ease concerns. Perhaps it is time to try a new approach."*

Based on this continuing disagreement and mutual desire for a "new approach," the Commission and the Navy agreed to an informal mediation process through the Office of Ocean and Coastal Resource Management (OCRM)[5]. Through that process, described in detail in Exhibits 4 and 5, the parties have agreed that technical experts on radar should be consulted to advise the Commission and provide an independent verification of the Navy's assertions that the facilities do not pose a risk to coastal resources.

IV. Status of Local Coastal Program. The standard of review for federal consistency determinations is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) of the affected area. If the LCP has been certified by the Commission and incorporated into the CCMP, it can provide guidance in applying Chapter 3 policies in light of local circumstances. If the LCP has not been incorporated into the CCMP, it cannot be used to guide the Commission's decision, but it can be used as background information. The Port Hueneme LCP and Port Hueneme Port Master Plan (PMP) have been incorporated into the CCMP.

V. Federal Agency's Consistency Determination. The Navy has determined the project consistent to the maximum extent practicable with the California Coastal Management Program.

[5] Pursuant to federal consistency regulations 15 CFR Part 930, § 930.36 and Subpart G, § 930.110 et seq.

VI. Staff Recommendation. The staff recommends that the Commission adopt the following motion:

MOTION. I move that the Commission concur with the Navy's consistency determination.

The staff recommends a **NO** vote on this motion. Failure to receive a majority vote in the affirmative will result in adoption of the following resolution:

Objection

The Commission hereby **objects** to the consistency determination made by the Navy for the proposed project, finding that the Navy has not provided adequate information to enable the Commission to determine whether the project is consistent to the maximum extent practicable with the enforceable policies of the California Coastal Management Program (CCMP).

VII. Applicable Legal Authorities:

1. State Agency Objections. Section 307 of the Coastal Zone Management Act provides in part:

(c)(1)(A) Each Federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs.

The federal consistency regulations (15 CFR Part 930) provide:

Section 930.42 State agency disagreement.

(a) In the event the State agency disagrees with the Federal agency's consistency determination, the State agency shall accompany its response to the Federal agency with its reasons for the disagreement and supporting information. The State agency response must describe (1) how the proposed activity will be inconsistent with specific elements of the management program, and (2) alternative measures (if they exist) which, if adopted by the Federal agency, would allow the activity to proceed in a manner consistent to the maximum extent practicable with the management program.

A Commission objection to a consistency determination made by a federal agency for an activity or development that affects the coastal zone does not result in a veto of the proposed project. A federal agency may continue with a proposed project even though the Commission has objected to the consistency determination. However, Section (a)(i) of Chapter 11 of the CCMP requires Federal agencies to inform the Commission of any such action. This section provides:

If the Coastal Commission finds that the Federal activity or development project directly affects the coastal zone and is not consistent with the management program, and the federal agency disagrees and decides to go forward with the action, it will be expected to (a) advise the Coastal Commission in writing that the action is consistent, to the maximum extent practicable, with the coastal management program, and (b) set forth in detail the reasons for its decision. In the event the Coastal Commission seriously disagrees with the Federal agency's consistency determination, it may request that the Secretary of Commerce seek to mediate the serious disagreement as provided by Section 307(h) of the CZMA, or it may seek judicial review of the dispute.

2. **Practicability**. The federal consistency regulations also provide:

Section 930.32 Consistent to the maximum extent practicable.

(a) The term "consistent to the maximum extent practicable" describes the requirement for Federal activities including development projects directly affecting the coastal zone of States with approved management programs to be fully consistent with such programs unless compliance is prohibited based upon the requirements of existing law applicable to the Federal agency's operations. If a Federal agency asserts that compliance with the management program is prohibited, it must clearly describe to the State agency the statutory provisions, legislative history, or other legal authority which limits the Federal agency's discretion to comply with the provisions of the management program.

Since no issue of practicability has been formally raised by the Navy, the standard before the Commission is full consistency with the CCMP. The Commission does not believe the Navy has established in this case that compliance with the CCMP is prohibited based upon the requirements of existing law applicable to its operations.

3. **Necessary Information**. Section 930.42(b) of the federal consistency regulations requires that, if the Commission's objection is based on a lack of information, the Commission must identify the information necessary for it to assess the project's consistency with the CCMP. That section provides:

If the State agency's disagreement is based upon a finding that the Federal agency has failed to supply sufficient information (see Section 930.39(a)), the State agency's response must describe the nature of the information requested and the necessity of having such information to determine the consistency of the Federal activity with the management program.

As described fully in the Public Access and Recreation, the Fishing, Boating and Shipping, and the Environmentally Sensitive Habitat sections below, the Commission has determined that the information to be provided through the expert panel deliberations (described in Exhibits 4 and 5 and on page 13) is necessary to advise the Commission on the technically complex issues raised by these radar facilities and to enable the Commission to adequately evaluate the activity's

consistency with the public access and recreation policies (Sections 30210-30220), fishing, boating and shipping (30234, 30234.5, 30240, 30255, and 30701) and habitat policies (Sections 30230 and 30240) of the Coastal Act.

4. **Mediation**. Sections 930.36 and 930.43 of the federal consistency regulations provide for the availability of mediation in the event of a serious disagreement between a Federal agency and a State agency over either: (1) whether a proposed activity affects the coastal zone (Section 930.36) ; or (2) regarding the consistency of a proposed Federal activity affecting the coastal zone (Section 930.43). In either event, either party may request the Secretarial mediation services provided for in Subpart G, including Section 930.111, which provides:

> *The availability of mediation does not preclude use by the parties of alternative means for resolving their disagreement. In the event a serious disagreement arises, the parties are strongly encouraged to make every effort to resolve the disagreement informally. OCZM [i.e., OCRM] shall be available to assist the parties in these efforts.*

The mediation efforts involving the SWEF that the Navy and the Commission are currently engaged in (Exhibits 6 and 7) are being conducted pursuant to Sections 930.36 and 930.111.

X. Findings and Declarations:

The Commission finds and declares as follows:

A. Public Access and Recreation. Sections 30210-30212 of the Coastal Act provide for the maximization of public access and recreational opportunities, with certain exceptions for, among other things, military security needs and public safety. Section 30213 provides that "Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided." Section 30220 provides that: "Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses."

The public access and recreation issue raised by radar facilities and operations at the SWEF is whether they have the potential to adversely affect public access and recreation at Silver Strand Beach and La Janelle Park and adjacent jetty, which are located seaward of the facility (Exhibits 1 and 2) and which receive heavy public use for a variety of recreational activities. In addition, the radar operations have the potential to affect water-related activities in the harbor mouth and ocean seaward of the facility, including uses such as recreational boating and fishing, surfing, and swimming.

As it has maintained for its existing radar facilities, the Navy contends that the proposed radar facilities (and other operations involved in the VTC) would not pose any public health risks, and, as has occurred for the existing facilities, that the proposed new facilities would be tested and performed safely in accordance with Navy procedures. The Navy states:

Under the proposed action, additional components of the AEGIS SPY-1A antenna would be installed. Two additional radar (the SPQ-9B Phased Array Radar and the Multi-Spec radar) would also be installed at the SWEF complex and used for surface/air tracking exercises. Like the existing antennas, they would be located on rooftops of existing buildings within the SWEF complex and would radiate at an angle that would not impact members of the public, ships, or recreational vessels. Detailed testing would be performed before and after these radar are installed and/or rendered operational in order to ensure that no public safety hazards would result from their use. If the studies indicated a potential hazard to personnel working within the SWEF complex or members of the public, then emitter system characteristics would be modified to ensure a safe operational environment.

The ongoing use of these radar systems would be subject to the same intensive safety procedures that are currently in place, further ensuring that no impacts occur. PHD NSWC Instruction3120.1A, "Standard Operating Procedures for Radar Systems, High Power Illuminators, and Launching Systems at the Surface Warfare Engineering Facility Complex," provides requirements and specific guidance for the safe installation and operation of equipment and systems at the SWEF complex. The new radar systems would be subject to these procedures. Key points are as follows:

(1) A Subject Matter Expert (SME) would document and establish standard operating procedures (SOP) and approved parameters for system installation, modification, change and/or deviations based on the following studies.

(2) A preliminary RF/RADHAZ [Radio Frequency/Radiation Hazard] assessment would be required for the installation of the new radar system components that would render the systems operational. The purpose of the preliminary RADHAZ assessment would be to document and assess the potential risks of the new radar and identify operating parameters. The preliminary assessment would determine what the safe separation distances would be, and at what height above the ground the RADHAZ region would be located. Safe separation distances (RADHAZ zones) would be calculated using permissible exposure limits (PELs) for the controlled and uncontrolled environments per DOD Instruction 6055.11. (PELs are based upon the thermal effects of a field, that is, the actual heating of tissue due to the absorption of energy.) For search radar such as those proposed, calculations would include the rotational duty cycle of the radar. Fixed beam calculations without the rotational duty cycle also would be completed for these rotating systems, which would yield a worst-case RADHAZ distance. In the preliminary assessment, the following would be documented:

- *Location of emitter.*
- *Height above the ground or water.*
- *Type of RF emitter (i.e., search radar).*

- *Proposed radiate sectors (true coordinates).*
- *RF emission RADHAZ zones, heights and obstructions (primarily obstructions that may alter the RF transmission, such as other emitters to the side or behind the antenna or building blockage).*
- *Operating parameters, such as average power, estimated system losses, and PELs, that would be used to compute the safe separation distance. The calculation would be based on the lowest frequency of the radar since this would yield the worst-case limit.*
- *RADHAZ distance with height above the ground.*

The preliminary assessment of RF emissions would evaluate propagating beam patterns (i.e., mainlobe, sidelobes) and beam overlap area measurements for evaluating cumulative effects of RF emissions at ground level and adjacent areas near the SWEF complex. The assessment of RF emissions also would include adjacent water areas and the shipping lane (leading in and out of Port Hueneme Harbor), which is approximately 650 feet to 1,000 feet in front of the SWEF complex. The intent of this preliminary assessment is to ensure that during operation no significant levels of RF would be present in areas where the general public may be present. The assessment would show predicted RF levels where the general public may be present as being above, at or below the PELs. This assessment would be conducted with reference to an uncontrolled (public) environment.

(3) After the preliminary assessment and in accordance with OPNAVINST 5100.23, the Radiation Hazard (RADHAZ) survey would be conducted prior to operation. The surveys would establish operating parameters and assign frequencies to ensure that any impact from radio frequency (RF) emissions is confined to SWEF complex boundaries, or is focused in the air at heights (normally 60 feet) that would not affect the public. The RADHAZ surveys would confirm the systems' safe operation for personnel at SWEF (the "controlled environment") as well as the human and natural environment close by (the "uncontrolled environment").

The Navy describes its standards and frequency of testing as follows:

The surveys use RF safety standards that were originally developed by the Institute of Electrical and Electronic Engineers (IEEE) and later approved and adopted by the American National Standards Institute (ANSI) and the Department of Defense (DOD). These standards are composed of two parts. The first set of safety standards is for controlled areas or zones. Controlled areas are locations where people, due to their employment, would expect to have the potential to be exposed to hazardous levels of RF. An example would be the area immediately around SWEF as stated above. Standards for these areas are based on a limit that is 10 times the exposure that might result in

potential deleterious biological effects (0.4 watts per kilogram averaged over the whole body). In other words, the exposure that is allowed is 10 times less than that which would cause bodily harm.

The second set of safety standards relates to uncontrolled areas or zones (areas that are accessible to those other than trained personnel, including the general public). An example of the uncontrolled area is the jetty adjacent to the SWEF. The standards for these areas are based upon an exposure limit that is 50 times the level that might be required to produce potentially deleterious biological effects (0.08 watts per kilogram averaged over the whole body), or 50 times less than that which would cause bodily harm. Uncontrolled areas are further divided into two separate areas. The first is an area in which the RF levels are so low that there is no limit to the exposure allowed. The second area, referred to as the RF hazard zone or safe separation distance, is an area that has a defined permissible exposure limit (PEL).

Radiation hazard zones or safe separation distances are calculated based primarily on parameters associated with an individual radar system, including Permissible Exposure Limits (PELs), power, and antenna gain. RADHAZ calculations will vary depending on the absolute numbers used with the calculations and whether the environment is controlled or uncontrolled. In addition, most calculations do not include transmission line losses (loss of transmitter power on the way to he antenna), because they are often unknown and vary from installation to installation. In effect, this makes the calculation even more conservative.

The SWEF will operate all radar associated with the VTC within these parameters. Any further modifications needed to ensure public and personnel health and safety would be made at this time.

The new radar would be resurveyed at set intervals; spot checks are conducted every year. OPNAVINST 5100.23(E), January 1999, requires site certification, which includes a review of each radar every 3 to 5 years. This instruction would also require that any major modification to radar systems be subject to the above outlined installation and operation procedures.

Using these procedures and standards will ensure that the installation and operation of additional equipment necessary for the VTC would not create any hazard to beachgoers, boaters, jet skiers, fishermen or any other member of the public, and would therefore not restrict public access.

The BEACON Foundation contends that the Navy's consistency determination project description lacks sufficient clarity to enable an accurate impact analysis, and that a concurrence at this time would be premature, given: (1) the lack of completion of the mediation/expert panel review of the

existing SWEF facilities; and (2) the fact that the Environmental Assessment for the proposed project has not yet been published for public review (see Exhibit 10).

The Navy's analysis on pages 10-12 is similar to assertions made repeatedly throughout the Commission's consideration of the potential impact from the existing SWEF radar facilities on coastal resources such as public access and recreation. The Navy has asserted that the existing facilities are operated safely and are regularly tested (and modified, if necessary, to assure their safety). Despite these assertions the Commission has expressed concerns over whether the Navy's analyses and radar tests have provided an accurate "worst case" or cumulative impact scenario depicting the potential impacts of the SWEF radar operations. Concerns have been raised because, in past tests and analyses performed by the Navy: (1) not all existing radar equipment has been turned on; (2) some information has been withheld due to its being considered "classified"; and (3) certain assumptions about calculations estimating effects on shipboard personnel appear questionable. Concerning cumulative impacts, the Commission has sought to define, if possible, an overall "envelope" of potential impacts and determine the facility's compliance with established radar standards; such an overall analysis is essential to provide the Commission a context within which the Commission can adequately assess future modifications to the facility (such as the proposed VTC facilities and operation).

To date the Navy has not adequately described and analyzed the proposed modifications to the SWEF considered in the context of the cumulative impacts of the operation of the overall facility. Without an analysis of the additional contribution such modifications will make to the existing levels of radar emissions at the SWEF, the Commission is unable to fully analyze the effects of the proposed additional facilities and operations. The ongoing mediation efforts the Navy has agreed to join should provide the necessary issue analysis that to date have frustrated resolution of these matters.

In agreeing to enter mediation with the Commission and seek independent verification of its analysis and conclusions concerning existing SWEF operations, the Navy has implicitly understood that such a review process is needed before the Commission can determine the facility's impacts on coastal resources. In the absence of the panel deliberations which the Commission has determined are needed to advise it on the technically complex issues raised by radar facilities at the SWEF, it would be premature to determine the consistency of the proposed VTC additions to the SWEF. For these reasons, the Commission lacks the necessary information at this time to determine the activity's consistency with the public access and recreation policies (Sections 30210-30213 and 30220) of the Coastal Act.

B. Fishing, Boating and Shipping. Several Coastal Act policies provide for the protection of boating and shipping activities. Sections 30234 and 30234.5 of the Coastal Act provide for protection of commercial and recreational fishing. Section 30220 provides that coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses. Section 30255 provides that coastal-dependent developments shall have priority over other developments on or near the shoreline. Section 30701 provides a legislative

declaration that the ports of the State of California, which by definition include Port Hueneme, "constitute one of the state's primary economic and coastal resources and are an essential element of the national maritime industry."

The Navy states concerning boating and shipping activities:

> *Boating*
>
> *The use of surface craft would increase from 10 operations per year to 20, however most activity would take place on weekdays, which would minimize potential conflicts with recreational boaters. Standard navigational procedures would be used to avoid affecting other boats in the area, including visual observation.*
>
> *Commercial shipping traffic shares a portion of the Navy harbor and would continue to have unlimited access. No physical or safety issues would restrict port operations. The VTC would allow vessel traffic transiting the harbor, whether Navy ships or commercial cargo ships, to continue to do so without any restrictions. The Navy routinely coordinates with the Oxnard Harbor District to ensure no impacts to shipping occur.*
>
> *RF emissions would be unable to reach locations where commercial or recreational boats and their crews are present, as described below. Ships cannot get close enough to the SWEF to enter the RF hazard zones (safe separation distances) that are located in the area in front of the SWEF and extend toward the shipping channel that leads in and out of Port Hueneme Harbor. These hazard zones are elevated above the water level (40-95 feet) and point upwards. The radar that have safe separation distances that extend into the shipping lane emit RF at high elevations only and do not affect even tall ships. Ships are prevented from getting close enough to SWEF to enter the hazard zone because of the draft and length of the ship and the shallow depth of the channel. Port pilots and tugboats are used to guide large ships in and out of the harbor, thus ensuring that they do not inadvertently enter the shallow portions of the channel.*
>
> *An increase of ten (10) 2-4 hour aircraft operations and ten (10) 2-4 hour boat operations associated with use of the VTC would occur over or on the Point Mugu Sea Range. These operations would not require that an area be cleared of recreational or any other users, nor would the operations in any way limit or restrict recreational activities. The VTC would have no impact on recreational uses of area waters, beaches, the Channel Islands, or associated recreational facilities within the Sea Range.*

The Navy also notes that:

> *The VTC is a coastal dependent development. The radar systems must be located on the beach, adjacent to the ocean, at an elevation not exceeding that of a typical combatant ship in order to emulate ship propagation characteristics of radio frequency (RF)*

emissions, and to allow systems testing in an operationally realistic environment. The location of the VTC at SWEF would accommodate it's [sic] coastal dependent uses, and would not result in significant impacts to coastal resources.

The Commission has raised concerns over the Navy's assumptions in analyzing safe separation distances and the nearest proximity of ship traffic to the SWEF. For example, the Navy states tall ships would come no nearer than 650 ft. to the SWEF, whereas the Commission staff believes, given the configuration of the ship channel, tall ships may come as near as 350 ft. from the SWEF. These assumptions are integral to the issues being analyzed in the mediation efforts (described further in Exhibits 4 and 5). The same concerns over potential impacts on shipping from the existing facilities apply to the proposed new facilities at the SWEF. Until these issues are resolved, the Commission is unable to find that it has sufficient information to determine the project's consistency with Sections 30220, 30234, 30234.5, and 30255, and 30701 of the Coastal Act.

C. Marine Resources/Environmentally Sensitive Habitat. Section 30230 of the Coastal Act provides:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30240 provides:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

The Navy analyzed effects of its radar facilities and additional flight operations on sensitive wildlife species, including: the endangered California brown pelican, which resides in the area and breeds on Anacapa Island; the threatened western snowy plover, which breeds on Ormond Beach and at Point Mugu and may occasionally be found roosting along Silver Strand beach during non-breeding seasons; the endangered California least tern, which breeds at several beaches throughout the Port Hueneme area, including portions of Ormond Beach; and the endangered American peregrine falcon (currently proposed for removal from the endangered species list), which may visit McGrath State Beach at the mouth of the Santa Clara River, about 12 miles north of the SWEF.

The Navy's analysis includes potential impacts to birds from noise, bird strikes by test aircraft, air emissions and exposure to radio frequency (RF) emissions. The Navy concludes that: (1) noise impacts from aircraft operations "would be intermittent, infrequent, and of short duration;" (2) that "There is no evidence that the noise levels or the presence of the aircraft would significantly affect the flight behavior;" (3) that "the low number of flights ... is unlikely to cause disturbances that would adversely affect reproductive success"; (4) that "the proposed increase of 10 flights per year would have a negligible impact associated with bird strikes'; and (5) that "There is little scientific evidence to indicate that RF exposure has adverse impacts to birds." To support this last conclusion, the Navy states:

> *Eastman (1967) reviewed the available literature at the time and considered the effects of radar on bird homing and flying ability, migration, and physical damage due to heat. He considered various frequencies and powers and compared anecdotal evidence to controlled experiments on spring migrants, starling roosts, flocking birds, homing pigeons, and a host of other situations. Although there were a few anecdotes concerning birds apparently being disturbed by being beamed by radar, none of the controlled experiments supported any effects whatsoever. Eastman concluded, "radar... does not disturb the birds whose presence it detects." He noted that RF might affect flight behavior (homing or orientation), although any effect on orientation is very slight and temporary. Most controlled experiments reviewed by Eastman failed to detect any "scatter" of migrating birds when illuminated by radar, and radar has been used successfully to track migrating birds for many years. Even in those anecdotal descriptions where scattering was reported, the effect lasted only for the brief time the birds were illuminated. As soon as they flew out of the radar's beam, they re-oriented properly. Such an effect would be considered less than significant.*
>
> *Radar also may heat the bird. The degree of heating is determined by the frequency and the wattage of the radiation, the length of time the object is illuminated, as well as by the distance and size of the object from the source of radiation. A flying bird would be too far away and illuminated for too short of a time to be affected by any radar beams. It is possible that a bird could perch, or attempt to nest, on an antenna or other structure near enough to cause it to heat up. Birds are highly sensitive to heat, however, and if that were the case, the most likely scenario is that the bird would simply fly off when it began to get too hot. The effects of RF exposure are not additive. Once the bird moved away, the effects would cease. Other standard operating measures are in place (which would continue under the proposed action) to prevent birds from roosting or nesting on the facility and to minimize their exposure. These measures include visual inspections by SWEF employees and the sounding of a horn prior to radiating. Once the director begins to move, any birds perched there fly away.*
>
> *Accordingly, there would be no impact on birds from the proposed action.*

The Navy also coordinated its conclusions with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. The Fish and Wildlife Service states (Exhibit 8):

> *We concur that impacts to wildlife are not likely to increase significantly due to the increase in boat and aircraft operations You also provide data which indicate that RF emissions do not pose a threat to wildlife. This conclusion is based upon the distance birds are likely to be from the radar and if exposed, the assumption that duration of exposure will be short. ... The Service does not have any more recent data that Eastwood's "Radar Ornithology" (1967) as cited in your letter. From discussions with ... your staff, it appears that the literature search for papers describing the effects of RF emissions on wildlife has been exhausted. Consequently, the Service concurs with your findings, as the best scientific evidence indicates that there will be no effects on wildlife from the RF emissions, and the additional emissions only amount to approximately seven minutes per day.*

The National Marine Fisheries Service similarly concludes (Exhibit 9):

> *... that the proposed project is not likely to impact any species listed as endangered or threatened under the Endangered Species Act ...[and] not likely to take any marine mammals protected under the Marine Mammal Protection Act ....*

The BEACON Foundation (Exhibit 10) maintains: (1) that the Navy's consistency determination is too vague in its descriptions of the number of flights, aircraft types, and flight times, paths and locations to allow definitive conclusions to be drawn as to the project's impacts; (2) that several avian experts have submitted previous testimony expressing concerns over avian impacts from radar facilities at the SWEF; (3) that Navy air emission impacts conclusions are not substantiated by the data provided; (4) that the Navy is relying on outdated data (more than 30 years old) in concluding that RF emissions would be minimal, and, therefore, that "None of these [RF] conclusions are supported and each requires actual environmental review by the preparer in light of current scientific knowledge"; and (5) that Navy bird strike assumptions have been refuted by previous testimony from avian specialists, and, thus, that the Navy's "submission is deeply flawed ... by its use of erroneous and out of date scientific assumptions."

While the U.S. Fish and Wildlife Service and the National Marine Fisheries Service have not raised concerns over the proposal for radar and flight operation additions to the SWEF, it is not clear that they reviewed the activity taking into account cumulative impacts from the overall operations. Similar to the discussion in the previous sections of this report, the Commission concludes that in the absence of the panel deliberations which the Commission has determined are needed to advise it on the technically complex issues raised by radar facilities at the SWEF, issues which include analysis of potential avian and other habitat impacts by a wildlife specialist, it would be premature to determine the consistency of the proposed VTC additions to the SWEF. The Commission therefore lacks the necessary information at this time to find the activity consistent with the habitat policies (Sections 30230 and 30240) of the Coastal Act.

XI. Substantive File Documents:

1. U.S. Navy Consistency Determination No. CD-75-95, Virtual Test Capability (copy mailed to Commissioners separately from this report).

2. Navy SWEF Radar Negative Determinations ND-26-98, ND-52-98, and ND-10-99.

3. Navy Special Use Airspace Negative Determination CD-115-94.

4. OCRM Memos to Technical Panel Members entitled: "Charge to the Technical Panel, Materials and Other Information on the Review of the Navy's Surface Warfare Engineering Facility at Port Hueneme, California," July 19, 1999 (including attachments).

G: Land Use/Federal Consistency/Staff Reports/1999/075-99 SWEF VTC

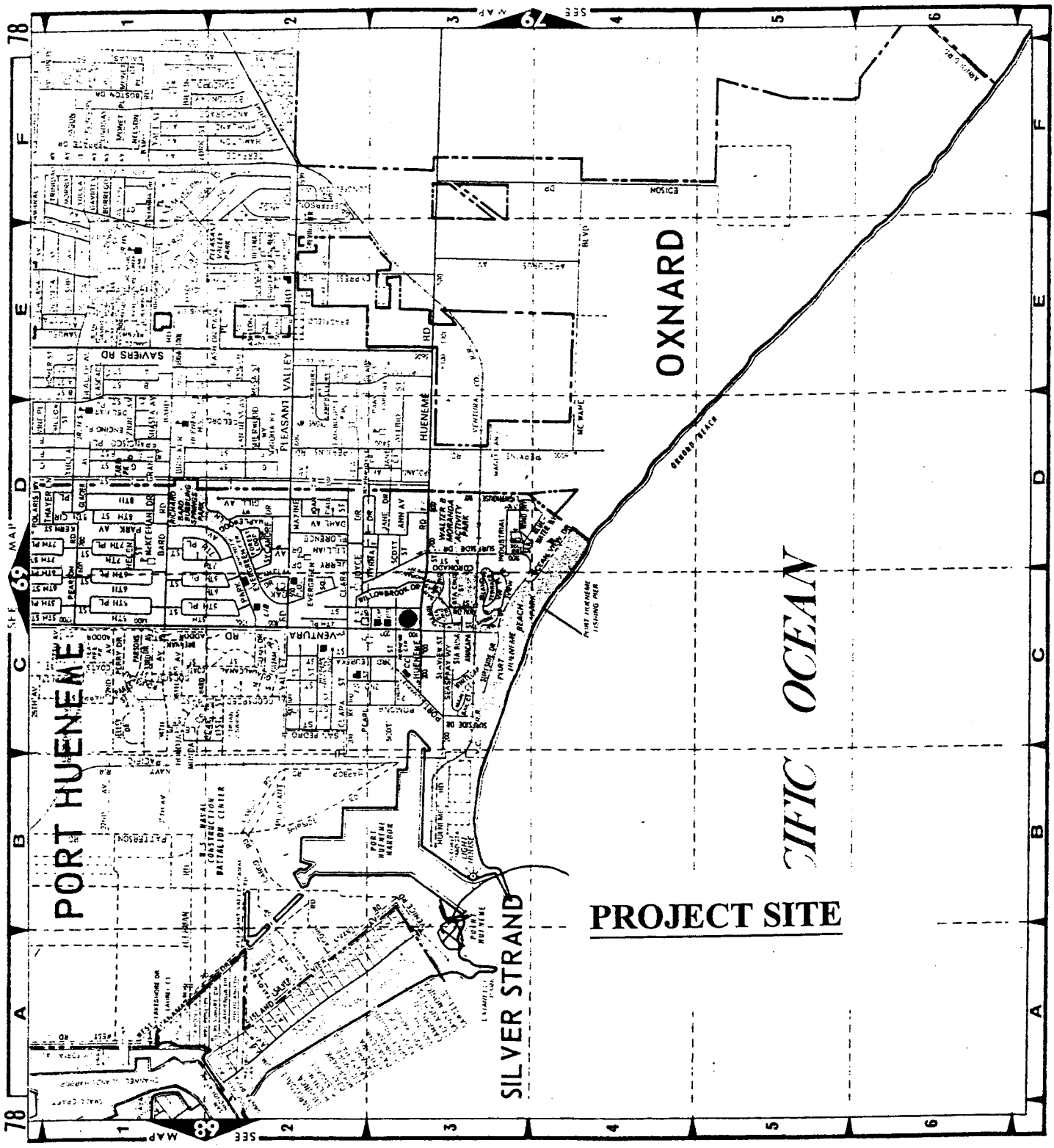

EXHIBIT NO. 1
APPLICATION NO.
CD-75-99

FIGURE 1. THE NAVAL CONSTRUCTION BATTALION CENTER, PORT HUENEME

EXHIBIT NO. 2
APPLICATION NO.
CD-75-99

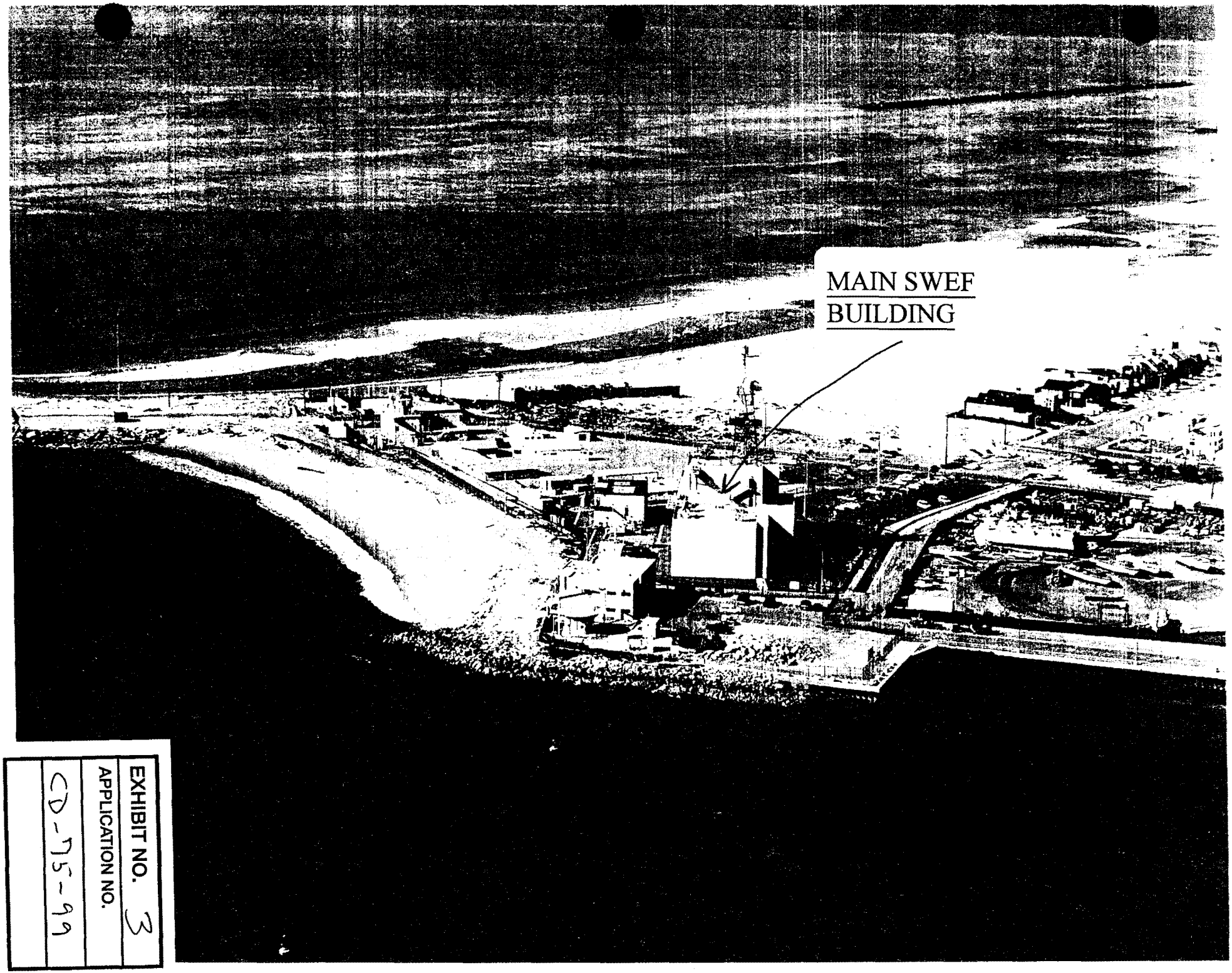

EXHIBIT NO. 3
APPLICATION NO.
CD-75-99

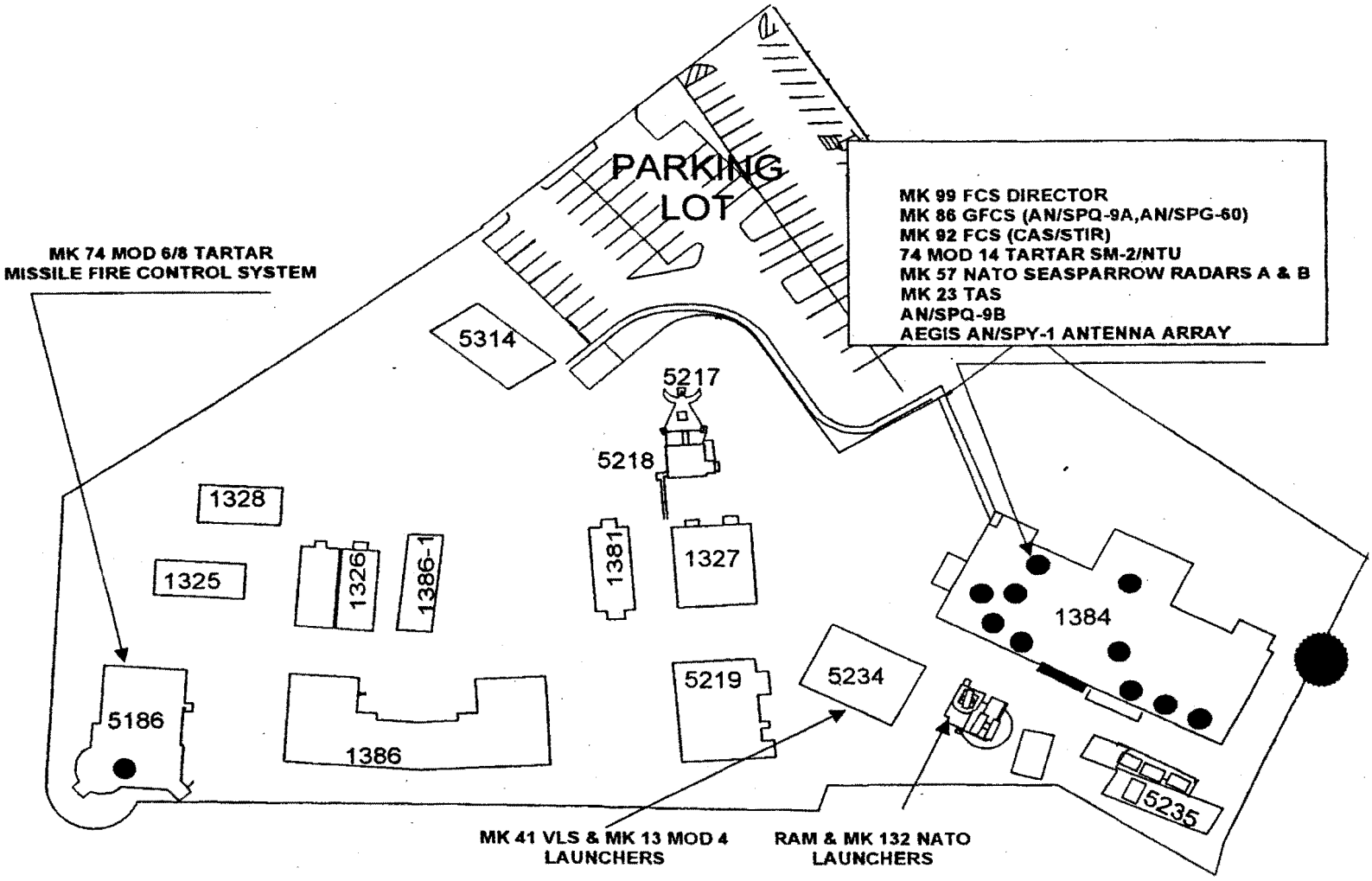

Figure 3-1
Surface Warfare Engineering Facility Complex

EXISTING SWEF BUILDINGS & RADARS

EXHIBIT 3
(cont'd.)

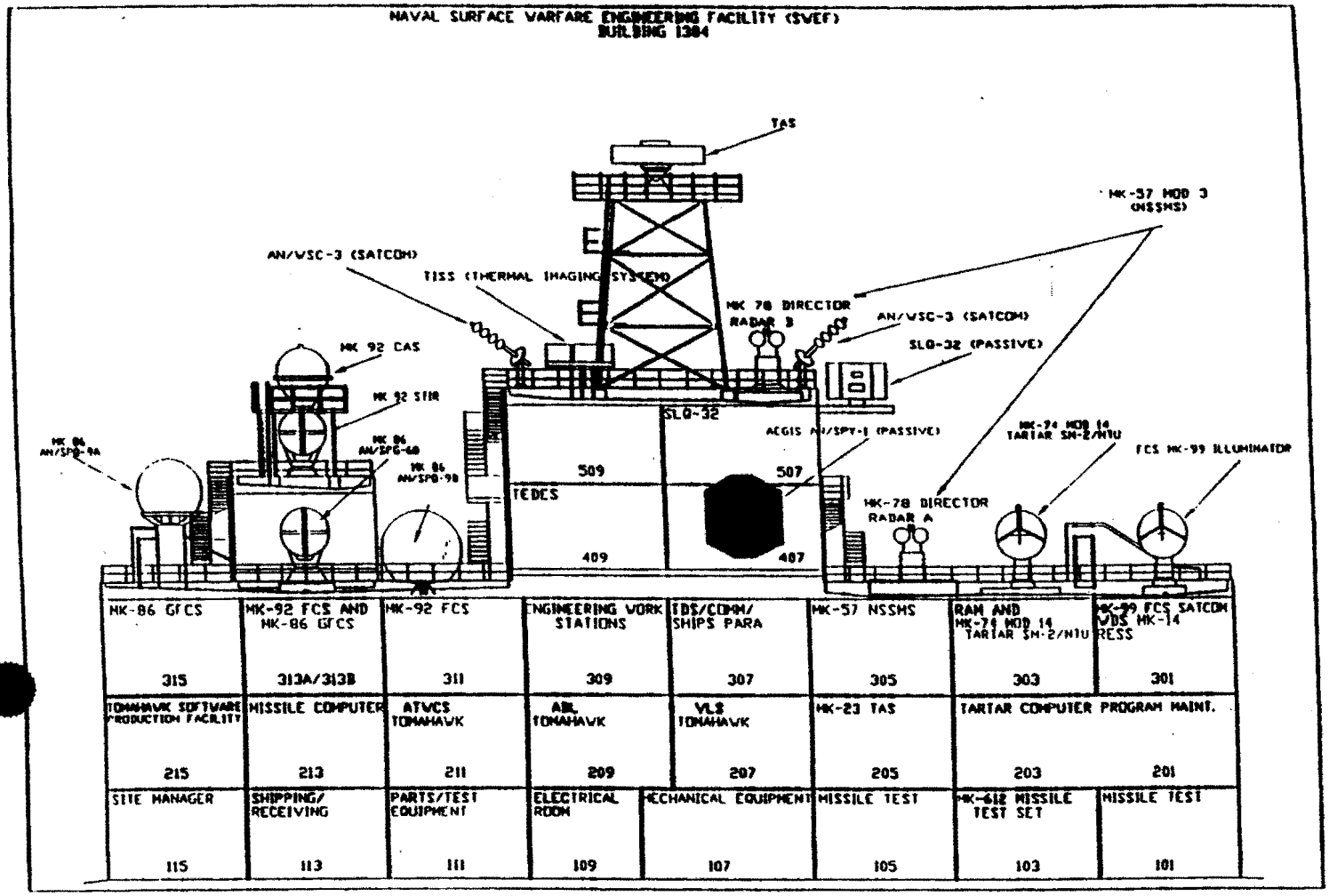

Figure 3-2
Surface Warfare Engineering Facility (Building 1384)

EXISTING SWEF
RADARS
(Main SWEF Bldg.)

EXHIBIT 3
(cont'd.)

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Silver Spring, Maryland 20910

NOV - 6 1998

MEMORANDUM FOR: Peter M. Douglas
California Coastal Commission

Chuck Hogle
U.S. Navy, Port Hueneme

FROM: Jeffrey R. Benoit JRB
Director

SUBJECT: Outcome of October 29, 1998, Meeting to Discuss the Surface Warfare Engineering Facility at Port Hueneme

This memorandum provides you with a report of the important issues, agreements and next steps identified at our October 29, 1998, meeting in San Francisco. Our discussions were fruitful and positive. The Office of Ocean and Coastal Resource Management (OCRM), as mediator, appreciates the commitment, flexibility and resourcefulness of both the Navy and the California Coastal Commission (Commission) to resolve the coastal management issues involving the Navy's Surface Warfare Engineering Facility (SWEF) at Port Hueneme, Ventura County.

This report is divided into the following sections: Purpose of the Informal Negotiations and OCRM's Role as Mediator, Proposed Negotiation Steps, Questions to Present to the Commission and the Public, the Navy's Response to the Questions, Independent Technical Review, Future Planning Actions for the SWEF, and Final OCRM Report to the Commission.

Purpose of the Informal Negotiations and OCRM's Role as Mediator

The SWEF uses various radar emissions to simulate combat scenarios to test a ship's combat systems. The Commission, and residents of Ventura County, are concerned that the radar emissions pose public health risks and may affect coastal uses (public access near the SWEF, coastal shipping, and commercial and recreational fishing). The Navy does not believe that the SWEF poses public health risks or causes coastal effects.

The Commission requested that the Navy provide, pursuant to the Coastal Zone Management Act (CZMA) federal consistency requirement, a consistency determination and other information for the SWEF. The Navy declined and, instead, provided the Commission with negative determinations.

EXHIBIT NO. 4
APPLICATION NO.

The Commission requested that OCRM informally mediate the matter. The Navy agreed. The purpose of the informal negotiations is for OCRM, as mediator, to assist the Commission in determining, relying on advice from an independent and objective technical panel, whether radar emissions from the SWEF will adversely affect the public's use of coastal resources. OCRM will provide its findings to the Commission and the Navy for appropriate action.

The Navy and the Commission have agreed that all interaction, documents, requests, etc. shall be from the Commission or the Navy to OCRM. Public involvement and interaction will occur through the Commission (either through the Commission staff or Commission meetings) and then to OCRM. OCRM will not act on or pass through information or requests provided by either the Navy or the Commission, until OCRM has obtained the agreement of the other party or, if either party requests and OCRM believes the request is appropriate and reasonable.

OCRM's point of contact for this informal negotiation is:

Mr. David W. Kaiser
Federal Consistency Coordinator
Office of Ocean and Coastal Resource Management
1305 East-West Highway, 11th Floor (N/ORM3)
Silver Spring, Maryland 20910
Voice: (301) 713-3098, extension 144; Fax: (301) 713-4367
Internet: david.kaiser@noaa.gov

The Commission's point of contact is:

Mr. Mark Delaplaine
Federal Consistency Supervisor
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, California 94105-2219
Voice: (415) 904-5289; Fax: (415) 904-5400
Internet: mdelaplaine@coastal.ca.gov

The Navy's point of contact is:

Mr. Chuck Hogle
Naval Surface Warfare Center
Port Hueneme Division
4363 Missile Way
Port Hueneme, California 93043-4307
Voice: (805) 228-8225; Fax: (805) 228-8740
Internet: hogle_chuck@phdnswc.navy.mil

Proposed Negotiation Steps

The Navy and the Commission have agreed that the informal negotiations will follow the following steps:

1. **Negotiation Questions.** The Commission staff and the Navy have agreed on a set of questions regarding the SWEF and coastal effects. The questions will eventually be used to focus OCRM's and the technical panel's deliberations regarding coastal effects. These questions are contained in this memorandum, see below.

2. **Navy Response.** The Navy shall prepare a response to these questions.

3. **OCRM Review and Report.** OCRM, the Navy and the Commission staff shall briefly review the questions and the Navy's response. Following this review, OCRM shall provide the Commission with a report that includes the questions, the Navy's response and proposed next steps. The parties shall endeavor to complete steps 1, 2 and 3 by December 16, 1998.

4. **Commission Review and Public Input.** Commission staff will transmit OCRM's report on the questions and the Navy's response to Commission members and the public on or about December 18, 1998, and will discuss the report at the Commission meeting in Los Angeles on January 12-15, 1999 (subject to availability of the Navy's response).

5. **Commission Decision.** At the January Commission meeting, the public will have the opportunity to comment on the questions, the Navy's response and the negotiation's next steps. Following review of the Navy's response to questions, public comments and Commission deliberations, the Commission will determine which issues have been resolved, which issues require additional review or request that OCRM add or modify questions.

6. **Technical Panel.** OCRM, the Navy and the Commission will agree on the make-up of the technical panel and technical panel review timeframe. OCRM will contact and secure the commitments of technical panel members. OCRM will consult with the technical panel to address those issues requiring additional review.

7. **OCRM Report.** OCRM will provide the Commission and the Navy with its report on coastal effects, based on the review by the technical panel.

Questions to Present to the Commission and the Public

OCRM, the Navy and Commission staff have agreed that the following questions are the questions and issues that need to be addressed to determine whether coastal effects from the SWEF are reasonably foreseeable. These questions, along with the Navy's responses, will be submitted to the Commission for its consideration at the January meeting.

1. **Do the radar frequency (RF) emissions from the SWEF pose a risk to people who use coastal resources?**

In answering this question, the following questions should also be considered:

1.a. Do the SWEF RF emissions affect public access and recreation at public beaches and La Jenelle Park, coastal shipping, or commercial or recreational fishing?

1.b. What is the maximum level (and duration) of foreseeable exposure that could be received by a shipboard person?

1.c. Does the evidence support the Navy's conclusion that no harmful exposure could occur on a nearby ship (including transiting ships, moored ships, dredging ships, fishing vessels, etc.)?

1.d. How does the lowered height of the radar on Building 5186 affect exposure calculations to ships and public areas?

1.e. Can reflection of SWEF radar emissions off metal ship structures focus and intensify exposure?

2. **Is there potential for adverse effects on wildlife from SWEF radar emissions?**

3. **What is the baseline worst case scenario for SWEF radar emissions in the uncontrolled environment?**

In answering this question, the following questions should also be considered:

3.a. What are the maximum RF levels that could be emitted at the same time and what would be the effect of such levels on the uncontrolled environment?

3.b. What are the maximum RF levels that could be directed at a particular point, i.e., a shipboard person, and what would be the

effect of such levels on a point in the uncontrolled environment?

3.c. What are the expected operational maximum RF levels and what effect would such emissions have on the uncontrolled environment?

3.d. Are multiple source RF emissions a factor in any worst case scenario (i.e., a ship moving through several radar beams)?

3.e. What is the distinction between RF emission capabilities "as installed" versus "as operated?"

3.f. What controls are in place to ensure that an RF standard is not exceeded?

3.g. What are the consequences to people in the uncontrolled environment if an RF standard was exceeded by various percentages? Are there thresholds above an RF standard that the Commission could use to determine whether the Commission should be concerned?

4. How will the Navy interact with the Commission in the future?

In answering this question, the following questions should also be considered:

4.a. What technical information should the Navy provide and the Commission seek, and what will be available, in reviewing modifications to the SWEF?

5. With what RF standards does the Navy comply? What do those standards mean? What is the status of evolving international RF emission standards and would the international standards be useful in determining whether SWEF RF emissions pose a risk to coastal users? How will the Navy respond if/when the international standards change?

6. How do SWEF RF emissions compare to other radar emissions?

7. To what extent is the Navy, in response to these questions, relying on information that is not available to the public?

<u>The Navy's Response to the Questions</u>

The Navy will provide a response to the questions described above. The Navy's response will build upon previous information provided by the Navy, but will be organized and written in less technical jargon. The primary purpose of the Navy's response is to provide the Commission (and the public) with information that will assist the

Commission in deciding whether the Navy's previously submitted Negative Determinations meet the requirements of the CZMA, and what questions will be provided, through OCRM, to the technical panel.

Independent Technical Review

OCRM, the Navy and the Commission have agreed, in principle, that OCRM may rely on a panel of technical experts to review the Navy's response to the questions when determining whether the SWEF RF emissions cause coastal effects. The selection of the technical panel, the charge to the technical panel, what the panel will consider, how long the panel will have and how the panel will function will be agreed to by both parties. The make up and dynamics of the technical panel will be determined once the parties agree as to which Navy answers require additional review. OCRM will contact the panel members shortly after the January Commission meeting. All interaction with the technical panel will be through OCRM. The technical panel will report to OCRM.

Once OCRM, the Commission and the Navy understand what types of expertise will be needed on the technical panel, OCRM will request appropriate organizations to participate. Potential panel members may or may not include: the National Telecommunications Information Administration, within the U.S. Department of Commerce; the Terminal Doppler Radar program, within the Federal Aviation Administration; the National Air and Radiation Laboratory, within the U.S. Environmental Protection Agency; and possibly, one or two university programs.

Future Planning Actions for the SWEF

The Navy and the Commission have agreed to improve coordination and planning for future projects or changes that may result in modifications to the SWEF. The Navy has committed to describe the process that the Navy uses when making changes to the SWEF. These procedures will clarify the Navy's process, ensure that the Commission, as well as other environmental regulatory organizations, clearly understand when in the process that they will be notified as well as the type of information that will be provided. These procedures will also, to the extent possible, ensure that information released addresses the issues at hand in a clear (easily understood) and complete manner.

Final OCRM Report to the Commission

After the technical panel reports to OCRM, OCRM will discuss the panel's findings with the Navy and the Commission. OCRM will then make its final report to the Commission. OCRM will base its finding of coastal effects on the panel's findings. OCRM will also provide

recommendations for the Commission and the Navy for final resolution of this negotiation. If the questions and Navy response are considered at the January Commission meeting, then a final report should be issued in the Spring of 1999. After this report is issued, the Commission will take a formal consistency action on the Negative Determinations that were previously objected to by the Commission's Executive Director.

---

cc: Mark Delaplaine
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, California 94105-2219

Suzanne Duffy
Commander Naval Sea Systems Command
NSWC HQ code 04V
2531 Jefferson Davis Hwy
Arlington, Virginia 22242-5160

Matthew Rodriguez
California Attorney General's Office
1515 Clay Street, 20th Floor
Oakland, California 94612-1413

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Silver Spring, Maryland 20910

April 6, 1999

MEMORANDUM FOR: Mark Delaplaine
California Coastal Commission

Chuck Hogle
U.S. Navy, Port Hueneme

FROM: David W. Kaiser
Federal Consistency Coordinator

SUBJECT: Outcome of February 10, 1999, Meeting to Discuss the Surface Warfare Engineering Facility at Port Hueneme

This memorandum provides you with a report of the agreements and next steps identified at our February 10, 1999, video conference meeting held in Silver Spring, Maryland and San Francisco, California. The Office of Ocean and Coastal Resource Management (OCRM) appreciates the assistance of the Navy in setting up the video conference and for providing conference facilities for the California Coastal Commission (Commission). OCRM is also pleased that the mediation is proceeding along the lines that we agreed to in October 1998, as outlined in OCRM's memorandum to the Navy and the Commission (November 6, 1998). The next steps that we identified, which are detailed below, will keep us moving forward in our efforts to resolve the coastal management issues involving the Navy's Surface Warfare Engineering Facility (SWEF) at Port Hueneme, Ventura County.

This memorandum is divided into the following two subject areas that we discussed at the February 10 meeting: the Technical Panel, and Citizen Observer.

The Technical Panel

Make up of the Panel. The Panel should consist of 3-5 members. The Panel members need to be objective and not be substantially involved with the Department of Defense. At least one of the Panel members should have clearance to review classified materials. It is desirable that one of the Panel members have bio-medical expertise and one of the Panel members have wildlife expertise. Public agency Panel members are preferred, but, depending on availability of the public agencies, universities or private contractors may be selected

EXHIBIT NO. 5
APPLICATION NO.

Panel Pool. **The following entities and persons are included in the Panel pool:**

Priority Panel Pool:

- **National Telecommunications Information Administration (U.S. Department of Commerce).**
- **Terminal Doppler Radar Program (Federal Aviation Administration).**
- **National Air and Radiation Laboratory (U.S. Environmental Protection Agency).**
- **Raymond Neutra (California Department of Health Services) (Bio-medical effects).**
- **United States Fish and Wildlife Service.**
- **Dr. Robert Libudy (Lawrence Berkeley National Laboratory).**
- **Dr. Craig Byus (University of California Riverside).**
- **Dr. Asher Sheppard (Consultant to Judge Advocates on similar issues, Redlands, California).**
- **Carl Durney (Department of Electrical Engineering, University of Utah).**

Secondary Panel Pool (Not in any particular order):

- **James Manitakos, Jr. (Environmental Engineer, SRI International, Menlo Park, California).**
- **Ronald Petersen (Lucent Technologies/Bell Laboratories, Murray Hill, New Jersey).**
- **Richard Tell (Richard Tell Associates, Inc., Las Vegas, Nevada).**
- **Dr. Eleanor Adair (Senior Scientist, Brooks Air Force Base, Texas) (Bio-medical effects).**
- **Dr. John Osepchuk (Full Spectrum Consulting, Concord, Massachusetts).**
- **Peter Valberg (Gradient Corporation, Cambridge, Massachusetts).**
- **W. Arthur Guy (Bio-electromagnetics Consulting, Seattle, WA).**

Selection of the Panel. OCRM will solicit the participation of the candidates listed in the priority Panel pool, see above. If 3-5 of the priority Panel pool candidates agree to participate, then the rest of the Panel pool will not be contacted. If OCRM cannot obtain the participation of 3-5 participants from the priority Panel pool, OCRM will contact the candidates in the secondary Panel pool until 3-5 have agreed to participate. Once OCRM obtains commitments from the Panel selectees, OCRM will forward to the Commission and the Navy the names and background information of the selected Panel members. The Commission will review the Panel selection at the first Commission meeting after OCRM forwards the Panel names. The Commission and the Navy will then provide OCRM with their concurrence or objection with the Panel selection, immediately following that Commission meeting.

Funding for the Panel. Funds are not available to compensate Panel members for their participation. However, the Navy has agreed to cover the travel costs for the Panel members to attend the two meetings (the first meeting is to get the Panel started and the second meeting is the report of their findings, see below under process).

Process for the Panel's Review of the Materials. Once OCRM receives concurrence from the Commission and the Navy on the make-up of the Panel, OCRM will provide to the Panel its charge and the materials. Approximately two to three weeks after the Panel receives this information OCRM, the Navy, the Commission and the Citizen Observer will meet with the Panel members (at one location or through a video-conference), to discuss the charge to the Panel and the materials, discuss the process, and answer any questions that the Panel members may have. The Panel members will then have six weeks to conduct their review.

At the end of the six week review period, OCRM, the Navy, the Commission and the Citizen Observer will meet with the Panel to discuss their findings. After this meeting the Panel members will provide their reports to OCRM. OCRM will then prepare and submit a draft report to the Navy, the Commission, the Citizen Observer and the Panel members for their review and comment. This draft report will describe the mediation process and discussions, summarize the Panel's findings and include draft recommendation's on a process to resolve the CZMA federal consistency issue. The Panel's findings will be attached to OCRM's report. Depending on the comments received, further discussions with the Panel and the parties may be necessary (either by meeting or conference call). OCRM will then submit its final report, including the Panel's findings, to the Commission.

Once the Panel is selected and while it is deliberating, all communications between the Panel and others (Navy, Commission, the public, etc.) shall be through OCRM. OCRM will pass on any additional and appropriate request or information to or from the Panel. Panel members may communicate with each other on an informal basis. Panel members will be asked to inform OCRM of any inter-Panel communications.

Materials to be Provided to the Panel. The materials that will be provided to the Panel will be:

- **Cover memorandum from OCRM.** This will include a background of the issue and this mediation, the charge to the Panel, and the process. The background information will be derived primarily from the memorandum from Mark Delaplaine, Commission, to Interested Parties (Sep. 15, 1998). The Mark Delaplaine memorandum will be attached to OCRM's cover memorandum.

- **OCRM's memorandum to the Commission and the Navy (Nov. 6, 1998).** This memorandum contains other background information and the questions that the Panel will evaluate.

- **The Navy's Response to the Questions.** This is the document that the Navy provided in response to OCRM's November 6, 1998, memorandum. The document is from J.W. Philips, Navy, to David Kaiser, OCRM (Dec. 14, 1998).

- **The Document from The Beacon Foundation to the Commission (Jan. 5, 1998)[sic].** This document responds to the Navy's December 14, 1998, response to the questions contained in OCRM's November 6, 1998, memorandum. (The Beacon document is dated January 5, 1998, but it is actually a January 5, *1999*, document.)

- **RadHaz Survey of December 1998.** This is a survey conducted by the Navy for the AN/SPQ-98 and MK-99 radars.

- **Radiation Hazard Reports of 1989, 1994, 1996 and 1997.** This will include classified versions of these reports to those Panel members who hold proper clearances.

Charge to Panel. The Panel will be charged with:

> The Panel is charged with providing, to the Navy and the California Coastal Commission (Commission), through the mediator, the Office of Ocean and Coastal Resource Management (OCRM), an objective scientific evaluation on

whether, and to what extent, the operation of the Navy's Surface Warfare Engineering Facility (SWEF) at Port Hueneme, Ventura County, California, poses impacts to any land or water use or natural resource of the coastal zone or impacts safe public access to the coastal zone. The Panel, in making its evaluations, shall use the materials and questions provided by OCRM. Each Panel member is asked to provide its own independent finding. Panel members may communicate with one another and shall inform OCRM of such inter-Panel communications. Requests to use additional information or to communicate with the Navy, the Commission or others shall be made through OCRM. Panel members shall have six weeks to complete their evaluations.

Citizen Observer

The Navy and the Commission have agreed that a citizen of Ventura County may observe the interactions between the Panel and the Navy, the Commission and OCRM. This person must be acceptable to both the Commission and the Navy. Members of community organizations are eligible, but only so long as they represent the community-at-large and not their particular organization. Each Citizen Observer candidate shall provide the following information: name, professional background, residence, a brief statement of personal interest, and a brief statement describing their objectivity and ability to represent the community-at-large and not just the interests of a particular group or organization. The Navy and the Commission will provide to OCRM lists of potential observers. OCRM, the Navy and Commission staff will then agree on a pool of mutually acceptable observers. The Commission will then select the Citizen Observer from this pool at the first available Commission meeting. OCRM will then provide the Citizen Observer with necessary information and logistical details.

The Citizen Observer may participate in the following manner:

- The Citizen Observer may attend the two formal meetings, discussed above, with the Panel (and any other meetings that may be convened with the Panel). These meetings are the initial meeting with the Panel and the meeting where the Panel members will discuss their findings with OCRM, the Navy, the Commission and the Citizen Observer.

- The Citizen Observer shall be given a copy of all materials provided to the Panel, but the Observer shall not provide its own evaluation of the materials.

- The Citizen Observer may ask questions of the Panel members in any meetings held with the Panel.

- The Citizen Observer shall not provide any materials or have any other contact with the Panel. All contact with the Panel shall be through OCRM. If the Observer wants to pose a question to the Panel, outside of the meetings, the Observer shall provide its question to OCRM. OCRM will then notify the Navy and the Commission and forward to the Panel any reasonable and appropriate question and relay any response to the Navy, the Commission and the Observer.

- The Navy has offered to provide any travel funds for the Citizen Observer to attend the two meetings with the Panel.

cc: Suzanne Duffy
Commander Naval Sea Systems Command
NSWC HQ code 04V
2531 Jefferson Davis Hwy
Arlington, Virginia 22242-5160

Matthew Rodriguez
California Attorney General's Office
1515 Clay Street, 20th Floor
Oakland, California 94612-1413

Jeff Benoit, OCRM
Karl Gleaves, GCOS

fc\ca\swefout.2.wpd

STATE OF CALIFORNIA -- THE RESOURCES AGENCY GRAY DAVIS, Governor

CALIFORNIA COASTAL COMMISSION
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200

August 4, 1999

J. W. Phillips, Captain
U.S. Navy
Department of the Navy
Naval Surface Warfare Center
4363 Missile Way
Port Hueneme, CA 93043-4307

RE: **CD-75-99,** Consistency Determination, U.S. Navy, Virtual Test Capability (VTC), Surface Warfare Engineering Facility (SWEF), Port Hueneme

Dear Captain Phillips:

On July 16, 1999, the Coastal Commission staff received the above-referenced consistency determination. In order to fully evaluate this project for consistency with the California Coastal Management Program, the staff requests the following information:

1. Environmental Assessment. The Navy has indicated that it is in the process of preparing an Environmental Assessment for the VTC. Please let us know the status of that document, its anticipated release date, and the anticipated date for the close of the public comment period.

2. Agency Coordination. The Navy states it has sent letters dated July 9, 1999, concerning biological issues to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Please let us know which offices those letters were sent to, and if possible, the individual agency contact persons who are or will be reviewing the letters. Also, please let us know any responses the Navy receives (either verbal or written) from those agencies.

3. Radar Instructions. Page 9 of the consistency determination references a Navy document entitled: *PHD NSWC Instruction 3120.1A, "Standard Operating Procedures for Radar Systems, High Power Illuminators, and Launching Systems at the Surface Warfare Engineering Facility Complex."* The Navy states these instructions provide "requirements and specific guidance for the safe installation and operation of equipment and systems at the SWEF complex." We would appreciate having the opportunity to review a copy of these "instructions" (assuming they are not classified). If this material is highly technical or too voluminous to be useful, a summary of the instructions may be appropriate.

4. RADHAZ Surveys. Pages 9-11 of the consistency determination discuss RADHAZ assessments that would be conducted on all new radar facilities to be installed, prior to their operation (and further, that annual spot checks and review of each radar

EXHIBIT NO. 6
APPLICATION NO.

every 3-5 years would also be performed). These surveys will be used to set the parameters to dictate how safe operation of the radars will be maintained. However, the consistency determination does not discuss whether or how this information will be made available to the Commission for its review.

The Navy has previously committed to providing the Commission with future survey information, and to date the Navy has been complying with this commitment. A letter from Capt. Beachy, U.S. Navy, to the Coastal Commission, dated 5 April 1996, stated:

> *We are required to do new RFR studies for new installations, relocations, and modifications.... With respect to future modifications to SWEF ..., the Coastal Commission will be notified in accordance with existing regulations and policy.*

We request that the Navy specifically clarify, in the context of this consistency determination: (1) the extent to which the Navy is willing to afford the Commission an opportunity to review and comment on the results of surveys the Navy conducts prior to commencement of normal operation of the radar equipment; and (2) the extent to which the Navy will provide future survey results to the Commission, including a description of any modifications/operating limitations to the facilities it determines to be warranted on the basis of the survey results.

5. Operating Parameters. A Navy "Presentation to California Coastal Commission" provided during a previous Commission public hearing by PHD NSWC Cmdr. Paul Benfield contained a chart which provided a detailed description of Safe Separation Distances for SWEF emitters (copy attached). Although, as Cmdr. Benfield described in his talk, the Navy used approximations to protect classified data, the chart provided useful information, including "SWEF emitter" data, generic "Navy publication" data, emission sectors, and mainbeam touchdown data for each radar. Information comparable in detail to that provided in this chart should be provided for the proposed new radar equipment. If this information is not available at this time, please explain why, when it will be available, and whether it will be provided to the Commission when it is available.

6. Active Lasers. Page 3 of the consistency determination discusses active lasers. What, if any, testing will be performed for these lasers?

7. Airspace Use. The consistency determination states in the following terms that air activities will occur "primarily" within existing Navy airspace:

The proposed action requires 10 additional aircraft operations and 10 additional boat operations. These operations would continue to be conducted primarily on the Point Mugu Sea Range (Sea Range), which ends 3.5 nautical miles from shore.

We would like to be informed as to the circumstances under which such air operations activity might *not* be conducted within the airspace (i.e., nearer to shore). What is the nearest distance to shore that such an activity could occur? What, if any, additional coordination with the Commission is the Navy willing to commit to in the event air operations occur nearer to shore than the Navy-controlled airspace?

In conclusion, we are requesting the above information in order to enable us to determine the project's consistency with the public access and recreation and marine and terrestrial biological protection policies (Sections 30210-30214, 30230, and 30240) of the Coastal Act. Please provide this information by August 18, 1999, so we can include an analysis of it in time for the August 27, 1999, mailing for the September Commission meeting in Eureka. Feel free to call me at (415) 904-5289 if you have any questions about this information request.

Sincerely,

Mark Delaplaine
Federal Consistency Supervisor

Attachment (Chart)

cc: Ventura Area Office
Chuck Hogle, U.S. Navy
Suzanne Duffy, U.S. Navy
David Kaiser, OCRM
Matthew Rodriguez, Attorney General's Office

G: LU/FC/correspondence/info request, cd-75-95

SYSTEM	CONTROLLED ENVIRONMENT		UNCONTROLLED ENVIRONMENT		EMISSION SECTORS		EMITTER MAINBEAM TOUCHDOWN DISTANCE FROM EMITTER AT SEA LEVEL AND 6 FT ABOVE THE WATER	
SWEF EMITTER NAME Height above Water used in Calculation (ft)	SWEF EMITTER (feet)	NAVY PUBLICATION (feet)	SWEF EMITTER (feet)*	NAVY PUBLICATION (feet)	Approximate bearing (degrees true)	Approximate lower antenna elevation (degrees relative)	6 FT ABOVE THE WATER ft	AT WATER LEVEL (0 FT) ft
FCS MK 92 CAS-CWI (95 ft)	141	285	<183	345	142 - 92	0	4249	4535
FCS MK 92 CAS-Track (95 ft)	61	165	<90	215	142 - 92	0	4249	4535
FCS MK 92 CAS Search (85 ft)	<1	235	<1	305	360	+1.4	4764	5126
FCS MK 92 STIR-CWI (80 ft)	376	570	<491	700	151 - 257	0	8480	9167
FCS MK 92 STIR-Track (80 ft)	127	395	<202	525	151 - 257	0	7066	7639
MK 86 SPG-60 (65 ft)	208	370	<315	500	152 - 261	0	5634	6207
MK 86 SPQ-9A (65 ft)	<1	18	<1	40	360	0	9014	9931
MK 74 MOD 14 (TARTAR SM2/NTU)-CWI (65 ft)	483	1155	<630	1405	138 - 263	0	6761	7448
MK 74 MOD 14 (TARTAR SM2/NTU)-Track (65 ft)	329	885	<615	1605	138 - 263	0	4225	4655
MK 23 TAS (117 ft)	<1	120	<2.5	295	117 - 269	0	1056	1113
MK 57 NSSMS Radar A (65 ft)	262	295	<339	360	137 - 255	0	3380	3724
MK 57 NSSMS Radar B (95 ft)	262	295	<339	360	117 - 260	0	5099	5443
TARTAR MK 74 MOD 6/8/A/N/SPG-51C-Track (40 ft)	238	840	<456	625	133 - 184	0	2435	2865
TARTAR MK 74 MOD 6/8/A/N/SPG-51C-CWI (40 ft)	N/A**	1155	N/A**	1405	133 - 184	0	N/A***	N/A***
AN/SPQ-9B (70 ft)	<1	Not Shown	<1	Not Shown	360	0	7334	8021
FCS MK 99 (65 ft)****	<50	1160	<50	1415	360	+5	Mainbeam Does Not Touch Down	Mainbeam Does Not Touch Down

* Calculations were performed using approximate Permissible Exposure Limits (PELs) to calculate safe separation distances. This was done because the actual PELs used to calculate these distances in this environment are derived from the operating frequency of the emitter, which is classified technical information and not releasable. In order to provide releasable data , a PEL was calculated from an approximate operating frequency of the emitter and subsequently used to calculate the safe separation distances shown. Using the actual PEL (actual operating frequency) yields a safe separation distance less than those shown above. In other words, the values in this table representing safe separation distances are greater than actual.

** System operates in Dummy Load. Safe separation distances are 949 ft and <1231 ft if operated in the Controlled and Uncontrolled environments respectively.

*** System operates in Dummy Load. Mainbeam touchdown distances if operated are 4870 ft and 5730 ft from the emitter at 6 ft above water and at water level respectively.

**** FCS MK 99 transmits at high elevations only. Therefore, the safe distances shown represent distances from the antenna where near field radiation is present and sidelobe energy. The antenna does not point into the shipping lane or on the ground/water in front of SWEF.

General Note: Safe Separation Distances were calculated using emitter characteristics in the RADHAZ survey reports and proprietary software which uses the near field gain of the antenna where applicable.

Mainbeam Safe Separation Distances for SWEF emitters in Controlled and Uncontrolled Environments (Worse case based on Navy Publication and specific to SWEF installations as presently operated).

DEPARTMENT OF THE NAVY
PORT HUENEME DIVISION
NAVAL SURFACE WARFARE CENTER
4363 MISSILE WAY
PORT HUENEME, CALIFORNIA 93043-4307

IN REPLY REFER TO:

5050
Ser 01/25
August 17, 1999

Mr. Mark Delaplaine
Federal Consistency Supervisor
California Coastal Commission
49 Fremont Street, Suite 2000
San Francisco, CA 94105-5200

Dear Mr. Delaplaine:

In response to your letter of August 4, 1999, the following additional information in support of CD-75-99 is provided:

1. Environmental Assessment (EA). The EA is in internal Navy review. Release is expected by September 1999. Public notification will be pursuant to Navy policy as contained in OPNAVINST 5090.1B CH-1, 2 February 1998. The policy states that a summary of the Finding of No Significant Impact (FONSI) will be published for three (3) consecutive days in the Los Angeles Times and the Ventura County Star. Any interested parties will receive a direct mail copy.

2. Agency Coordination. Copies of letters and responses are enclosed.

3. Radar Instructions. A copy of the instruction is enclosed.

4. RADHAZ Surveys. The RADHAZ surveys will be forwarded to the Commission for review after the surveys have been completed for a particular radar system. The Navy will answer questions that the Commission has regarding the surveys. We will continue to provide the RADHAZ survey results as they are completed, including a description of any modifications/operating limitations to the facilities that the survey determines are warranted.

5. Operating Parameters. The information is not currently available because it is developed at the time of radar installation. The information will be provided to the Commission as part of the RADHAZ survey results.

6. Active Lasers. All lasers would be Class I eye-safe lasers. No site specific testing at SWEF is performed or required prior to use.

7. Airspace Use. The Navy intends to continue to conduct flight operations, using established flight rules (including distance from shore, height above ground and other parameters) which are regulated and enforced by the FAA and local airport authorities. The nearest distance to shore that flight operations can occur is 2000 feet. This is in accordance with 14 CFR Part 91, Subpart B, "Flight Rules," Section 91.119, "Minimum Safe Altitudes, General." The flight rules apply to all government, commercial and private flights. Navy operations will continue to comply with all regulatory restrictions. Historically, only non-availability of Point Mugu Sea Range airspace has caused air operations to be conducted off the Range. As a result, the Navy has not planned any additional coordination with the Commission.

EXHIBIT NO. 7
APPLICATION NO.

We appreciate your interest and look forward to continuing to work with the Commission and community. If you have any further questions, the Navy point of contact is Chuck Hogle, PHD NSWC, at (805) 228-8225.

Sincerely,

P. K. BENFIELD
Commander, U.S. Navy
Acting

Enclosures: 1. CBC Port Hueneme letter 5090/PW420GPof July 16, 1999
(to U.S. Fish and Wildlife Service)
2. CBC Port Hueneme letter 5090/PW420GP of July 16, 1999
(to National Marine Fisheries Service, Southwest Region)
3. U.S. Fish and Wildlife Service letter of July 30, 1999
4. U.S. National Marine Fisheries Service letter of August 10, 1999
5. PHDNSWCINST 3120.1A

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

July 30, 1999

Ronald J. Dow, Director
Environmental Division
Department of the Navy
Naval Construction Battalion Center
1000 23rd Avenue
Port Hueneme, California 93043-4301

Subject: Request for Concurrence on Findings for Expansion and Enhancement of Surface Warfare Engineering Facility, Port Hueneme, California

Dear Mr. Dow:

The U.S. Fish and Wildlife Service (Service) has reviewed your letter dated July 16, 1999, concerning the Navy's proposal to expand and enhance the capabilities of the Surface Warfare Engineering Facility (SWEF) at the Port Hueneme Division of the Naval Surface Warfare Center, California. The current SWEF supports a variety of radar, computer, and communications systems, as well as laboratory space, which are used to perform test and evaluation exercises and for training. The radar systems are atop a five-story building on the base and are directed toward the ocean. Aircraft and ship operations occur offshore and on the Point Mugu Sea Range. The SWEF has operated for 15 years.

The proposed projects assume continuation of current SWEF activities, combined with new equipment to develop the Virtual Test Capability (VTC). The VTC is needed to maintain state-of-the-art combat weapons and self-defense system readiness. The new elements proposed are as follows:

1. In terms of capabilities, additions would include three new radar systems, two new optical systems, five additional communications systems, one new network system, and two new launchers.

2. Activities will be increased as follows: 42 hours per year of RF radiation in addition to the current 218 hours per year; two more major maintenance events per year; a doubling of aircraft operations with 10 additional 2-4 hour events per year; and a doubling of boat operations with 10 additional 2-4 hour events per year.

EXHIBIT NO. 8
APPLICATION NO.

3. Support requirement increases will include the addition of 25 support personnel, use of 1.1 additional megawatts of power per year, and additional consumption of 96 gallons of water per day. No additional natural gas would be needed.

Your letter indicates that an environmental assessment and coastal consistency determination are being prepared. The Service requests that copies of these documents be sent to us for review in addition to the information provided thus far.

The potential effects on wildlife species from the operation of the SWEF are listed in your letter as noise, bird strikes, air emissions, collision, and radio frequency (RF) emissions. We concur that impacts to wildlife are not likely to increase significantly due to the increase in boat and aircraft operations. You also provide data which indicate that RF emissions do not pose a threat to wildlife. This conclusion is based upon the distance birds are likely to be from the radar and if exposed, the assumption that duration of exposure will be short. Also, you state that there have been no such impacts in the past, and that horns and the movement of equipment will cause birds to move away from radar sources. The Service does not have any more recent data than Eastwood's "Radar Ornithology" (1967) as cited in your letter. From discussions with Gail Pringle of your staff, it appears that the literature search for papers describing the effects of RF emissions on wildlife has been exhausted. Consequently, the Service concurs with your findings, as the best scientific evidence indicates that there will be no effects on wildlife from the RF emissions, and the additional emissions only amount to approximately seven minutes per day.

If you have any questions about our comments, please call Rick Farris of my staff at (805) 644-1766.

Sincerely,

Diane K. Noda

Diane K. Noda
Field Supervisor

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

AUG 10 1999 F/SW3:CCF

Mr. Ronald J. Dow
Director, Environmental Division
Department of the Navy
Naval Construction Battalion Center
1000 23rd Avenue
Port Hueneme, California 93043-4301

Dear Mr. Dow:

This letter responds to your July 16, 1999, request for the National Marine Fisheries Service (NMFS) to concur with the Department of the Navy's findings that the proposed expansion and enhancement of the Surface Warfare Engineering Facility (SWEF) at the Port Hueneme Division of the Naval Surface Warfare Center, California will have no impact on marine mammals and sea turtles under the jurisdiction of NMFS. Your letter concludes that the proposed action, which includes an increase in 10 aircraft operations and 10 boat operations per year, will have no impact to fish, intertidal life forms or marine mammals.

After reviewing your letter and the July, 1999, Coastal Consistency Determination, I have concluded that the proposed project is not likely to impact any species listed as endangered or threatened under the Endangered Species Act. The project is also not likely to take any marine mammals protected under the Marine Mammal Protection Act (MMPA). Because of the sufficiently high altitudes of the aircrafts (2,000 feet and above) over nearby haulouts and open ocean, and the very low potential for a boat collision with a marine species, the likelihood that a marine mammal or sea turtle would be impacted by the proposed action is extremely low. Therefore, NMFS concurs with your findings of no impact.

Thank you for coordinating with NMFS regarding this proposed project. If you have any questions, please contact Ms. Christina Fahy at (562) 980-4023.

Sincerely,

Rodney R McInnis

Rodney R. McInnis
Acting Regional Administrator

EXHIBIT NO. 9
APPLICATION NO.

cc: Ken Hollingshead - F/PR

The Beacon Foundation
Box 352
3844 Channel Islands Blvd
Oxnard, CA 93035
A Nonprofit Public Benefit Corporation

Mr. Mark Delaplaine
Federal Consistency Supervisor
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

August 19, 1999

SWEF "Virtual Test Capability"

Dear Mr. Delaplaine:

The Consistency Determination submission by the U.S. Navy dated July 14, 1999 states (page 5): "The purpose of establishing the Virtual Test Capability (VTC) is to enhance and expand SWEF [Surface Warfare Engineering Facility] capabilities...."

The proposed action purports to be in accord with the Federal Coastal Zone Management Act (CZMA) Section 307 requirement that the proposed action be "...consistent to the maximum extent practicable" with the California Coastal Act.

Pursuant to CZMA regulations (15 CFR 930.34) Federal agencies are required to provide the State with a consistency determination for proposed activities affecting the coastal zone "... at the earliest practicable time in the planning or reassessment of the activity..." and "... before the Federal agency reaches a significant point of decision making in its review process."

This proposal comes to the Coastal Commission after the proposed action has been internally approved and funded, desired implementation is imminent, and a public relations campaign has been launched. The professed urgency occasioned by the Navy delay in submission must not be allowed to short cut full Coastal Commission review in compliance with its obligations under the Coastal Zone Management Act.

The submission fails the CZMA regulation requirement (15 CFR 930.39) that:

> "The consistency determination shall ... include a detailed description of the activity, its associated facilities, and their coastal zone effects, and comprehensive data and information to support the Federal agency's consistency statement."

This consistency determination fails to provide the reader with even the most basic information necessary to understand the nature and scope of the proposed action.

EXHIBIT NO. 10
APPLICATION NO.

Withholding of the Environmental Assessment for the Proposed Action.

The paucity of information in the consistency determination is glaring in view of the Navy announcement that contemporaneously with the consistency determination it is also completing an Environmental Assessment (EA) for the proposed action. The Navy has announced that both the consistency determination and the EA will be completed this summer. Under these circumstances it violates informed decision making to ask the CCC to approve a consistency determination without providing the Environmental Assessment for Coastal Commission review.

Leap Froging the Lacking Baseline.

A decision maker cannot rationally act on the consistency determination or the Environmental Assessment without an underlying baseline environmental review of existing operations of the Surface Warfare Engineering Facility. The decision maker is being asked to evaluate a proposal to "enhance and expand" SWEF operations when there has never been an environmental review of the SWEF operations to which the proposed action is additive.

The Coastal Commission has been seeking an after- the-fact consistency determination on SWEF operations since September of 1995. In August 1995 The Beacon Foundation provided the Commission with a copy of a Navy preconstruction report detailing "unavoidable" radio frequency and other coastal zone impacts of SWEF operations. These impacts were described in the Navy pre-construction document as violations of Coastal Act policy. Despite actual knowledge of potential impacts and despite an obligation under the Coastal Zone Management Act to submit a consistency determination, the Navy proceeded to build and operate the facility without ever completing or filing an environmental review with the Coastal Commission or any other agency.

After first claiming that a consistency determination had been filed, the Navy finally admitted in 1998 that it can find no such environmental documents regarding the SWEF. Despite this admission, the Navy refuses to submit an after-the-fact consistency determination. This impass caused the CCC Executive Director to initiate an informal mediation of this "serious disagreement" in August of 1998. The Navy consented to participate and a year has been spent establishing ground rules and selecting a panel of experts to advise the Coastal Commission. The Office of

Coastal Resource Management of the U.S. Department of Commerce is facilitating the mediation and it describes the process as follows:

"The purpose of the informal negotiations is to assist the Commission in determining, relying on input from an independent and objective technical panel, whether radar emissions from the SWEF will adversely affect the public's use of coastal resources and the resources themselves."[1]

The Navy has had since 1985, when it commenced construction of the SWEF, to submit a consistency determination on SWEF operations. It has chosen not to.

The consistency determination for the proposed additions to SWEF operations follows bizzare logic. By this filing, the Navy acknowledges that the new actions require a consistency determination while continuing to deny that a consistency determination is required for the underlying SWEF operations to which the proposed action is added.

The consistency determination filing is an attempt to leap frog over the informal mediation. At a minimum, consideration of additive proposed actions needs to await completion of the informal mediation process. If, in the end, the Coastal Commission affirms its prior staff determination that SWEF operations may impact the coastal zone, environmental documentation will be required on the whole operation and not just on its expansion and enhancement.

Analytical Elements Missing.

The consistency determination withholds the specific functional parameters of the proposed action. Aircraft, ship, radar and laser operations are all elements. However, no comprehensive data is provided on characteristics of the chosen equipment or on the manner in which it will be operated. Under these circumstances, it is impossible to evaluate the conclusions of no impact on human and biological resources.

To illustrate the consequences of withholding comprehensive data, we comment below on the consistency determination treatment of impacts of aircraft on avian species. This exhibits the lack of facts necessary to evaluate the conclusions stated and also illustrates erroneous understandings of science and avian behavior.

---

[1]. David Kaiser "Memorandum for: John D'Andrea, Ed Mantiply, and Robert Beason" July 19,1999.

Aircraft and Avian Impacts

A key element of the proposal involves use of aircraft. The Consistency Determination (page 2) indicates the SWEF was sited to "... afford clear paths for the installed radar systems to the open ocean and allow line-of-sight flight paths to the building." The proposed action would (page 2) "... test equipment and warfare scenarios using a mix of real, prototype, and simulated equipment." Only a fragmentary description is provided of aircraft operations:

(1) The Number of Aircraft is Unlimited. The "Proposed Action" section of the consistency determination (page 4) states "10 additional aircraft operations" will be required annually. "Aircraft operations" are not further defined in the text and Table 1 (page 4) offers only the additional information that they will be "2-4 hours per event." No limitation is stated on use of multiple aircraft during an event or on repeated passes during an event.

(2) The Type of Aircraft is not Defined. The "Proposed Action" section (page 4) contains no information whatsoever on the type of aircraft to be utilized. Elsewhere, in comments on noise (page 14), an anecdotal comment appears that jet aircraft used would be "primarily Lear jets:"

(3) Flight Profiles are Neither Defined nor Limited. The "Proposed Action" section (page 4) states flight operations would be "conducted primarily on the Point Mugu Sea Range (Sea Range), which ends 3.5 nautical miles from shore." This would allow up to half of the operations to be somewhere outside the range including closer to the shoreline or to the Channel Islands National Park. Precisely limited flight corridors need to be defined if adjacent restricted habitat airspace is to be avoided. Instead, only the uninformative comment is offered that "Flight profiles, trajectories and flight attitudes would continue to comply wth local regulatory restrictions." Although not disclosed in the "Proposed Action" section of the consistency determination, it is elsewhere noted (page 15) that "... flight altitudes of 100 feet to 6,000 feet above the ocean surface for Lear jets, reduce the potential for bird strikes ...." This comment suggests some test flights will be as low as 100 feet from the surface of the ocean but provides no actual flight profiles and geometries.

(4) No Restrictions are Imposed on Times of Operation. There is no limitation provided on either time of day or season of the year of flight operations.

Absent the four above categories of information regarding aircraft usage, the Coastal Commission lacks the "detailed description of the activity" and the "comprehensive data" the proponent is required to provide. Based on what is provided, no evaluation by the Coastal Commission is possible that will support the Navy conclusion that the proposed action has no impact on coastal zone resources protected by policies of the Coastal Act. The filing is not only deficient for it failure to include an adequate description of the proposed action. It is also deficient for its often erroneous and unsupported scientific conclusions regarding the types of impacts that could result from actions of the type proposed. This is illustrated below in a review of the consistency determination conclusions regarding birds.

Impacts on Avian Species

The Consistency Determination lists avian species in the general vicinity of the SWEF. It fails to acknowledge the significance of the location of this facility in the midst of an ecologic area of great significance and the role of the facility itself as a habitat. Within five miles to the south of the SWEF facility are the Mugu Lagoon and Ormond Beach. Mugu Lagoon is designated by the National Audubon Society and the American Bird Conservency as a "globally" significant habitat. To the southwest some 12 nautical miles is Anacapa Island, a northern Channel Islands that is also recognized as a globally significant habitat. To the Northwest some 6.5 miles [2] is McGrath State Beach, a nesting area for the endangered snowy plover. In the immediate foreground of the SWEF is the entrance to the Port of Hueneme and the upwelling of the Hueneme marine trench -- a natural attraction for feeding birds and marine mammals.

Unlike the July 14, 1999 consistency determination, a 1994 Navy Environmental Assessment prepared by the same command (for a now abandoned proposal for special use airspace at the SWEF) did correctly recognized the habitat significance of the SWEF site as follows:

> "The SWEF and surrounding area provide an actual or potential habitat or migration area for endangered species. Those endangered species actually sighted in the area include the northern elephant seal, the California brown pelican, and the California least tern."[3]

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2. The consistency determination (page 14) erroneously states a distance of "about 12 miles north."

3. March 1994, Page 34.

The July 14, 1999 consistency determination mentions the presense throughout the year of the California brown pelican but fails to consider the extraordinary numbers found in the immediate area of the SWEF. The consistency determination erroneously states that the peregrine falcon "has not been observed in the Port Hueneme area".

At the March 10, 1998 CCC study session regarding SWEF operations (in which the Navy participated) the Commission received testmony of two eminent avian experts -- Brian Walton, Coordinator of the Predatory Bird Research Group at the University of California at Santa Cruz and Dr. Franklin Gress, Research Specialist with the California Institute of Environmental Studies. In respective letters on file with the Commission, Dr. Gress reported "the number of pelicans roosting on mainland sites in the potentially impacted area [of the SWEF] on any given day during the breeding season varies widely, but could be as many as 3,000." and Mr. Walton reported "I have seen peregrines on the SWEF building ...." [4]

Noise.

The consistency determination (page 15) asserts: "There is no evidence that the noise levels or the presence of aircraft would significantly affect the flight behaviour of birds." However, contrary to this assertion, a critically important impact of the proposed action on the California brown pelican, an endangered species, is disclosed in the Consistency Determination and then dismissed as follows (page 14-15):

> "Flights of Lear jets and helicopters on the Sea Range could disturb brown pelicans while nesting (March-July) at the west end of Anacapa Island or foraging over the ocean in the flight path. The low number of flights, however, is unlikely to cause disturbances that would adversely affect reproductive success. Infrequent disturbance of foraging brown pelicans would affect few individuals and would have no adverse effect on their survival."

The preparer knows that sound levels on West Anacapa Island and on flight paths over water may be at a decibel levels sufficient to cause scatter and flee harrassment of brown pelicans. However, these noise calculations are not disclosed nor is any factual basis provided for the Navy conclusion that only a "few individuals" would be affected and that it would have "no adverse effect on their survival" or reproductive success.

---

4. Letter of Franklin Gress to Mark Delaplaine, March 6, 1998 and Letter of Brian Walton to Mark Delaplaine, March 18, 1998.

The number and density of brown pelicans on Anacapa Island is extraordinary particularly during the breeding season which in most years is February-September[5] not March-July as stated in the Consistency Determination. The land area of all parts of Anacapa Island taken together is just 1.1 square miles. During the breeding season "... as many as 6,000 pairs of brown pelicans may be nesting on Anacapa Island; in addition, an estimated 2,000-3,000 non breeders may also be present." [6]

It is well known in the scientific literature that noise, including aircraft noise, can have a significant impact on nesting birds and in some species these consequences may include flushing from nests and resultant damage or abandonment of nesting sites, eggs or newborns. Regarding pelicans:

> "Both Amercan white pelicans and brown pelicans appear to be particularly susceptible to disturbance. Pelican biologists have discovered that low-flying aircraft can contribute to dramatic reductions in survivorship of young and in overall productivity of a nesting colony."[7]

Anacapa Island is part of the Channel Islands National Park and is within the Channel Islands National Marine Sanctuary. West Anacapa Island has been given additional protection by the State of California as one of 19 ecological reserves established by the State in marine and esturarine environments.

The State of California established the Anacapa Island Ecological Reserve to protect the brown pelican fledging area on West Anacapa Island by, among other things, restricting all public entry into the area during the period January 1 to October 31. Other California restrictions expressly limit noise.

Air Pollution

The consistency determination concludes (page 15) that "Air emissions from the proposed action would not be expected to significantly impact birds" Detailed

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5. Letter of Franklin Gress to Carl Thelander, March 26, 1996.

6. Ibid.

7. U.S. Department of the Interior, Report on Effects of Aircraft Overflights on the National Park System, July, 1995, page 115.

calculations of carbon monoxide and other emissions are reported. In order to make these calculations the preparer had to utilize specific and undisclosed information regarding the number and type of aircraft, flight paths, and geometries. This information is required to evaluate the conclusion that a lack of significant impact is "expected."

RF Exposure

A single scientific work dated 1967 -- more than thirty years ago -- is cited to support the Consistency Determination statement that: "There is little scientific evidence to indicate that RF exposure has adverse impacts to birds." Fundamental changes have occured in emitters and in knowledge of the effects of their microwave emissions:

> "Technological advances have increased the output power of microwave emitters several-fold during the past 30 years, enhancing concerns over inadvertent human exposure."[8]

and:

> "Research has shown that exposure to microwave radiation can cause behaviorial changes in man and laboratory animals that range from perception of warmth and sound to high body temperatures that can result in grand mal seizures and eventual death. In laboratory animals, trained behavior can be either perturbed or stopped outright."[9]

and further:

> "Performance of cognitively mediated tasks may be disrupted at levels of exposure lower than that required to elicit behaviorial thermoregulation. Unlike disruption of performance of a simple task, a disruption of cognitive function could lead to profound errors in judgment due to alterations of perception, disruption of memory processes, attention, and/or learning ability, resulting in modified but not totally disrupted behavior." [10]

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8. John D'Andrea, Naval Health Research Center Detachment, Brooks Air Force Base, Texas, "Behavior Evaluation of Microwave Irradiation", Bioelectromagnetics 20:64-74 (1999) page 64.

9. Ibid.

10 Ibid, page 69.

In dismissing effect of RF on avian species, the Consistency Determination states that all RFR effects on birds are temporary; that "A flying bird would be too far away and illuminated for too short a time to be affected by any radar beam;"[11] that birds roosting on radar antennas are sensitive to heat and will "simply fly off when it began to get too hot"; that RF effects are not additive; and that once a radar begins to move "any bird perched there fly away."[12] None of these conclusions are supported and each requires actual environmental review by the preparer in light of current scientific knowledge. Such a review must include full disclosure of the proposed action. This is not provided in the document now before the California Coastal Commission.

Bird Strikes.

The Consistency Determination comment on bird strikes is based on the premise (page 15) that "The proposed increase of 10 flights per year would have a negligible impact associated with bird strikes." The proposed action is not "10 flights" but rather 10 flight "periods" that will utilize undisclosed numbers, types, speeds, passes and manuvers of aircraft. Impacts of the actual proposed action are not considered in the Bird Strike discussion.

Furthermore, the bird strike "negligible impact" conclusion depends on the fanciful belief (page 15) that "The brown pelican is a low-altitude forager, usually at heights below 60 feet." The authority for this belief is "PHDNSWC 1995, " a document not further described and not listed in the Reference section of the Consistency Determination.

The assertion that pelicans are low-altitude foragers is intended to obviate concern that proposed action flights as low as 100 feet would encounter these birds. In its previous consideration of the SWEF Special Use Airspace proposal, the Commission received expert testimony debunking the very same Navy assertions regarding pelicans.

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11. The preparer assumes birds fly across and not toward radar emitters such as those on a stationary structure like the SWEF.

12. The consistency determination notes (page 2) that among radars at the SWEF are those with "phased array capability" defined as "a type of radar antenna that moves electronically .... [and] does not physically move...." It is also the case some SWEF radars are encased in radomes and, as to these, even if their antenna move this movement is invisible.

Carl Thelander, Director of the Western Foundation of Vertebrate Zoology stated in a comment on file with the Commission dated March 27, 1996:

> "It is my opinion, contrary to the [SWEF Special Use Airspace] EA/SEA, there is a very high probability of mid-air collisions occuring between test aircraft and Brown Pelicans .... I believe further analysis will reveal that Brown Pelicans regularly fly at or above 100 feet, especially when travelling between Anacapa Island and the mainland, and when moving between foraging locations. Such information could be easily determined through a modest study of daily activity patterns using telemetry in conjunction with field observers."[13]

Dr. Franklin Gress of the California Institute of Environmental Studies noted in a comment on file with the Commission dated March 26, 1996:

> "Brown pelican flight elevations vary according to their activities. They can soar, circling about searching for food at heights of well over 1,000 or more feet; they can plunge-dive for food from over 100 feet or less; they can come into mainland or island roost sites from varying heights from circling in from over 100 feet to just circling the water surface. In other words, flying pelicans can be at any altitude within this range; there is no 'typical' elevation for flight."[14]

Impacts on avian species are apparent from the above analysis. All impacts are denied in the consistency determination without a factual basis or analysis. The proposed action does not comply, among others, with Section 30230 of the Coastal Act providing:

> "Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance...."

It is incompatible also with the policy of Section 30240 that:

> "(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas."

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13. Letter to John Buse.

14 Letter to Carl Thelander.

"(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas."

General Conclusion

The proposed action is not a free standing activity. The lack of a baseline for existing SWEF operations is the subject of an informal mediation on going at this time between the Coastal Commission and the Navy. That process needs to reach a conclusion before consideration can logically be given to expanded functional operations and additions of radar and other equipment.

In addition to the lack of a baseline, the present filing is deficient in its description of the proposed action making it impossible to evaluate impacts.

It should be unacceptable that this submission is made to the Coastal Commission without providing the contemporaneously prepared Environmental Assessment for the proposed action. Environmental review should not be a game of hide and seek.

In addition to the failure to factually describe the proposed action , the submission is deeply flawed (as illustrated above in the treatment of impacts on avian species) by its use of erroneous and out of date scientific assumptions.

The Navy delayed its filing until the eve of desired implementation. This is contrary to Coastal Zone Management Act requirements. Self created time pressure should not short cut the required Coastal Commission review.

The California Coastal Commission should decline concurrence in this consistency determination for a proposed action to "enhance and expand SWEF capabilities."

For The Beacon Foundation,

Vickie Finan — Gordon Birr — Lee Quaintance

Jean Rountree — Ellen Spiegel — Don Dodd

DEPARTMENT OF THE NAVY
PORT HUENEME DIVISION
NAVAL SURFACE WARFARE CENTER
4363 MISSILE WAY
PORT HUENEME, CALIFORNIA 93043-4307

Tu 10a

IN REPLY REFER TO:
5090.1B
Ser 02-CH/22
14 July 1999

Navy Consistency Determination
CD-75-95
NAVY VTC

Mr. Peter Douglas
Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

Dear Mr. Douglas,

The enclosed Coastal Consistency Determination (CCD) is submitted for the establishment of the Virtual Test Capability (VTC) at the Port Hueneme Division, Naval Surface Warfare Center. Specifically, the VTC will be located at the Surface Warfare Engineering Facility (SWEF) complex. The CCD is in compliance with Section 930.34 of the National Oceanic and Atmospheric Administration, Federal Consistency Regulations (15 CFR Part 930).

In accordance with the Federal Coastal Zone Management Act of 1972 as amended, the Navy has determined that the proposed actions are consistent to the maximum extent practicable with the California Coastal Act of 1976, Chapter 3 "Coastal Resources Planning and Management Policies" as amended. Your concurrence with the enclosed CCD is requested.

Please notify us of the date of the public hearing for this project. If you have any questions, please contact Mr. Chuck Hogle at (805) 228-8225.

Sincerely,

J. W. PHILLIPS
Captain, U.S. Navy

Enclosure: 1. Coastal Consistency Determination for Virtual Test Capability

Copy to: Commanding Officer, CBC Port Hueneme
Commanding Officer, NAS Point Mugu
Regional Environmental Coordinator
CINCPACFLT

COASTAL CONSISTENCY DETERMINATION FOR THE VIRTUAL TEST CAPABILITY (VTC)

July 1999

1. AUTHORITY

This Consistency Determination is being submitted in compliance with Section 930.34 et seq. of the National Oceanic and Atmospheric Administration (NOAA) Federal Consistency Regulations (15 CFR 930).

2. DETERMINATION

In accordance with the Federal Coastal Zone Management Act of 1972, as amended, Section 307(c)(1), the Department of the Navy (Navy) has determined that this proposed action is consistent to the maximum extent practicable with the California Coastal Act of 1976, Chapter 3, Coastal Resources Planning and Management Policies, as amended January 1998, for the reasons stated below.

3. PROJECT DESCRIPTION

PROJECT LOCATION

The proposed project would be located at the Port Hueneme Division, Naval Surface Warfare Center (PHD NSWC). NSWC is located on the Naval Construction Battalion Center (CBC) in Port Hueneme, California. CBC is situated on the coast in Ventura County, approximately 60 miles northwest of Los Angeles. The base is within the city limits of Port Hueneme, California, and shares a boundary with the city of Oxnard, California. Specifically, the project would be located at the Surface Warfare Engineering Facility Complex (SWEF), annotated on Figure 1 (page 7). SWEF is located within the PHD NSWC compound on the southwest corner of CBC. It is adjacent to La Janelle Park and Silver Strand Beach.

Examples of other locations that would be linked to SWEF as a result of the proposed action include Wallops Island and Dam Neck Virginia, as well as Point Mugu and San Diego, California.

GENERAL BACKGROUND OF SWEF

Established in 1963 as the Naval Ship Missile Systems Engineering Station, PHD NSWC is the "In-Service Engineering Agent" (ISEA) for U.S. Navy combat systems and U.S. Coast Guard surface fleets, as well as some foreign Navy fleets. PHD NSWC uses the Surface Warfare Engineering Facility (SWEF) to support the continued improvement of warfare, combat, and weapon systems in areas such as reliability, operational capabilities, maintenance, availability, safety, and performance.

The SWEF has been in existence since the 1970s. Located on the beach at the entrance to the Port Hueneme Harbor, the entire SWEF complex consists of 14 buildings and one communications tower (structure 5217); about 50 full time (and 25 part time) employees work at

the complex. Most buildings serve as engineering laboratories, and Building 1386 is a classroom training facility. Radar/director systems are located on Buildings 5186 and 1384. Building 1384 is the largest and most recent addition to the SWEF complex. Construction of Building 1384 began in 1983, equipment installation began in 1985, and the Navy assumed full control of the building in 1986. Today, Building 1384 is an essential element of PHD NSWC's mission and is sometimes referred to simply as the SWEF. It contains a variety of fully operational systems, including sensors and launchers. The site affords clear paths for the installed radar systems to the open ocean and allows line-of-sight flight paths to the building. Building 1384 was designed to simulate the shape of the front of the superstructure of the Navy's most modern cruisers and destroyers in order to replicate conditions experienced at sea, including the elevation at which the radar antennas are placed. It also replicates these ships' phased array capability. ("Phased array" refers to a type of radar antenna that moves electronically and contains no moving parts. Since the antenna does not physically move, it can change directions almost instantaneously and is capable of tracking multiple targets at the same time.)

The SWEF is currently equipped with a variety of combat and weapons systems, including radar, computer and communications systems, as well as laboratory spaces. The equipment and spaces are similar to those found aboard ships. SWEF is used to perform test and evaluation exercises as well as to train personnel to maintain and operate the systems. SWEF provides a cost-effective means of providing realistic, verifiable surface combat and defense systems data to the fleet. As an example of the critical nature of the work that the SWEF performs, virtually all of the software used on Navy ships is tested at SWEF prior to installation and operation aboard those ships. The combat systems and safety of the fleet depend on the software operating correctly every time.

PROPOSED ACTION

The proposed action is to develop a Virtual Test Capability (VTC) at the SWEF. The proposed action assumes the continuation of existing activities at SWEF. It combines these activities with the (1) installation of new equipment and (2) increased operations to develop the VTC.

The VTC would electronically connect Navy facility assets (e.g., laboratories and ranges) with Navy fleet assets (e.g., aircraft and ships). The network that would be established would allow engineers and technicians to integrate the use of Navy systems hardware, (radar, directors, and launchers), software (computer programs), and communications devices (satellites and radios). The Navy would be able to link all of the above assets together in different configurations to support required testing, training, and maintenance operations through the simulation of real scenarios.

The VTC would allow the SWEF to be interconnected with other military facilities throughout the United States in order to conduct tests that could not be accomplished with the resources of a single facility, and specifically to emulate the assets of a battle group or battle force. (Battle force refers to a group composed of multiple branches of the military, such as the Navy, Army, Marines, and Air Force. Battle group refers to a deployed group of submarines, cruisers, destroyers, aircraft, etc., within the Navy.) The network would allow the "real-time" transference of data between these facilities, thus providing realistic simulations of warfare situations. The SWEF would be the key node, or center of operations for the network and would function essentially like a switching device, channeling information among the different facilities as needed to meet the requirements of a given test.

The VTC would provide the Navy with the capability to test equipment and warfare scenarios using a mix of real, prototype, and simulated equipment. Tests would be conducted in either a

real environment (e.g., using Navy ships and aircraft on a test range), test environment (using laboratories), or a completely simulated environment, depending on the requirements of individual operations. Certain tests would use a combination of environments. This capability would allow the Navy to test new equipment without requiring the use of an expensive real test environment unless necessary. It also would allow the Navy to change the mix of equipment that is linked together to provide needed testing, training, or maintenance for configurations that otherwise would be very expensive and time consuming to accomplish using only real assets.

Key elements of the proposed action include:

- **Installation of new equipment**:

(1) Additional components of the AEGIS SPY-1A would be installed at the SWEF including a transmitter, waveguide and antenna. However, the system would be incapable of tracking targets and would not radiate out of the antenna or outside the building. Two additional radar systems are currently in development (the SPQ-9B Phased Array Radar and the Multi-Function Radar) and would be installed and operational in FY 2002 and FY 2004, respectively. They would be used for surface/air tracking exercises, as well as evaluation of engineering changes and training of personnel. These radar systems are referred to as "surface/air search radar" and operate on F and I frequency bands. F and I are standard band widths used by the Institute of Electrical and Electronic Engineers (IEEE) and the military services. The F band ranges from 3 to 4 Ghz; the I band ranges from 8 to 10 Ghz.

(2) A C4 I satellite transceiver (command, control, and communications computer) is in development and would be used as part of SWEF operations. In addition, new C4 I radios and telephones (which "talk" exclusively with other military radios and telephones) would be installed, as would Link 16, Cooperative Engagement Capability (CEC), and a microwave link for local communications capabilities.

(3) Both passive and active optical systems would be installed at the SWEF. These systems would be used for targeting, tracking, and engaging systems to fire weapons. Specific systems include the Infrared Search and Tracking (IRST) passive optical system, which would be used only for looking at targets, much like a camera is used. Active systems include the MK-34 (MK-46) active optical sight system (OSS), and potentially, the Thermal Imaging Sensor System (TISS). Active systems would use a laser for target designation (detecting and tracking targets) and to measure distance electronically. All lasers would be Class I, eye-safe lasers, comparable to those used by the police for speed checks. Class I lasers are defined as "lasers which by inherent design normally cannot emit radiation levels in excess of the permissible exposure limits" (OPNAVINST 5100.23E). These lasers are not hazardous under almost all operational or viewing conditions, and no controls are required. Both passive and active laser systems would be installed at the SWEF.

(4) Existing launcher systems (used for simulating missile launches) would be used for new integration tests, loading training and special fault tests. Modified or improved launcher canisters also would be tested at the launcher site. Two new launchers, a Quad Pack launcher and a Slant Pack launcher, are under development and would be installed at the SWEF when available and/or required. (Note: no actual launches would occur at SWEF.)

(5) A replacement or upgrade of a fiber optic cable may be required to support the VTC network. It would tie into an existing telephone/communications switch site located in Building 1524. The cable would run alongside utility cable trunks, probably through a below ground cable conduit.

The 3,500-foot cable would be laid in an already developed area within the base boundaries. The route would originate at Building 1524, which is located at the intersection of Missile Way and Engineering Way. The cable would be installed in a trench along Engineering Way, Tomahawk Drive, and Venice Road until it reached the existing cable trench system located adjacent to Building 5186. This cable would facilitate communications with military installations throughout the country.

A summary of the proposed new equipment installation is shown on Table 1 under the "Capabilities" section.

Table 1. Comparison of Proposed Project Elements to Current Operations

Element	*Current (FY 99)*	*Proposed Action*
CAPABILITIES		
Radar Systems	12	3 new
Optical Systems	1	2 new
Communications Systems	6	5 new
Network Systems	2	1 new
Launcher Systems	5	2 new
ACTIVITIES		
RF Radiation	218 hours per year	42 additional hours per year
Major Maintenance Operations	4 events per year	2 additional events per year
Aircraft Operations	10, 2-4 hours per event	10 additional, 2-4 hours per event
Boat Operations	10, 2-4 hours per events	10 additional, 2- 4 hours per event
SUPPORT REQUIREMENTS		
Personnel	75	25 additional
Power	10.9 MW per month	1.1 additional MW per month
Water	960 gallons per day	96 additional gallons per day
Natural Gas	5,100 cubic feet per day	No change

- **Increase in operations:**

Operations, which are currently ongoing at SWEF, will increase in three areas consisting of testing, maintenance and training.

Testing. Testing would continue to involve the use of aircraft and boats to test radar detection and tracking capabilities. The proposed action requires 10 additional aircraft operations and 10 additional boat operations. These operations would continue to be conducted primarily on the Point Mugu Sea Range (Sea Range), which ends 3.5 nautical miles from shore. Flight profiles would continue to be within Federal Aviation Administration (FAA) controlled airspace. Flight profiles, trajectories and flight altitudes would continue to comply with local regulatory restrictions. Boats would normally be used in the open ocean, either on or off the Sea Range, although the small boats used to support Radiation Hazard surveys would remain close to the SWEF.

Maintenance. Routine maintenance would continue to be performed on a weekly, monthly, or annual basis, depending on the equipment or facility involved. Because of the proposed additional equipment, two additional major maintenance events would occur each year.

Training. Training sessions in the use of current and new radar systems would increase by 5 sessions, from the current 7 sessions to an average of 12 sessions per year. Sessions range from 2 weeks to 2 months, with some classes lasting 6 months.

A summary of the proposed operational increases is shown above on Table 1 under the "Activities" section.

PURPOSE AND NEED

The purpose of establishing the Virtual Test Capability (VTC) is to enhance and expand SWEF capabilities to simulate complex, multi-faceted combat/weapons training and systems testing activities. These activities would involve real and simulated combat systems components in both real and simulated environments. The project is needed so that the Navy can maintain state-of-the-art combat weapons and ship self-defense system readiness. This need is driven by three interrelated factors: the increasing complexity of weapon/combat systems, declining Navy resources, and changes to the way modern warfare is conducted.

New tactical weapons are being developed that are increasingly sophisticated, with greater targeting abilities and requirements for interconnectivity than those of the past. The Navy carefully evaluated the programs that will require use of the SWEF over the next five years and determined that new resources (i.e., the computers, radar, and communications systems that comprise the VTC) are needed to support these programs. The new programs will require more sophisticated testing and evaluation, maintenance, and troubleshooting procedures than can be accomplished using the equipment that is currently installed at the SWEF, due in part to the fact that the existing equipment cannot provide the interconnectivity with other facilities that is required.

Additionally, the availability of Navy fleet assets for engineering and testing purposes is decreasing, thus requiring new means of accomplishing tasks that formerly relied on ships, aircraft, and other real assets. General declines in military funding have occurred since the end of the Cold War, and the Navy fleet has decreased by almost 50 percent since 1984. This trend is expected to continue. The ability to simulate testing, training, and maintenance operations is essential given the limited funding available. Simulations are far less costly than using real assets (an Aegis DDG-51 class ship costs $16,254 per day to operate, exclusive of personnel costs), and given the reduction of fleet size, these assets simply are not available. Moreover, using them for testing and training purposes would render them unavailable for combat. Using simulations to test and evaluate equipment before it is installed onboard ship also results in considerable savings. It is estimated that for every dollar spent on engineering and corrections before systems are installed on ships, the Navy saves between $100 and $150.

The VTC also is needed to allow the Navy to engage effectively in modern warfare practices. Warfare is increasingly focused on the concept of "interoperability." Interoperability refers to the ability of different branches of the Armed Forces to be interconnected in a complex electronic network (battle force interoperability), as well as the ability of elements within a deployed Navy group (e.g., submarines, cruisers, destroyers, and aircraft) to be interconnected (battle group interoperability). Being linked in an electronic network allows the immediate transference of data and the rapid allocation of resources to where they are needed. For example, if one ship is

damaged, functions quickly can be transferred to another ship. The network that would be established as part of the VTC would be compatible with both existing and planned network systems. It would be a vital component of the Navy's mission and would allow the Navy to simulate all the assets of a battle group or battle force. The VTC's networking ability also would allow one facility to draw on the resources of another elsewhere in the country without requiring the construction of new facility, a critical factor given budget reductions. Additionally, the Navy has changed its strategy from deepwater conflicts to littoral (nearshore) operations, close to potentially hostile factions. Under the Navy's littoral operations strategy, the SWEF develops and tests self-defense systems that counter foreign threats. Development of the VTC, which would be on the coast, would enhance the Navy's abilities to conduct tests, training, and maintenance operations in this environment.

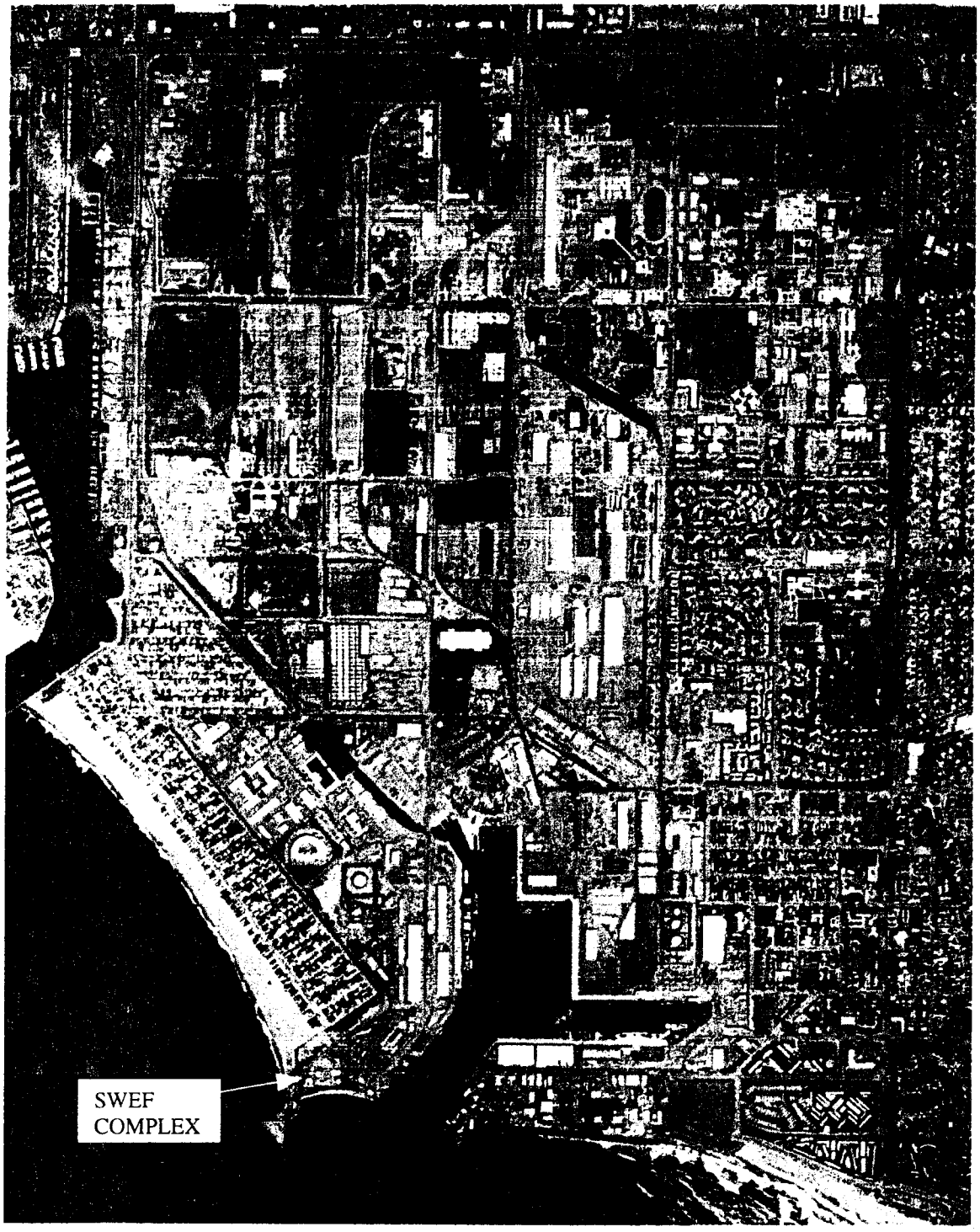

FIGURE 1. THE NAVAL CONSTRUCTION BATTALION CENTER, PORT HUENEME

5. CONSISTENCY WITH PROVISIONS OF THE CALIFORNIA COASTAL ACT (DIVISION 20 PUBLIC RESOURCES CODE)

Since the proposed action may impact areas within the coastal zone (CZ) or coastal zone resources, a Consistency Determination is required. The following Determination of Consistency is prepared in compliance with the Federal Coastal Zone Management Act of 1972, Section 307 (Title 16, U.S.C. Section 1456(c)), which states that federal actions must be consistent to the maximum extent practicable with state coastal management plans.

Sections of the California Coastal Act of 1976 (14 C.C.R. § 13001 et seq.) applicable to this project, as determined by the Navy, include: Article 2 - Public Access (Sections 30210-30212); Article 3 - Recreation (Section 30220); Article 4 - Marine Environment (Sections 30230 and 30232); Article 5 - Land Resources (Section 30240); Article 6 – Development (Sections 30250, 30251, 30253 and 30255); and Article 7 – Industrial Development (Section 30260).

It is the opinion of the Navy, based on a review of the applicable sections of the Act and on the information provided below that the proposed action is consistent with the California Coastal Act of 1976 to the maximum extent practicable. This Determination of Consistency has been prepared with the following applicable sections of the California Coastal Act of 1976 listed below.

A. ARTICLE 2 - PUBLIC ACCESS (SECTIONS 30210-30212)

Section 30210

This section provides that recreational activities shall be provided for all the people consistent with public safety needs and the need to protect public rights, right of private property owners, and natural resource areas from overuse.

Public activities near SWEF include recreational activities such as boating, surfing, fishing, and scuba diving. The SWEF complex shares a boundary wall with the adjacent beach area; a public parking lot is on the public side of the wall. A rock jetty extends out into the water and is divided lengthwise with a chain link fence; the south half is posted federal property. Figure 2 shows this area.

The proposed action will not restrict public access to recreational activities in the coastal area. The modifications associated with the proposed action will be implemented only on federal property at Port Hueneme, where public access to the shoreline is restricted for security reasons. The proposed action will not limit access at any public beach.

Under the proposed action, additional components of the AEGIS SPY-1A antenna would be installed. Two additional radar (the SPQ-9B Phased Array Radar and the Multi-Spec radar) would also be installed at the SWEF complex and used for surface/air tracking exercises. Like the existing antennas, they would be located on rooftops of existing buildings within the SWEF complex and would radiate at an angle that would not impact members of the public, ships, or recreational vessels. Detailed testing would be performed before and after these radar are installed and/or rendered operational in order to ensure that no public safety hazards would result from their use. If the studies indicated a potential hazard to personnel working within the SWEF complex or members of the public, then emitter system characteristics would be modified to ensure a safe operational environment.

Figure 2. View of the SWEF complex, jetty, and Navy and public beach areas

The ongoing use of these radar systems would be subject to the same intensive safety procedures that are currently in place, further ensuring that no impacts occur. PHD NSWC Instruction 3120.1A, "Standard Operating Procedures for Radar Systems, High Power Illuminators, and Launching Systems at the Surface Warfare Engineering Facility Complex," provides requirements and specific guidance for the safe installation and operation of equipment and systems at the SWEF complex. The new radar systems would be subject to these procedures. Key points are as follows:

(1) A Subject Matter Expert (SME) would document and establish standard operating procedures (SOP) and approved parameters for system installation, modification, change and/or deviations based on the following studies.

(2) A preliminary RF/RADHAZ assessment would be required for the installation of the new radar system components that would render the systems operational. The purpose of the preliminary RADHAZ assessment would be to document and assess the potential risks of the new radar and identify operating parameters. The preliminary assessment would determine what the safe separation distances would be, and at what height above the ground the RADHAZ region would be located. Safe separation distances (RADHAZ zones) would be calculated using permissible exposure limits (PELs) for the controlled and uncontrolled environments per DOD Instruction 6055.11. (PELs are based upon the thermal effects of a field, that is, the actual heating of tissue due to the absorption of energy.) For search radar such as those proposed, calculations would include the rotational duty cycle of the radar. Fixed beam calculations without the rotational duty cycle also would be completed for these rotating systems, which would yield a worst-case RADHAZ distance.

In the preliminary assessment, the following would be documented:

- Location of emitter.
- Height above the ground or water.
- Type of RF emitter (i.e., search radar).
- Proposed radiate sectors (true coordinates).
- RF emission RADHAZ zones, heights and obstructions (primarily obstructions that may alter the RF transmission, such as other emitters to the side or behind the antenna or building blockage).
- Operating parameters, such as average power, estimated system losses, and PELs, that would be used to compute the safe separation distance. The calculation would be based on the lowest frequency of the radar since this would yield the worst-case limit.
- RADHAZ distance with height above the ground.

The preliminary assessment of RF emissions would evaluate propagating beam patterns (i.e., mainlobe, sidelobes) and beam overlap area measurements for evaluating cumulative effects of RF emissions at ground level and adjacent areas near the SWEF complex. The assessment of RF emissions also would include adjacent water areas and the shipping lane (leading in and out of Port Hueneme Harbor), which is approximately 650 feet to 1,000 feet in front of the SWEF complex.

The intent of this preliminary assessment is to ensure that during operation no significant levels of RF would be present in areas where the general public may be present. The assessment would show predicted RF levels where the general public may be present as being above, at or below the PELs. This assessment would be conducted with reference to an uncontrolled (public) environment.

(3) After the preliminary assessment and in accordance with OPNAVINST 5100.23, the Radiation Hazard (RADHAZ) survey would be conducted prior to operation. The surveys would establish operating parameters and assign frequencies to ensure that any impact from radio frequency (RF) emissions is confined to SWEF complex boundaries, or is focused in the air at heights (normally 60 feet) that would not affect the public. The RADHAZ surveys would confirm the systems' safe operation for personnel at SWEF (the "controlled environment") as well as the human and natural environment close by (the "uncontrolled environment").

The surveys use RF safety standards that were originally developed by the Institute of Electrical and Electronic Engineers (IEEE) and later approved and adopted by the American National Standards Institute (ANSI) and the Department of Defense (DOD). These standards are composed of two parts. The first set of safety standards is for controlled areas or zones. Controlled areas are locations where people, due to their employment, would expect to have the potential to be exposed to hazardous levels of RF. An example would be the area immediately around SWEF as stated above. Standards for these areas are based on a limit that is 10 times the exposure that might result in potential deleterious biological effects (0.4 watts per kilogram averaged over the whole body). In other words, the exposure that is allowed is 10 times less than that which would cause bodily harm.

The second set of safety standards relates to uncontrolled areas or zones (areas that are accessible to those other than trained personnel, including the general public). An example of the uncontrolled area is the jetty adjacent to the SWEF. The standards for these areas are based upon

an exposure limit that is 50 times the level that might be required to produce potentially deleterious biological effects (0.08 watts per kilogram averaged over the whole body), or 50 times less than that which would cause bodily harm. Uncontrolled areas are further divided into two separate areas. The first is an area in which the RF levels are so low that there is no limit to the exposure allowed. The second area, referred to as the RF hazard zone or safe separation distance, is an area that has a defined permissible exposure limit (PEL).

Radiation hazard zones or safe separation distances are calculated based primarily on parameters associated with an individual radar system, including Permissible Exposure Limits (PELs), power, and antenna gain. RADHAZ calculations will vary depending on the absolute numbers used with the calculations and whether the environment is controlled or uncontrolled. In addition, most calculations do not include transmission line losses (loss of transmitter power on the way to the antenna), because they are often unknown and vary from installation to installation. In effect, this makes the calculation even more conservative.

The SWEF will operate all radar associated with the VTC within these parameters. Any further modifications needed to ensure public and personnel health and safety would be made at this time.

The new radar would be resurveyed at set intervals; spot checks are conducted every year. OPNAVINST 5100.23(E), January 1999, requires site certification, which includes a review of each radar every 3 to 5 years. This instruction would also require that any major modification to radar systems be subject to the above outlined installation and operation procedures.

Using these procedures and standards will ensure that the installation and operation of additional equipment necessary for the VTC would not create any hazard to beachgoers, boaters, jet skiers, fishermen or any other member of the public, and would therefore not restrict public access.

Section 30211

This section provides that development shall not interfere with the public's right of access to the sea.

The proposed action would not interfere with the public's right of access to the sea in the coastal zone. Right of access would continue to be available at the nearby Channel Islands Harbor for recreational boaters and commercial fishermen. Jet ski, kayak, surfboard and other recreational activity access would continue to be available directly adjacent to SWEF, and would not be restricted in any way as a result of the establishment of the VTC. Increased aircraft and surface craft operations would be minimal and would not restrict access.

The use of surface craft would increase from 10 operations per year to 20, however most activity would take place on weekdays, which would minimize potential conflicts with recreational boaters. Standard navigational procedures would be used to avoid affecting other boats in the area, including visual observation.

Commercial shipping traffic shares a portion of the Navy harbor and would continue to have unlimited access. No physical or safety issues would restrict port operations. The VTC would allow vessel traffic transiting the harbor, whether Navy ships or commercial cargo ships, to continue to do so without any restrictions. The Navy routinely coordinates with the Oxnard Harbor District to ensure no impacts to shipping occur.

RF emissions would be unable to reach locations where commercial or recreational boats and their crews are present, as described below. Ships cannot get close enough to the SWEF to enter the RF hazard zones (safe separation distances) that are located in the area in front of the SWEF and extend toward the shipping channel that leads in and out of Port Hueneme Harbor. These hazard zones are elevated above the water level (40-95 feet) and point upwards. The radar that have safe separation distances that extend into the shipping lane emit RF at high elevations only and do not affect even tall ships. Ships are prevented from getting close enough to SWEF to enter the hazard zone because of the draft and length of the ship and the shallow depth of the channel. Port pilots and tugboats are used to guide large ships in and out of the harbor, thus ensuring that they do not inadvertently enter the shallow portions of the channel.

Section 30212

This section provides that public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects, except where access is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, or adequate access exists nearby. For military security reasons, public access from the nearest public roadway to the shoreline would be limited to existing, adequate access at Silver Strand Beach.

Section 30212.5

An analysis was not provided for this section because the proposed action does not involve public facilities.

Section 30213

An analysis was not provided for this section because the proposed action does not involve lower cost and recreational facilities.

Section 30214

An analysis was not provided for this section because the proposed action occurs on federal property that is restricted from public access; therefore, management of public access is not an issue.

B. ARTICLE 3 - RECREATION (SECTIONS 30220-30224)

Section 30220

This section provides that coastal areas providing water oriented recreational opportunities not available at inland water areas shall be protected. The proposed action would not limit recreational activities in the area adjacent to SWEF.

The addition of new equipment to the SWEF, necessary to create the VTC, would occur on land presently owned and operated by the Navy with restricted public access. RF emissions, generated as a result of added equipment, would be confined to SWEF boundaries or focused in the air at heights that would not impact nearshore waters, as described in Section 30211 above. Therefore, no impacts would occur to nearby recreational uses.

The VTC would require an additional 5 classroom training sessions per year. This would occur inside the SWEF facility and therefore would not impact water-oriented recreational uses.

An increase of ten (10) 2-4 hour aircraft operations and ten (10) 2-4 hour boat operations associated with use of the VTC would occur over or on the Point Mugu Sea Range. These operations would not require that an area be cleared of recreational or any other users, nor would the operations in any way limit or restrict recreational activities. The VTC would have no impact on recreational uses of area waters, beaches, the Channel Islands, or associated recreational facilities within the Sea Range.

Section 30221

No oceanfront land suitable for recreational use is proposed for development under the proposed action, therefore impacts to oceanfront land suitable for recreational use would not occur.

Section 30222 and Section 30222.5

No private land suitable for visitor serving commercial recreational facilities is proposed for development under the proposed action. No private lands would be affected under implementation of the proposed action; therefore, impacts to private land suitable for visitor-serving commercial recreational uses would not occur. No oceanfront land suitable for coastal-dependent aquaculture is proposed for development under the proposed action. Therefore, impacts to oceanfront land suitable for coastal-dependent aquaculture would not occur.

Section 30223

No upland areas necessary to support coastal recreational uses are proposed for development under the proposed action. Therefore, impacts to upland areas necessary to support coastal recreational uses would not occur.

Section 30224

No oceanfront land suitable for recreational boating use is proposed for development under the proposed action. Therefore, impacts to land suitable for support of recreational boating use would not occur.

C. ARTICLE 4 - MARINE ENVIRONMENT (SECTIONS 30230-30237)

Section 30230

Section 30230 provides that marine resources shall be maintained, enhanced, and where feasible, restored, with special protection being given to areas and species of special significance. Under the proposed action, marine resources would be adequately maintained.

Potential impacts to marine resources, including marine biology and marine mammals (including threatened and endangered species in both categories) are discussed below. These potential impacts are estimated to be minimal.

Marine Biology

(1) Birds

Numerous species of birds inhabit the Ventura County coastline, including several that are state and federally listed as endangered or threatened. The endangered California brown pelican (*Pelecanus occidentalis californicus*) is resident throughout the year and breeds on Anacapa

Island. The threatened western snowy plover (*Charadrius alexandrinus nivosus*) breeds on Ormond Beach and at Point Mugu. It does not breed in the Port Hueneme area, but may occasionally be found roosting along Silver Strand beach during non-breeding seasons. The endangered California least tern (*Sterna antillarum browni*) breeds at several beaches throughout the Port Hueneme area, including portions of Ormond Beach. The endangered American peregrine falcon (*Falco peregrinus anatum)* has not been observed in the Port Hueneme area, but does visit McGrath State Beach at the mouth of the Santa Clara River, about 12 miles north. Table 2 summarizes the endangered and threatened bird species that potentially may be found in the project area.

Table 2. Endangered or Threatened Bird Species in the Proposed Project Area

Species	Federal Status	State Status	Notes
Pelecanus occidentalis californicus California Brown Pelican	Endangered	Endangered	Forages while flying low over the ocean surface
Sterna antillarum browni California least tern	Endangered	Endangered	Forages over shallow waters, along the coast and in bays
Charadrius alexandrinus nivosus Western snowy plover	Threatened	Threatened	Frequents sandy beaches for breeding and foraging
Falco peregrinus anatum American peregrine falcon	Endangered	Endangered	To be delisted in August 1999.

Several hundred other species of birds frequent the project area. These include common pelagic birds such as loons (common, Pacific); grebes (western, Clark's); cormorants (double-crested, Brandt's, pelagic); scoters (surf, white-winged); shearwaters (sooty, black-vented); storm-petrels (ashy, black); gulls (western, glaucous-winged, California, herring, Heermann's, ring-billed); terns (common, arctic, Caspian, Forster's); alcids (common murre, rhinoceros auklet); and migrating shorebirds. On land are commonly found birds such as rails (sora, Virginia, American coot); shorebirds (black-bellied plover, marbled godwit, long-billed curlew, sanderling, western sandpiper); ducks (ruddy, mallard, cinnamon teal); gulls; herons (great blue, green, black-crowned night-heron); egrets (snowy, great); hawks (red-tailed, red-shouldered, American kestrel); and many others. Birds that migrate through the area on a seasonal basis are protected under the Migratory Bird Treaty Act.

Potential impacts to birds would be the result of noise, bird strikes by test aircraft, air emissions and exposure to RF. The most sensitive area with respect to endangered or threatened species of birds is Ormond Beach. Least terns and snowy plovers are known to breed there. Brown pelicans also have been sighted in the air and on waters around the SWEF, are present at the Channel Islands, and fly between the islands and the mainland.

Noise. Noise created by aircraft operations would be intermittent, infrequent, and of short duration. No sonic booms would occur. Aircraft could be heard approaching and departing local airports (Point Mugu or Oxnard or Camarillo), but this noise exposure would be very brief and would only occur 10 additional times per year for a total of 20 aircraft operations per year. No noise standards would be violated by any elements of the proposed action. Noise from the few Cessna aircraft and helicopters that would fly in the project area would be very short-term, and sporadic, and not distinguishable from other similar aircraft which frequent the project area. Jet aircraft, primarily Lear jets, would fly on the Point Mugu Sea Range, extending to 3.5 nautical miles from shore. Noise from these aircraft would likely not even be perceptible near the shore. There is no evidence that the noise levels or the presence of the aircraft would significantly affect the flight behavior of birds. Flights of Lear jets and helicopters on the Sea Range could disturb

brown pelicans while nesting (March-July) at the west end of Anacapa Island or foraging over the ocean in the flight path. The low number of flights, however, is unlikely to cause disturbances that would adversely affect reproductive success. Infrequent disturbance of foraging brown pelicans would affect few individuals and would have no adverse effects on their survival.

Bird strikes. The proposed increase of 10 flights per year would have a negligible impact associated with bird strikes. Many of the birds in the Port Hueneme/Point Mugu area are migratory species, passing through en route to winter or summer breeding grounds. Brown pelicans that nest along the coast of Mexico migrate up and down the coast each spring and fall. Brown pelicans also nest on Anacapa Island and several of the other Channel Islands, and they may move on a daily basis from nest or roost sites on the islands over channel waters to forage and to roost on the mainland onshore. The brown pelican is a low-altitude forager, usually at heights below 60 feet (PHD NSWC 1995). Least terns and snowy plovers migrate between Ormond Beach and the McGrath colony to the north, but not on a daily basis. When they forage for food, they do so at low altitudes (under 100 feet). Plovers forage along the shoreline, and the primary foraging area for the Ormond tern colony is inshore, rather than offshore (California Department of Fish and Game 1995). These factors, combined with the flight altitudes of 100 feet to 6,000 feet above the ocean surface for Lear jets, reduce the potential for bird strikes to these species as a result of the small increase in aircraft operations. The Lear jets generally fly at 200 knots, and pilots watch for birds to avoid strikes that could damage the aircraft. Helicopters fly at a minimum altitude of 50 feet on the range, but at slower velocities (20-120 knots) which allow visual sighting and avoidance of birds. There have been no reported bird strikes during helicopter flight operations on the Sea Range (Sea Range data, 1999). Bird strikes typically occur during take offs and landings. At Point Mugu, the probability of a bird strike on a given take off or landing is 0.00016.

Air emissions. The air emissions from the proposed action would not be expected to significantly impact birds. The quantities of nitrogen oxide (NOx) and Reactive Organic Compounds (ROC) would be minimal, and the speed at which the aircraft fly would ensure dispersion and dilution of the air pollutants. The peak daily emissions that would occur from the proposed SWEF exercises would be 10 pounds of ROC, 31 pounds of carbon monoxide (CO), 24 pounds of NOx, and 1 pound of particulate matter (PM10). These proposed emissions represent only a slight increase in emissions that occur during the 10 days of existing SWEF testing activities. During the 10 additional days of proposed testing activities, the action would not exceed any Ventura County Air Pollution Control District (VCAPCD) emissions threshold. The net change in annual emissions between the proposed action and existing SWEF testing activities would be 0.1 tons of ROC and 0.2 tons of NOx. Therefore, emissions from the SWEF action would be substantially less than the annual emission thresholds which would trigger a conformity determination (25 tons of VOCs or NOx).

RF exposure. There is little scientific evidence to indicate that RF exposure has adverse impacts to birds. Eastman (1967) reviewed the available literature at the time and considered the effects of radar on bird homing and flying ability, migration, and physical damage due to heat. He considered various frequencies and powers and compared anecdotal evidence to controlled experiments on spring migrants, starling roosts, flocking birds, homing pigeons, and a host of other situations. Although there were a few anecdotes concerning birds apparently being disturbed by being beamed by radar, none of the controlled experiments supported any effects whatsoever. Eastman concluded, "radar...does not disturb the birds whose presence it detects." He noted that RF might affect flight behavior (homing or orientation), although any effect on orientation is very slight and temporary. Most controlled experiments reviewed by Eastman failed to detect any "scatter" of migrating birds when illuminated by radar, and radar has been

used successfully to track migrating birds for many years. Even in those anecdotal descriptions where scattering was reported, the effect lasted only for the brief time the birds were illuminated. As soon as they flew out of the radar's beam, they re-oriented properly. Such an effect would be considered less than significant.

Radar also may heat the bird. The degree of heating is determined by the frequency and the wattage of the radiation, the length of time the object is illuminated, as well as by the distance and size of the object from the source of radiation. A flying bird would be too far away and illuminated for too short of a time to be affected by any radar beams. It is possible that a bird could perch, or attempt to nest, on an antenna or other structure near enough to cause it to heat up. Birds are highly sensitive to heat, however, and if that were the case, the most likely scenario is that the bird would simply fly off when it began to get too hot. The effects of RF exposure are not additive. Once the bird moved away, the effects would cease. Other standard operating measures are in place (which would continue under the proposed action) to prevent birds from roosting or nesting on the facility and to minimize their exposure. These measures include visual inspections by SWEF employees and the sounding of a horn prior to radiating. Once the director begins to move, any birds perched there fly away.

Accordingly, there would be no impact on birds from the proposed action.

(2) Intertidal - Marine Algae and Invertebrates

The rocky intertidal zones along the coast and around the offshore islands abound with a multitude of life forms, including crabs, snails, barnacles, sea stars, sea urchins, and anemones. Sandy beach areas have less diverse and abundant fauna that includes beach hoppers, mole crabs, and polychaete worms. Other invertebrate species include abalone, jellyfish, sea cucumbers, shrimp, clams, and plankton.

Offshore, but within the harbor jetties, are two small kelp beds, whose primary species is giant kelp (*Macrocystis pyrifera*). Kelp beds are also present in nearshore waters along the coast and around offshore islands. This ecosystem supports several other small species of kelp, as well as numerous algae and invertebrates.

The intertidal zones are exposed to air during low tides. None of the organisms in these habitats would be expected to be affected directly or indirectly (as through the modification of their habitat) by the proposed operations. The minimal and infrequent noise levels generated (increased aircraft operations from 10 to 20 per year, each) and small quantities of NOx and ROC emitted would not significantly affect the animals and plants in these habitats. The incremental increase in noise frequency would have negligible impacts on pelagic and benthic subtidal invertebrates due to limited exposure to such noise. Intertidal organisms would not be exposed to hazardous levels of RF emissions because the radar would be pointed well above the shoreline.

Marine algae and invertebrates would not be impacted by the proposed action.

(3) Fish

The Port Hueneme Harbor and associated jetties provide habitat and foraging areas for numerous fish species, both resident and seasonal visitors. These may include sharks, rays, flatfish, perch, croakers, smelt, herring, bass, anchovy, mackerel, bonito, goby, sculpin, mullet, and others. Between the jetties, just off the jetties, and in nearshore waters, California grunion, jacksmelt,

topsmelt, barred and walleye surfperch, California corbina, spotfin croaker, senorita, sheephead, rockfish, flatfish, and the deepbody and slough anchovy are commonly found.

Offshore pelagic waters support a variety of sharks, rockfish, anchovy, sardine, white seabass, salmon, and deep sea fishes.

Noise would be the most likely source of impacts to fish since the flight and vessel paths are directly over waters they are known to inhabit. The sound exposure level (SEL) at the water surface directly below the flight paths could be 85 to 95 dBA when a Learjet passes over. (The SEL is defined as the level of energy associated with each event over a one-second time period.) Project-related boat activity would also cause noise in the water. These levels would be intermittent (ten times per year each), however, thereby having less of an effect than a continuous noise. The levels in the water from aircraft would also be greatly reduced, first at the air water interface, and subsequently with distance through the water. Due to the transitory and limited underwater effects of noise from passing aircraft and boats, the impacts on fish would be expected to be minimal. No known sensitive areas for fish would be affected. Nor would any known fish migratory routes be affected. The impacts would not be substantial enough to affect the physical well being or habitat of the fish. Any impacts on behavior would be expected to be momentary.

No RF hazard zones do or would impinge on the harbor waters or ocean surface. The RF hazard zones would be confined to heights ranging from 40' to 95' above the water surface.

Therefore, no impacts to fish would result from the proposed action

Marine Mammals

Thirty-four species of cetaceans (whales, dolphins, porpoises) and six species of pinnipeds (seals and sea lions) can be found in the waters off the Ventura County coast, and many inhabit or migrate through nearshore waters. Some are year-round residents, and others are seasonal visitors or migratory. As many as 300,000 individual animals reside in or pass through the area each year, however neither the Point Mugu or Port Hueneme areas are feeding or breeding grounds at this time. The marine mammals within the region of influence are protected by the Marine Mammal Protection Act.

Gray whales, whose numbers are now estimated at over 24,000 individuals, are often sighted off the jetties during their annual migrations to and from breeding lagoons in Mexico and feeding grounds in the North Pacific. They are the first species of whale to have sufficiently recovered from commercial whaling to be removed from the endangered species list (in 1994). Other cetacean species that are routinely found in these waters are the common dolphin, Pacific white-sided dolphin, Pacific bottlenose dolphin, pilot whale, blue whale, and fin whale.

Beach and harbor areas provide occasional hauling out places for a number of species of pinnipeds including California sea lions, harbor seals, and northern elephant seals. Individual animals have even been sighted inside the Port Hueneme Harbor. Primary rookeries are located on the Channel Islands.

Table 3 summarizes the endangered and threatened marine mammal species that potentially may be found in the project area.

Table 3. Endangered or Threatened Marine Mammal Species in the Proposed Project Area			
Species	**Federal Status**	**State Status**	**Notes**
Balaenoptera musculus Blue whale	Endangered	____	Uncommon. Migratory; summer visitor as individuals or groups of 2. Usually found offshore.
Megaptera novaeangliae Humpback whale	Endangered	____	Uncommon. Summer visitor; feeds over the continental shelf, along coast.
Balaenoptera borealis Sei whale	Endangered	____	Rare. Migratory; possible in spring, summer likely. Found primarily offshore in temperate waters.
Eubalaena glacialis Northern right whale	Endangered	____	Rare. Sightings from March to May, recently nearshore.
Balaenoptera physalus Fin whale	Endangered	____	Uncommon. Few present year round; usually a summer visitor in small groups. Found on the continental slope and offshore waters.
Physeter macrocephalus Sperm whale	Endangered	____	Uncommon. Autumn and winter visitor, but season may vary; usually pelagic, but inshore when squid are abundant.

Potential impacts to marine mammals from the proposed action would be the result of noise, collision, or RF exposure.

Noise. Noise would be the primary source of potential impact to marine mammals as a result of the proposed action. They could hear the sound of the aircraft while swimming at the surface of the water or underwater, or while hauling out on one of the Channel Islands. Many variables contribute to the amount of sound that is received at the ocean's surface or subsurface from passing aircraft. These include altitude and aspect of the aircraft, water temperature and salinity, bottom topography and depth, and sea state. Relevant factors for any aircraft flyover include:

- Sound from passing aircraft is attenuated along the airborne portion of the propagation path before entering the water.
- Wave scatter may reduce sound levels at the surface by 3-5 dBA.
- Rough seas may increase sound levels at the surface by 3-7 dBA depending upon the relative angle of the source to wave travel direction.

Underwater noise from a passing aircraft is generally brief in duration, especially when compared with the duration of audibility in the air. An aircraft whose closest point of approach is far from directly overhead may be audible in air but inaudible or only weakly audible underwater.

The reactions of marine mammals while on land to aircraft overflights have been documented in a number of cases, and are summarized by marine mammal expert, Dr. W. John Richardson (1995). The observed reactions to noise while on land are in many cases minimal. For example,

pinnipeds, such as northern elephant seals and California sea lions at San Miguel Island have been observed to show no reaction to jets above 1,000 feet in altitude, and limited movement in response to aircraft below 1,000 feet. Seals do not commonly haul out in the SWEF area. However, a large harbor seal haul out and rookery exists in Mugu Lagoon, which is in the center of the Naval Air Station with daily aircraft operations. In general, pinnipeds hauled out for pupping or molting are the most responsive to aircraft. They may dive when overflown at a low altitude. Brief interruptions of normal behavior of this type are likely to have little effect on their overall behavior. This is not an effect expected from the proposed operation because flights in the present and proposed operation do not fly over any hauling out locations. Aircraft maintain a minimum altitude of 2,000 feet over the Channel Islands National Marine Sanctuary. Aircraft on low altitude runs avoid sensitive biological areas and fly outside of the Channel Islands National Marine Sanctuary boundary (at least 6 nm from any island within the Sanctuary).

Little information is also available about the reactions of whales. Anecdotal evidence indicates that baleen whales may react by diving, turning, or otherwise changing behavior, but responsiveness is dependent upon the activities and situations of the whales. Those engaged in feeding or social behavior seem rather insensitive. Richardson (1995) notes that migrating gray whales rarely show reactions to straight-line overflight of survey aircraft. According to Richardson's analysis of all available data (1991, 1995), "there is no indication that single or occasional aircraft overflights cause long-term displacement of whales."
Increasing boat activity from 10 to 20 per year is expected to have negligible noise impacts on marine mammals because the number and duration of these events is very small relative to existing boat activity in the project area.

Collision. Boat operation has the potential to affect marine mammals via collision. The likelihood of such a collision due to 10 additional events is remote and would not adversely affect marine mammal populations in the area. For the safety of personnel aboard, boat operators watch for and avoid marine mammals. There have been no strikes reported on the Sea Range between marine craft and marine mammals (Sea Range data, 1999).

RF exposure. No RF hazard zones do or would impinge on the harbor waters or ocean surface. The RF hazard zones would be confined to heights ranging from 40' to 95' above the water surface. Therefore, no impacts to marine mammals from RF emissions would occur.

For the reasons given above, no impacts to threatened or endangered species are expected, therefore a Section 7 consultation is not required. Nonetheless, the Navy contacted both the U.S. Fish and Wildlife Service (via telephone call, June 28, 1999) as well as the National Marine Fisheries Service (via e-mail, June 16, 1999) to advise them of the proposed action and obtain concurrence. Letters summarizing the proposed action and confirming their concurrence were sent to each agency on July 9, 1999.

In conclusion, the establishment of the VTC would not impact marine resources.

Section 30231

An analysis of this section was not provided for the proposed action because no wastewater discharges, additional runoff from construction activities or equipment installation, or interference with surface water flow will occur. No riparian habitats exist near SWEF; no natural streams will be altered. The projected increased water usage of 96 gallons per day will not deplete ground water supplies. The biological productivity of coastal waters will be maintained.

Section 30232

This section requires protection against the spillage of crude oil, gas, petroleum products, or hazardous substances and containment and cleanup facilities and procedures for spills.

The Department of the Navy currently has established containment and cleanup facilities and procedures that comply with applicable federal regulations regarding hazardous substances for accidental spills. PHD NSWC obtains these services from its host command, CBC. Therefore, protection against the spillage of crude oil, gas, petroleum products, and hazardous substances would be provided under the proposed action, and the quality of coastal waters would be maintained.

Section 30233

An analysis of this section was not provided for the proposed action because no diking, filling or dredging would occur.

Section 30234

An analysis of this section was not provided for the proposed action because it does not interfere with commercial fishing facilities and recreational boating industries or associated facilities.

Section 30235

An analysis of this section was not provided for the proposed action because it does not involve construction of revetments, breakwaters, groins, harbor channels, seawalls, or cliff retaining walls.

Section 30236

An analysis of this section was not provided for the proposed action because it does not involve construction of dams, channelizations, or other substantial alternations of rivers and streams.

Section 30237

An analysis of this section was not provided for the proposed action because it does not involve the Bolsa Chica wetlands or a portion thereof in the County of Orange.

D. ARTICLE 5 - LAND RESOURCES (SECTIONS 30240 – 30244)

Section 30240

The SWEF is located within a highly developed area, and additional land development is not proposed as part of the VTC. There would be no disturbance to environmentally sensitive habitat areas. See the discussion under Section 30230 for a discussion on the potential effects to sensitive habitats

Section 30241, 30241.5 and 30242

An analysis of this section was not provided for the proposed action because it does not involve prime agricultural land, or land suitable for agricultural use.

Section 30243

An analysis of this section was not provided for the proposed action because it does not affect soil productivity, nor does it involve coastal timberlands.

Section 30244

An analysis of this section was not provided for the proposed action because the action would not occur in an area identified by the State Historic Preservation Officer as an area of archaeological or paleontological significance.

D. ARTICLE 6 – DEVELOPMENT (SECTIONS 30250-30255)

Section 30250

This section provides that development shall be located within, contiguous with, or in close proximity to existing developed areas.

The proposed action would occur in areas currently used by the Navy for military testing, training, and associated operations. Therefore, no changes in land use would occur as a result of establishing the VTC.

Section 30251

This section provides that scenic and visual qualities of coastal areas shall be protected as a resource of public importance.

The VTC would have minimal visual impacts because the only new construction would be the installation of the fiber optic cable laid in a trench within the CBC boundaries. Also, all new equipment would be installed within the SWEF boundary. Two new radar antennae would be installed on top of buildings that already house 12 similar structures. Thus, they would be visually compatible with existing uses.

Section 30252

An analysis of this section was not provided for the proposed action because the action occurs on federal property used for military industrial and residential purposes; public access on the property is restricted.

Section 30253

The proposed action would not involve new development in areas of high geologic, flood, or fire hazards. The SWEF is located in a flood plain, however the VTC would not involve additional construction of facilities in this area. Since there is no associated construction, no stability or structural integrity issues exist; no natural landforms would be altered.

An air quality analysis was performed for the proposed action, which found that emissions would be below *de minimis* levels or not subject to the General Conformity Rule; therefore, the General Conformity Rule would not apply to the proposed action. (The Navy Record of Non-Applicability (RONA) for Clean Air Act Conformity was prepared by Chris Crabtree, Air Quality Specialist, June 3, 1999.)

Minimal additional utility consumption would result from the VTC. The network integration capability of the VTC will reduce technician, trainee and other personnel vehicle miles traveled.

As discussed in Section 30220, the proposed action will not impact popular visitor destination points for recreational uses; public access near the SWEF remains unchanged.

Section 30254 and 30254.5

An analysis of this section was not provided for the proposed action because the action does not involve new or expanded public works facilities.

Section 30255

The VTC is a coastal dependent development. The radar systems must be located on the beach, adjacent to the ocean, at an elevation not exceeding that of a typical combatant ship in order to emulate ship propagation characteristics of radio frequency (RF) emissions, and to allow systems testing in an operationally realistic environment. The location of the VTC at SWEF would accommodate it's coastal dependent uses, and would not result in significant impacts to coastal resources. The SWEF and its associated operations are not located in a wetland.

E. ARTICLE 7 – INDUSTRIAL DEVELOPMENT (SECTIONS 30260 – 30265.5)

Section 30260

The VTC would meet the intent of this section, since it involves expanded use of an existing military industrial facility. Developing the VTC at another location would require the construction of an additional facility, like the SWEF, in another coastal area.

Sections 30261 – 30265.5

An analysis of these sections for the proposed action has not been provided because the action does not involve new tanker facilities, oil and gas development, new or expanded refineries or petrochemical facilities, or new or expanded thermal electric generating plants.

6. CONCLUSION

Federal consistency with the California Coastal Act has been analyzed for the proposed action at SWEF. It is the opinion of the Navy that the proposed action is consistent with the California Coastal Act of 1976 to the maximum extent practicable. No significant impacts were identified with regard to applicable sections of the Act.

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