MINUTE ITEM
This Calendar Item No. C56
was approved as Minute Item
No. 56 by the State Lands
Commission by a vote of 3
to 0 at its May 3 1995
meeting.

CALENDAR ITEM
C56

A 19

S 8

05/03/95
W 25091 PRC 7831
N. Smith

GENERAL LEASE - PUBLIC AGENCY USE

APPLICANT:
University of California
San Diego - Scripps Institution of Oceanography
La Jolla, California 92093-0225

AREA, TYPE LAND AND LOCATION:
Tide and submerged land located on the bed of the Pacific Ocean extending from Pillar Point to the three mile limit, San Mateo County.

LAND USE:
Installation, operation and maintenance of fiber optical cable (1.25 inch diameter) for Acoustic Thermometry of Ocean Climate (ATOC) system.

PROPOSED LEASE TERMS:
Lease period:
Five years beginning May 3, 1995.

CONSIDERATION:
The public use and benefit; with the State reserving the right at any time to set a monetary rental if the Commission finds such action to be in the State's best interest.

BASIS FOR CONSIDERATION:
Pursuant to 2 Cal. Code Regs. 2003.

PREREQUISITE CONDITIONS, FEES AND EXPENSES:
Filing fee and processing costs have been received.

STATUTORY AND OTHER REFERENCES:
A. P.R.C.: Div. 6, Parts 1 and 2; Div. 13.

B. Cal. Code Regs.: Title 3, Div. 3; Title 14, Div. 6.

AB 884:
09/20/95

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OTHER PERTINENT INFORMATION:

1. The overall ATOC project is an international research effort to determine long-term ocean climate changes on a global scale by using acoustic sound paths in the sea's deep "sound channel" to precisely measure average ocean temperatures.

2. This project is also funding an extensive marine mammal research program (MMRP) to address the question of whether long-term underwater low frequency acoustic transmissions are safe for marine animals, particularly marine mammals and sea turtles.

3. This activity involves lands identified as possessing significant environmental values pursuant to P.R.C. 6370, et seq. The project, as proposed, is consistent with its use classification.

4. An EIS/EIR was prepared and adopted for this project by the University of California, San Diego-Scripps Institution of Oceanography. The document was circulated for public review as broadly as State and local law require and notice was given meeting the standards in 14 Cal. Code Regs. 15072(a).

APPROVALS OBTAINED:

James V. Fitzgerald Marine Reserve.

FURTHER APPROVALS REQUIRED:

State Lands Commission; Coastal Commission; National Marine Fisheries Service; United States Army Corps of Engineers; and Monterey Bay National Marine Sanctuary.

EXHIBITS:

A. Location Map
B. CEQA Findings

IT IS RECOMMENDED THAT THE COMMISSION:

1. FIND THAT AN EIS/EIR WAS PREPARED AND CERTIFIED FOR THIS PROJECT BY THE ADVANCED RESEARCH PROJECTS AGENCY, THE NATIONAL OCEANIC AND ATMOSPHERIC AGENCY, AND THE UNIVERSITY OF CALIFORNIA, SAN DIEGO, AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED IN THE EIS/EIR AND ITS CERTIFICATION PROCESS.

2. ADOPT THE FINDINGS MADE IN CONFORMANCE WITH SECTION 15096(h) OF THE STATE CEQA GUIDELINES, AS CONTAINED IN EXHIBIT "B", ATTACHED HERETO.

3. ADOPT THE MITIGATION MONITORING PLAN, AS CONTAINED IN EIS/EIR AND ON FILE IN THE MAIN OFFICE OF THE STATE LANDS COMMISSION.

4. FIND THAT THIS ACTIVITY IS CONSISTENT WITH THE USE CLASSIFICATION DESIGNATED FOR THE LAND PURSUANT TO P.R.C. 6370, ET SEQ.

5. AUTHORIZE ISSUANCE TO THE UNIVERSITY OF CALIFORNIA, SAN DIEGO, SCRIPPS INSTITUTION OF OCEANOGRAPHY OF A FIVE-YEAR GENERAL LEASE - PUBLIC AGENCY USE BEGINNING MAY 3, 1995, IN CONSIDERATION OF THE PUBLIC USE AND BENEFIT, FOR INSTALLATION, OPERATION, AND MAINTENANCE OF A FIBER OPTICAL CABLE ON THE LAND DESCRIBED ON EXHIBIT "A" ATTACHED AND BY REFERENCE MADE A PART HEREOF.

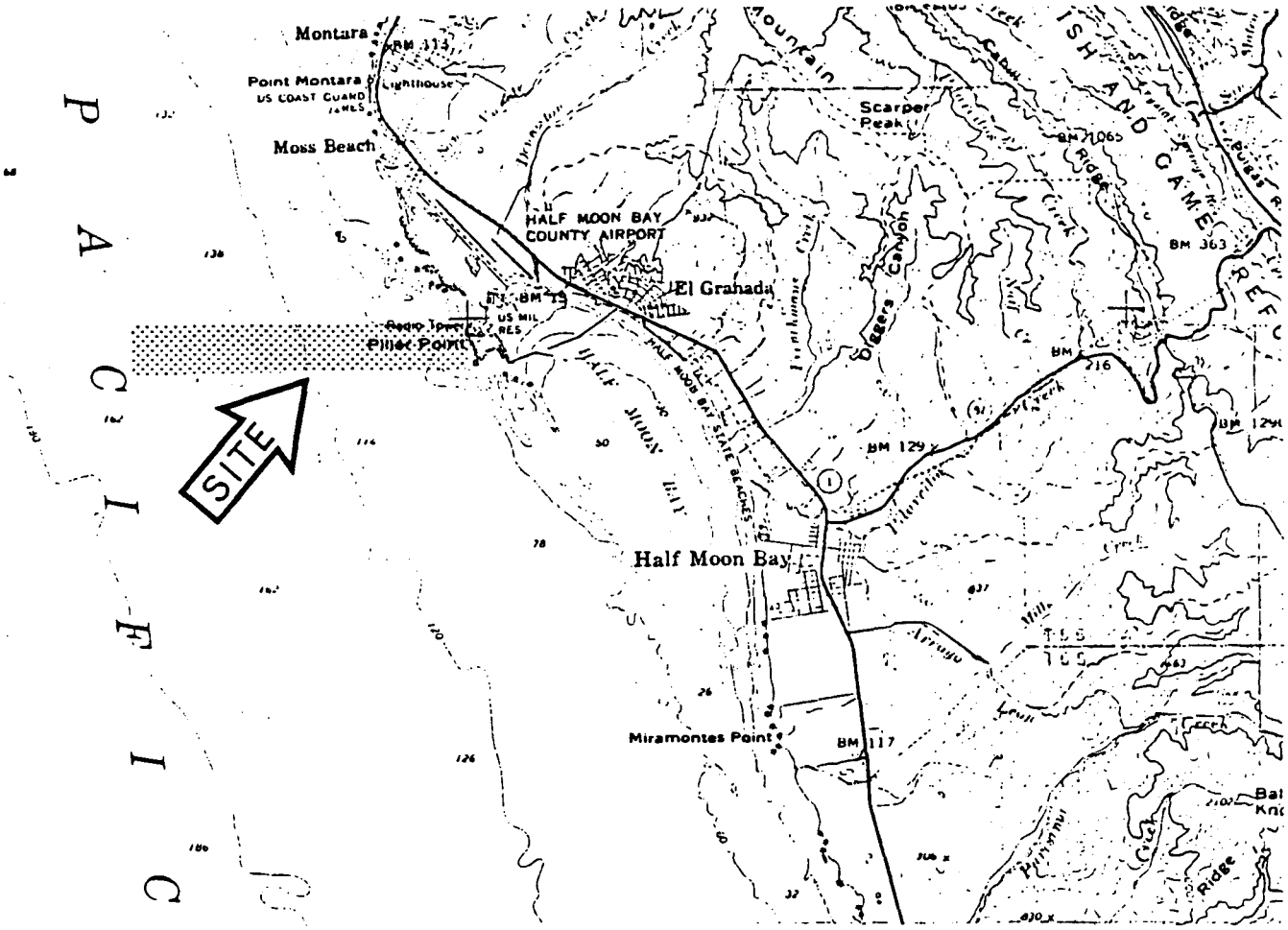

Exhibit "A"
Location Map

W 25091
U.C. San Diego-
Scripps Institute of
Oceanography
Pillar Point
San Mateo County

LAND DESCRIPTION

A strip of tide and submerged land in the Pacific Ocean, San Mateo County, California. Said parcel lying immediately beneath a seabed cable in the approximate location shown, bounded easterly by the ordinary high water mark and bounded westerly by the State of California three mile offshore boundary as said boundary is described in United States v. California 381 U. S. 139 (1965).

END OF DESCRIPTION

PREPARED MARCH 1995 BY SFBCC

This Exhibit is solely for purpose of generally defining the lease premise, and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.

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EXHIBIT "B"

CEQA FINDINGS

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SAN DIEGO CAMPUS PLANNING OFFICE (0006)
Tel. (619) 534-3470, FAX (619) 534-8937

April 28, 1995

FROM: JEFFREY A. STEINDORF, ASSISTANT VICE CHANCELLOR

TO: CHANCELLOR RICHARD C. ATKINSON

SUBJECT: Project Approval for the California Acoustic Thermometry of Ocean Climate (ATOC) Project and its associated Marine Mammal Research Program (MMRP)

The Campus Planning Office has reviewed the proposed ATOC and MMRP projects (together referred to hereafter as the Project) and has reviewed the Project pursuant to the California Environmental Quality Act (CEQA) and has prepared the attached Environmental Impact Report (EIS/EIR) to determine whether the Project as a whole could result in any potentially significant adverse environmental impacts. Based on the findings of the Final EIS/EIR described below, University approval is recommended.

PROJECT CHARACTERISTICS

ATOC is a proof-of-concept study to evaluate the use of acoustic techniques to measure large scale ocean temperatures. The current project scope is limited to approximately two years. If successful, a ten-year follow-on global ATOC program may be proposed that should help answer the question of the Earth's "greenhouse effect" and the potential for global climate changes (particularly global warming).

The physical facilities for the ATOC project include a 260 watt output sound source to be located 88 km offshore Pillar Point on the San Francisco Peninsula, to be connected to shore with a subsea power cable that would come ashore at the Pillar Point Air Force Tracking Station. Onshore, the cable would be installed in connection with bluff restoration activities previously planned by the Air Force and analyzed in a federal environmental assessment, incorporated in the Final EIS/EIR, which concluded that no significant impacts would result from those activities.

ATOC climate-related studies (and the accompanying MMRP) would be preceded by an approximate six-month MMRP Pilot Study, which would allow marine biologists to study the effects of low frequency sound on marine animals. Only if the results of the MMRP Pilot Study are favorable (no unacceptable acute or short-term effects are detected) will the Project proceed to an ATOC feasibility demonstration phase. Activities beyond the initial two year research period will be subject to and contingent upon additional environmental review.

This Project is not located on the University of California, San Diego (UCSD) Campus (or any other UC campus) and therefore is not included in the Campus Long Range Development

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Plan (LRDP) or its associated EIR; the Final EIS/EIR is therefore an independent project-level document. Since the Project is outside the LRDP planning area, no findings regarding the relationship of the Project to the LRDP are required.

The Project is more thoroughly described in the attached final EIS/EIR, and in the proposed findings set forth below.

ENVIRONMENTAL REVIEW SUMMARY

The recommendation for approval of this project is subject to your review and consideration of the environmental consequences of the Project as described in the attached Final EIS/EIR. The Final EIS/EIR concludes that all impacts of the Project are less than significant, particularly after the application of the mitigation measures proposed in the Final EIS/EIR and to be adopted through the proposed findings and approval set forth below. Some impacts, particularly potential effects of the ATOC sound source on the behavior of large marine mammals, could be subtle and/or difficult to detect or measure, and therefore may be considered uncertain or unknown; to the extent that any of these uncertain or unknown impacts are significant, a statement of overriding considerations is set forth in the findings below. However, protocols for the termination of the ATOC sound source transmissions, included in the mitigation measures for the Project, will prevent any detectable significant impacts from occurring since those protocols require termination of sound transmissions based on criteria that are considerably more sensitive than the standard of significance applicable to such impacts.

FINDINGS

The Chancellor of the University of California at San Diego (UCSD) hereby certifies that the California Acoustic Thermometry of Ocean Climate Project and its associated Marine Mammal Research Program (the Project) Final Environmental Impact Report has been completed in conformance with the California Environmental Quality Act and that the Chancellor has received, reviewed, and considered the information contained in the Final EIS/EIR.

The Chancellor further acknowledges that the Hawaii ATOC and MMRP Draft Environmental Impact Statement (Hawaii EIS) has been prepared and completed under requirements of the National Environmental Policy Act (NEPA) and the Hawaii Environmental Policy Act (HEPA), that the Hawaii EIS is incorporated by reference in the Final EIS, and that the Chancellor has received, reviewed and considered the information contained in it. The Chancellor also has received, reviewed and considered the information contained in the September, 1994, Final Environmental Assessment for Erosion Repair at Pillar Point Air Force Station (Air Force EA), which also is incorporated by reference in the EIS/EIR.

The Final EIS/EIR reflects UCSD's independent judgment and the independent judgment of the Chancellor.

Having received, reviewed, and considered the foregoing information, as well as all other information in the record, the Chancellor hereby approves and conditions the Project (Pioneer Seamount alternative site) and finds as follows:

I. BACKGROUND

The proposed ATOC project is funded by the Strategic Environmental Research and Development Program (SERDP) for the purpose of measuring water temperatures on ocean basin scales.

The current project scope is limited to approximately two years and to testing the ATOC concept and determining whether it should be pursued further. If successful, it is anticipated that up to a ten-year follow-on global ATOC program may be proposed that would help answer further the question of the Earth's "greenhouse effect" and the potential for global climate changes (particularly global warming).

Two sound sources are proposed for the current project. One would be located offshore of central California on the Pioneer Seamount. This is the sound source which is recommended for approval and is the subject of the attached EIS/EIR which is recommended for certification. The other sound source would be

located off the north shore of Kauai, Hawaii, and is the subject of a companion EIS, which is incorporated by reference into the EIS/EIR for the Project.

It is proposed to operate the sound sources from 2% to 8% of the time. Each source would be used to transmit low frequency, digitally coded sounds across the North Pacific ocean basin (at sound levels below ambient conditions along most of the path) to receiving stations around the North Pacific rim, most of which are existing facilities. Two new hydrophone receiver arrays would be installed along the radial from Pioneer Seamount to Rarotonga (New Zealand territory) at approximately 3000 km and 6000 km range from Pioneer Seamount. This network would be complemented by up to ten drifting receivers that would be deployed along selected transmission paths.

The proposed Pioneer Seamount facility would include a 260 watt output acoustic sound source to be located approximately 88 km (48 nm) offshore at a depth of approximately 980 m (3,215 ft). This sound source would be powered by a cable connected to a signal source and power amplifier in an existing building at the Pillar Point Air Force Station, in San Mateo County, California.

The Project is also funding an extensive marine mammal research program to address the question of whether long-term underwater low frequency sound transmissions are safe for marine animals, particularly marine mammals and sea turtles. For the first several months the sound source would be controlled by the MMRP Research Team, led by the University of California, Santa Cruz. Climate-related transmissions would only begin if the system is determined to be safe for marine mammals and other sea life.

II. ENVIRONMENTAL IMPACT SUMMARY

A Final EIS/EIR has been prepared for the ATOC and MMRP project in accordance with CEQA and the University Procedures for the Implementation of CEQA. The EIR is combined with a Federal Environmental Impact Statement (EIS) prepared pursuant to the National Environmental Policy Act (NEPA), for which the Advanced Research Projects Agency (ARPA) is the Federal lead agency. Both NEPA and CEQA strongly encourage federal and state agencies to avoid duplication by combining the state and federal environmental review process. The NEPA and CEQA review of the ATOC EIS/EIR occurred in parallel as described below.

The NEPA review began when ARPA invited comments on the scope of the proposed EIS by publishing a Notice of Intent to prepare the EIS in the Federal Register on May 3, 1994 (59 FR 22822). In addition to receiving written scoping comments, a

public scoping session was held in Santa Cruz on May 16, 1994. The subsequent draft EIS/EIR responded to these scoping comments.

The CEQA review process formally began on June 3, 1994, when UCSD (the CEQA lead agency) distributed a Notice of Preparation of the EIS/EIR to the California State Clearinghouse. A public Scoping session was held on the UCSD campus in La Jolla, California, on June 23, 1994, to solicit public comment on the scope and content of the proposed EIS/EIR. Although the official scoping period closed on July 5, 1994, scoping comments were received from the public through July 20, 1994. The Draft EIS/EIR was prepared to respond to public concerns identified through the federal and state public scoping processes.

A Draft EIS/EIR was released on December 2, 1994. Originally the public comment period on the Draft EIS/EIR was scheduled to last 45 days, until January 17, 1995. However, in light of numerous requests to extend the public review period, the comment period was extended to January 31, 1995.

During the public comment period the Draft EIS/EIR was reviewed by various Federal, state and local agencies, as well as by interested individuals and organizations. In addition, comments on the Draft EIS/EIR were received in testimony at a public hearing held on January 6, 1995, at the Santa Cruz Civic Auditorium in Santa Cruz, California. The letters and the public hearing transcript, as well as the University's responses to the public comments, are included in the Final EIS/EIR.

In addition, a Draft EIS has now been prepared for the Hawaii component of the ATOC and MMRP activities. This document is also a combined state (Hawaii) and Federal EIS, prepared under NEPA and the Hawaii Environmental Policy Act (HEPA). The Federal environmental review process was initiated by the issuance of a Notice of Intent to prepare an EIS published in the Federal Register on April 15, 1994. Public scoping hearings were held on April 15, 1994, in Honolulu and on April 16, 1994, in Kauai. The formal Hawaii state environmental review process was initiated by an EIS Preparation Notice published in the Office of Environmental Quality Control bulletin on October 8, 1994. Public scoping comments were received through November 7, 1994. The Draft EIS was issued in December 1994. The Final EIS is currently being prepared in accordance with the requirements of HEPA and NEPA.

The Final EIS/EIR, analyzes the Project impacts in five areas: physical environment, biological environment (which includes impacts on marine species), economic environment, social environment, and other impacts. No significant impacts

were found in any of these areas. However, the Final EIS/EIR identifies mitigation measures to reduce the less than significant impacts or the potential for impacts when they are uncertain.

The Final EIS/EIR also considers twelve alternatives, and analyzes in depth four of those alternatives: including a no-project alternative and three alternative project sites. All of the alternatives to the proposed Pioneer Seamount alternative site would either have increased environmental impacts as compared to the proposed Pioneer Seamount alternative site, would be infeasible due to economic and/or technical considerations, and/or would fail to satisfy project objectives, as set forth below.

III. PROJECT IMPACTS AND DISPOSITION OF RELATED MITIGATION MEASURES IDENTIFIED IN THE EIR

FINDING A. The Final EIS/EIR concludes that all impacts from the Project would be less than significant. However, some mitigation measures for less than significant, uncertain or subtle impacts are identified in the EIS/EIR to further reduce these less than significant impacts.

1. Physical Environment

The Final EIS/EIR concludes that the installation and operation of the ATOC cable and source would have no impact on the meteorology, physical oceanography, or on the temperature, salinity or dissolved oxygen characteristics of the water column, or on subsea geography, seismicity, or sediments. Potential impacts on the physical environment are discussed at pages 4-2 to 4-11 of the Final EIS/EIR.

To avoid any potential for impacts during the installation of the cable and source, the Final EIS/EIR identifies two mitigation measures: 1-1, requiring the cable to be designed to minimize potential for impacts in the nearshore area, surf zone, and bluff area, and 1-2, requiring ATOC facilities to be removed at the end of the experiment, to the extent economically and practicably feasible.

The EIS/EIR concludes that less than significant increases in the average ambient noise levels will occur in the immediate vicinity of the ATOC source. Two mitigation measures are identified to reduce this less than significant impact. Mitigation Measure 2-1 requires the adjustment of the duty cycle and power level of the ATOC source to the minimum necessary to support the research objectives. Mitigation Measure 2-2 requires the ATOC project to coordinate with other oceanographic

and acoustic research efforts and U.S. Navy activities, and commercial fishing activities, to avoid scheduling and operational conflicts.

2. Biological Environment

With regard to biological resources, the EIS/EIR applies, for CEQA purposes, the commonly accepted standard for a significant impact, which is one that would substantially reduce the number or restrict the range of a rare, endangered or threatened plant or animal, cause a fish or wildlife population to drop below self-sustaining levels, or adversely affect significant wildlife habitats.

The conclusions set forth below that impacts to all species from the ATOC sound source will be less than significant is further supported by a comparison of the ATOC sound source intensities to the intensities of anthropogenic (man made) sounds and natural sounds in the Project vicinity, which in many cases equal or exceed those of the Project without resulting in any documented adverse effects. For example, major shipping lanes are located directly above or in the near vicinity of, the proposed ATOC sound source and vessels such as large container ships and supertankers using these shipping lanes emit sound levels comparable to or greater than those anticipated from the Project. The historic acceptance of these sound levels and the lack of any regulatory standards or requirements applicable to these sound producing activities further indicates that sound emissions at these intensities do not result in significant impacts on biological resources.

a. Mysticetes.

Potential impacts on mysticetes (baleen whales) are discussed at pages 4-16 to 4-42 of the Final EIS/EIR. Mysticetes (including the endangered blue whale, fin whale, sei whale, humpback whale, and right whale) are believed to have good low frequency hearing capability, but no species are believed capable of diving deeper than 700 m. The source would be located considerably deeper, at 980 m. Thus, while mysticetes could be affected by passage through sound fields, encounters with high intensities would be unlikely. The potential for physical, behavioral, and long-term impacts on mysticetes is less than significant, because the source site is not located in a sensitive habitat, it will affect a minor portion of the range of these whales, and given the low densities of these whales close encounters with the ATOC sound source will be rare, with no potential for permanent damage.

The 5-minute ramp-up period and low duty cycle will mitigate the potential for impacts. In addition, the EIS/EIR, as

potential responses of sea turtles to low frequency sounds. Source termination protocols and criteria set forth in Appendix C of the EIS/EIR will result in suspension of the experiment before any detectable significant impacts occur.

e. Fish.

Potential impacts on fish are discussed at pages 4-80 to 4-98 of the Final EIS/EIR. The EIS/EIR concludes that bottom fish very close to the sound source could incur auditory injury which could, in turn, result in increased vulnerability to predation. However, given the minor portion of any population that may be affected, and the fact that this impact is extremely minor compared to the effects of commercial fishing activities which are commonly accepted and considered less than significant, and the lack of any significant population of endangered fish in the area of the ATOC sound source, this is deemed to be less than significant impact. The 5-minute ramp-up and low duty cycle should also mitigate potential impacts. As additional mitigation the EIS/EIR requires the MMRP to monitor fish stock assessments to attempt evaluation of the potential for increased predation on fish, in relation to ATOC source sounds (Mitigation Measure 10-1).

Impacts on the behavior of other fish, including sharks, are possible, but are considered less than significant due to the comparatively small proportion of any species' range which potentially would be affected, and the ability of sharks to quickly habituate to non-threatening human-made noise. The EIS/EIR requires the MMRP to monitor fish stock assessment to evaluate the potential for impacts on fish, including sharks, in relation to ATOC sound sources (Measure 11-1).

f. Other Species.

Potential impacts on other species are discussed at pages 4-58 to 4-72 and 4-98 to 4-115 of the Final EIS/EIR. The EIS/EIR concludes that the ATOC transmissions will have less than significant impacts on invertebrates, and no impacts on fissipeds, plankton, and seabirds including the endangered Peregrine falcon. No mitigation for these species is required. Impacts on all of the endangered species in the Project area, including those addressed above, are less than significant or nonexistent.

3. Economic Environment

Potential impacts on the economic environment are discussed at pages 4-116 to 4-118 of the Final EIS/EIR. The EIS/EIR concludes that ATOC and the MMRP will not cause any impacts on mariculture, shipping, military usage or mineral/energy develop-

ment in the Project area. Impacts on commercial or recreational fisheries are less than significant. The potential for impact on fisheries will be mitigated by the mitigation measures for potential impacts on fish species as described above.

4. Social Environment

Potential impacts on the social environment are discussed at pages 4-118 to 4-127 of the Final EIS/EIR. The EIS/EIR concludes that ATOC and the MMRP will not have any impact on population dynamics or recreational and leisure activities, including water contact sports, diving, and board or wind surfing. ATOC and the MMRP will have a beneficial impact on education institutions because interaction between ATOC and MMRP research scientists, and educational communities would stimulate interest and knowledge in oceanography, underwater acoustics, marine biology, and environmental monitoring techniques.

5. Other Impacts

Potential impacts on other environmental values are discussed at pages 4-127 to 4-134 of the Final EIS/EIR. There will be minor increases in vessel and aircraft traffic in the Project vicinity. These potential impacts will be mitigated by the requirement that vessel and aircraft traffic be kept to a minimum, and where possible, trips consolidated or other measures taken to reduce aircraft and vessel traffic levels (Mitigation Measure 12-1). The minor increase in air pollution caused by the ATOC and MMRP vessels will be mitigated by equipment with all required air pollution controls.

Although there are no recorded archeological sites along the cable route, previously unidentified cultural resources could be impacted by the installation of the ATOC cable. The EIS/EIR requires two mitigations for this possibility. Mitigation Measure 13-1: a qualified archeologist will be retained to visit the ATOC activity site. Mitigation Measure 14-1: If shipwrecks or other resources are identified, they will be avoided during installation of the ATOC facilities.

FINDING B. The mitigation measures proposed for each impact in the Draft EIS/EIR, as amended by the Final EIS/EIR, are approved, and have been included in and made a condition of this approval. In addition, implementation of the MMRP substantially in accordance with the protocols set forth in Appendix C to the Final EIS/EIR, with any modifications approved by the MMRP Advisory Board, is also included in and made a condition of this approval. It is hereby determined, based upon the analysis in the Final EIS/EIR, including

these mitigation measures, that all environmental impacts have been substantially lessened, and are less than significant.

FINDING C. To the extent that undetected impacts which are presumed to be less than significant are not reduced to a less than significant level by the mitigation measures, it is hereby determined that any remaining significant, unavoidable adverse impacts are acceptable for the reasons specified in Section VI below.

IV. CUMULATIVE IMPACTS

The Draft EIS/EIR, as amended by the Final EIS/EIR, concludes that no significant cumulative impacts are presented by the Project when combined with reasonably foreseeable future projects.

V. ALTERNATIVES

The Draft EIS/EIR, as amended by the Final EIS/EIR, evaluated twelve alternatives to the Project and analyzed four of those alternatives in detail (no action, 3 alternative project locations, and an autonomous source), as described below. The feasibility of each of the alternatives in relation to the project objectives is addressed in the findings below.

1. Project Objectives

ATOC Program Criteria

- Observe the ocean on the large space scales (3,000 to 10,000 km) which characterize climate, so that modelers will be able to: 1) test their models against the average ocean temperature changes seen by ATOC over a few years, and 2) if, and when, the models prove adequate, use those same observations to "initialize" the models to make meaningful predictions.

- Develop and demonstrate the equipment necessary to undertake acoustic thermometry experiments, in particular, reliable low frequency sound sources.

- Prove the concept of using acoustic thermometry to measure ocean climate variability for global applications by establishing multiple acoustic pathways in the North Pacific.

- Obtain early baseline data on transmission times in Pacific pathways to compare with data that may be

obtained in a follow-on global program, if such a program is approved.

- o Determine the minimum source level and duty cycle necessary for obtaining valid climatic data.

- o Characterize oceanographic factors that could affect the global climate "signal," such as tidal cycles, internal wave fields, and mesoscale variations, and determine the constraints they impose on the design of a future (conceptual) ocean monitoring system.

- c Utilize existing US Navy seafloor listening devices to the maximum extent feasible to increase the number of acoustic pathways and, hence, the quantity of data, at a relatively small cost.

MMRP Criteria

- o Assess the potential effects of ATOC sound transmissions on the relative distribution and abundance of marine animals (particularly marine mammals and sea turtles) within the 120 dB sound field (modeled at 100 m depth), so as to minimize uncertainties associated with determination of the significance of any effects.

- o Obtain sufficient information to evaluate what effects the ATOC sound transmissions could potentially have on the relative distribution, abundance and diving behavior of marine mammals and sea turtles.

- o Identify mitigation measures to avoid potential disruption of behavioral patterns of local marine mammals and sea turtles.

- o Assess the level of any responses of indicator species to ATOC sound signals, particularly whether any marine mammal or sea turtle demonstrates an acute or short-term response to low frequency sound transmissions with ATOC source characteristics.

2. Detailed Evaluation of Project Alternatives

Of the twelve alternatives originally considered, four were identified as potentially viable alternatives and analyzed in detail in the Draft EIS/EIR. These include: Alternative 1 - the Pt. Sur source location, identified in the Draft EIS/EIR as the preferred alternative; Alternative 2 - no action; Alternative 3 - alternative project sites; and Alternative 4 - moored autonomous sources, not restricted to any specific location.

a. Alternative 1: Pt. Sur Source Location

The Draft EIS/EIR identified the Pt. Sur location for the sound source as the preferred alternative. This alternative is discussed at pages 2-2 to 2-7 of the Final EIS/EIR. The alternative called for the installation and operation of the ATOC sound source approximately 40 km west of Pt. Sur, California, within the Monterey Bay National Marine Sanctuary. Comments received on the Draft EIS/EIR raised many concerns about locating the sound source within the Marine Sanctuary. Responding to these comments, the project proponents have proposed selection of the Pioneer Seamount (Alternative 3-1 in the EIS/EIR) for the sound source location. Assuming conflicts between the proposed location of the sound source at Pt. Sur and the plans applicable to the Marine Sanctuary, and given the somewhat higher abundances of most marine mammals at the Pt. Sur location as compared to Pioneer Seamount, impacts at the Pt. Sur site would have been somewhat greater than at Pioneer Seamount, albeit at a less than significant level.

The Marine Mammal Research Program was proposed in the Draft EIS/EIR in part as a mitigation measure for the preferred alternative of the Pt. Sur source site. This mitigation measure will remain effective at the Pioneer Seamount location as is further described in the Final EIS/EIR, Appendix C. The MMRP as proposed in the Final EIS/EIR is substantially equivalent to that proposed in the Draft EIS/EIR for the previously proposed Sur Ridge site. To the extent that the MMRP is made more difficult and/or less effective at the Pioneer Seamount site due to its greater distance from shore and the somewhat lower abundances of marine mammals, this factor is more than compensated by those lower abundances and the lesser need for mitigation at the Pioneer Seamount site.

b. Alternative 2: No Action

This alternative would consist of not conducting the ATOC study, nor the associated MMRP. This alternative is discussed at page 2-7 of the Final EIS/EIR. Since the No Action Alternative would delay or preclude both marine mammal research and ATOC feasibility efforts, it would meet none of the project objectives and therefore is infeasible as a means of meeting those objectives.

c. Alternative 3: Alternate Project Sites

In developing the ATOC project proposal, potential locations in the Pacific Ocean were comprehensively surveyed. In the eastern Pacific, a number of potential source sites were initially assessed for their ability to provide long-range acoustic path geometries needed for the Project. This narrowed

the field to six sites for further analysis: 1) off the coast of Pacific Beach, Washington; 2) off the coast of Coos Bay, Oregon; 3) Pioneer Seamount, off the coast of Pillar Pt., California; 4) Sur Ridge, off the coast of Pt. Sur, California; 5) Sur Slope, off the coast of Pt. Sur, California; and 6) off the coast of San Nicolas Island, California.

Of the six possible source sites, Sur Ridge proved to best meet the stated criteria, followed by the Pioneer Seamount site, and finally the Sur Slope site. The other three sites were eliminated from detailed analysis as being unsuitable (infeasible) for both the marine mammal research and ATOC feasibility components of the Project. The Sur Ridge site was further analyzed in the Draft EIS/EIR as Alternative 1, the preferred alternative. This alternative is discussed at pages 2-2 to 2-7 of the Final EIS/EIR. The Pioneer Seamount and Sur Slope sites were further analyzed as Alternatives 3-1 and 3-2. These alternatives are discussed at pages 2-19 to 2-42 of the Final EIS/EIR. In response to comments on the Draft EIS/EIR, the Pt. Sur site was eliminated and the site next-best meeting the stated criteria, the Pioneer Seamount site, was selected for the Project location. The Sur Slope alternative site, given current technologies, would delay or preclude both marine mammal research and ATOC feasibility efforts, would meet none of the project objectives at this time, and therefore is infeasible as a means of meeting those objectives.

The Pioneer Seamount is 88 km (48 nm) west of Pillar Point, California, and 28 km (15 nm) beyond the Monterey Bay National Marine Sanctuary. The acoustic source would be placed on the seaward side of Pioneer Seamount, at a depth of 980 m (3,215 ft), 130 m (427 ft) deeper than the proposed site at Pt. Sur. It would be powered through a cable which would come ashore at the Pillar Point Air Force Station, in San Mateo County, California. The Pioneer Seamount alternative site has the lowest overall environmental impacts of all of the feasible alternatives.

d. Alternative 4: Moored Autonomous Source

This alternative (discussed at pages 2-42 to 2-45 of the Final EIS/EIR) calls for using sound sources which are not attached to shore-based power by cables, but are free-standing, powered by large battery assemblies. Such sound sources would be moored to the ocean bottom with weights and held, suspended by floats, at the correct ocean depths. The principal advantage of moored autonomous sources is the increased flexibility in siting opportunities. They can be located where the water depth exceeds the depth of the sound channel. They are not constrained by the logistics of shore-based power cable connections. However, unsolved technical problems with the design of

the equipment, and the difficulty of maintaining a marine mammal research program far from shore, precluded this alternative from being selected at this time. Since the Moored Autonomous Alternative would delay or preclude both marine mammal research and ATOC feasibility efforts, it would meet none of the project objectives and therefore is infeasible as a means of meeting those objectives.

3. Evaluation of Other Alternatives to the Project

In addition to the four alternatives described above which were analyzed in detail, the Draft EIS/EIR identified seven other alternatives which it analyzed and either rejected or incorporated into the final Project. In addition, the Final EIS/EIR, responding to comments on the Draft EIS/EIR, analyzed an additional alternative. All of these alternatives are described below.

a. Alternative 5: Restricted Source Transmission Times.

This alternative (discussed at pages 2-45 to 2-47 of the Final EIS/EIR) would limit sound transmissions to times when vulnerable marine species are not present in the vicinity of the source. However, very few species (such as the grey whale) are known to have predictable seasonal migration patterns. Gray whales, however, have migration routes some distance from the proposed Pioneer Seamount site so this alternative would not substantially reduce impacts on gray whales. Since most other species do not exhibit seasonality, or have conflicting seasonality, this alternative also would not substantially reduce impacts on other species. Since the purpose of the proposed MMRP is to evaluate the potential effects of the ATOC sound source on all marine mammals and sea turtles, restricting the transmissions to times when important species are absent would prevent achievement of MMRP project objectives. Furthermore, since obtaining ATOC data in all seasons is anticipated to be important for achieving ATOC project objectives, the Restricted Source Transmission Time Alternative would not meet ATOC project objectives. The failure to meet objectives renders this alternative infeasible as a means of meeting those objectives.

b. Alternative 6: Modified Source Operational Characteristics.

This alternative (discussed at pages 2-47 to 2-50 of the Final EIS/EIR) would modify source characteristics to reduce the effect on marine mammals. However, the Project has already been designed with source characteristics which meet the project criteria and have the minimum impact on marine mammals. The

ATOC sound source would utilize frequencies anticipated to have minimal adverse impacts on species that may be exposed to their acoustic output (Mitigation Measure A-2), would operate at the minimum power level and duty cycle necessary to support MMRP objectives and ATOC feasibility operations (Measures A-3 and A-5), and would continue to study source waveforms and transmissions lengths that may facilitate long-range detection of the source sounds which, in turn, may permit lower source intensities than would otherwise be required (Measure A-4).

Since the mitigating effects of this alternative have already been incorporated into the proposed action, modified source characteristics were not analyzed as a separate alternative. Additional modified source operational characteristics are unavailable until the results of the initial feasibility study operations are obtained, and therefore are infeasible at this time.

c. Alternative 7: Global Climate Models.

This alternative (discussed at pages 2-50 to 2-51 of the Final EIS/EIR) is to use existing computer models alone, instead of ATOC, to predict long-term changes in the global climate. However, because of current limitations in existing computer models their use alone would not adequately address the project objectives. The use of computer models would be an integral part of the overall project and ATOC measurements could serve as an essential element of computer model development. Therefore, this alternative has already been incorporated into the Project and was not analyzed further as a separate alternative. Since the Global Climate Model Alternative (if adopted in lieu of the proposed ATOC experiment and MMRP) would delay or preclude both marine mammal research and ATOC feasibility efforts, it would meet none of the project objectives and therefore is infeasible as a means of meeting those objectives.

d. Alternative 8: Satellite Sensors for Sea Surface Temperature Measurements.

Another alternative considered was to use satellite measurements of sea surface temperatures. This alternative is discussed at page 2-52 of the Final EIS/EIR. However, while these measurements are fairly accurate for the sea surface, they alone cannot measure global climate changes, and, therefore, would not meet the project objectives. ATOC research would be coordinated with satellite measurements, so these measurements are not a substitute for ATOC, but rather an important adjunct to it. Therefore, this alternative was rejected as infeasible and not analyzed in detail as a separate alternative. Since the Satellite Sensor for Sea Surface Temperature Measurement Alternative (if adopted in lieu of the proposed ATOC experiment and MMRP)

would delay or preclude both marine mammal research and ATOC feasibility efforts, it would meet none of the project objectives and therefore is infeasible as a means of meeting those objectives.

e. Alternative 9: Satellite Sensors for Sea Level Measurements.

Another alternative for measuring ocean climate changes considered is the use of satellite-based measurements of sea level. This alternative is discussed at pages 2-52 to 2-53 of the Final EIS/EIR. However, sea level measurements alone, no matter how accurate, are not an effective measure of ocean temperatures. The satellite sea level measurements are one component, along with the ATOC project data, that will be assimilated into the computer predictions of global climate change, which is the ultimate objective of this project. Therefore, satellite sea level measurements are not a substitute for ATOC, but instead represent one method of augmenting larger ATOC project objectives. This alternative was rejected as infeasible and not analyzed in detail as a separate alternative. Since the Satellite Sensor for Sea Level Measurement Alternative (if adopted in lieu of the proposed ATOC experiment and MMRP) would delay or preclude both marine mammal research and ATOC feasibility efforts, it would meet none of the project objectives and therefore is infeasible as a means of meeting those objectives.

f. Alternative 10: Oceanographic Point Sensors.

This alternative (discussed at pages 2-53 to 2-55 of the Final EIS/EIR) calls for conventional thermometers placed directly in the ocean. This method, along with other oceanographic tools available, provide complementary forms of data, but cannot be used alone to resolve global climate questions. ATOC is expected to provide instantaneous temperature data averaged on ocean basin scales and would complement, not compete, with the other data collection research technologies. Therefore, this alternative is incorporated into the Project and not analyzed in detail as a separate, independent alternative. Since the Oceanographic Point Sensor Alternative (if adopted in lieu of the proposed ATOC experiment and MMRP) would delay or preclude both marine mammal research and ATOC feasibility efforts, it would meet none of the project objectives and therefore is infeasible as a means of meeting those objectives.

g. Alternative 11: Autonomous Polar Hydrophones - Ice Noise Measurements.

This alternative (discussed at page 2-55 of the Final EIS/EIR) calls for listening to Arctic ice noise which could be

related to quantity of ice melting, which could then be translated into changing temperatures in the atmosphere. However, correlation between ice noise and air temperature is limited to short-term local changes unrelated to climate change. Therefore, this alternative was rejected as infeasible and not analyzed in detail. Since the Autonomous Polar Hydrophone Alternative (if adopted in lieu of the proposed ATOC experiment and MMRP) would delay or preclude both marine mammal research and ATOC feasibility efforts, it would meet none of the project objectives and therefore is infeasible as a means of meeting those objectives.

h. Alternative 12: Dual Site Experiment; Alternative MMRP Techniques -- Mobile Playback Experiments.

Several commentators on the Draft EIS/EIR suggested that the MMRP be performed using a mobile sound source at a location with relatively large numbers of marine mammals, and the ATOC experiment be located at a remote site with lower densities of marine mammals, without any attempts at associated marine mammal research. This alternative is discussed at pages 2-55 to 2-56 of the Final EIS/EIR.

In response to this comment, mobile sound source (playback) experiments were added to the MMRP at several locations chosen for marine mammal and sea turtle abundances. However, playback experiments have only limited relevance to evaluating the potential impacts of an ATOC-like sound source. As a result, MMRP experiments utilizing an ATOC-like source are still required, and reasonable abundances of marine mammals are needed to support those experiments.

Moreover, there is no feasible cabled source site that has lower marine mammal and sea turtle abundances than Pioneer Seamount. As a result, this alternative, to the extent that it is feasible, has already been adopted; it therefore was not analyzed further. Since the Dual Site Experiment Alternative (if adopted in lieu of the proposed ATOC experiment and MMRP) would delay or preclude both marine mammal research on the effects of an ATOC type sound source and ATOC feasibility efforts, it would meet none of the ATOC project objectives and would meet only limited MMRP objectives and therefore is infeasible as a means of meeting those objectives.

3. Summary of Conclusions Regarding Alternatives

Among the alternatives considered, the Pioneer Seamount Alternative has the lowest overall environmental impacts of those alternatives that can feasibly meet project objectives. It has sufficient marine mammal abundances to support a valid MMRP, but compared to other feasible sites would have reduced

impacts on marine animals generally. It will meet all of the ATOC project objectives as well as the previously proposed Sur Ridge location, albeit at an increased cost and difficulty to the researchers. Despite these increased costs and difficulties, avoiding any conflicts with one or more of the Marine Sanctuary's goals, which could have occurred at the Sur Ridge location, supports the decision to select the Pioneer Seamount location instead. None of the other alternatives could feasibly meet project objectives and/or reduce environmental impacts further.

VI. STATEMENT OF OVERRIDING CONSIDERATIONS

The Final EIS/EIR concludes that there are no significant adverse unavoidable impacts from the implementation of the Project. However, some impacts, particularly potential effects of the ATOC sound source on the behavior of large marine mammals, could be subtle and/or difficult to detect or measure, and therefore may be considered uncertain or unknown; using the best information available, the EIS/EIR concludes that these impacts are less than significant. The EIS/EIR also identifies a range of feasible mitigation measures which would reduce the potential of impacts on these species even further. In particular, source termination protocols included in those mitigation measures would lead to suspension of the experiment if unacceptable acute or short-term impacts on large marine mammals or other marine animals are detected; therefore the only potentially significant impacts of the Project are any impacts that might remain undetected despite the observational efforts of the MMRP.

For the most part, the uncertainty of available information pertains to the degree of potential behavioral and other impacts of low frequency sounds on individual marine animals. In contrast, the characteristics of the ATOC sound fields themselves and the abundances of most marine species in the project area are much better known and independently support the conclusions in the Final EIS/EIR that impacts on marine species under CEQA criteria (which generally look at the impacts on the species as a whole rather than impacts on individual animals, and consider the percentage or portion of the range of a species that will be affected) will be less than significant.

In the event and to the extent that any of these uncertain, unknown or undetected impacts are nonetheless significant, the Chancellor adopts the following statement of overriding considerations. The findings set forth in the following statement also support the conclusions above regarding the infeasibility of project alternatives that do not meet project objectives.

Computer models of global climate change due to increasing

greenhouse gases predict complicated large-scale patterns of warming, and in some regions, cooling of the atmosphere and ocean. Some predicted changes are very severe; one model predicts that the ventilation of the deep ocean will cease, with severe consequences to marine life. Global climate changes are also anticipated to have significant social and economic effects given related changes in weather patterns and a predicted rise in sea level which would flood low lying coastal areas unless expensive protective structures are constructed.

However, the time scales and the specific global consequences on climate predicted by these models have been criticized as inaccurate and oversimplified. Therefore, they have had very little impact on governmental decisions to take action to curb emissions of greenhouse gases. As a result, the substantial reductions in emissions of greenhouse gases that many scientists consider important have not yet begun on the scale considered necessary. Any delays in effective curbs on the emissions of these gases could increase the severity of the environmental, social and economic impacts described above, and/or increase the difficulty and costs of achieving necessary reductions at a future date. If the ATOC concept proves effective, it is anticipated to increase the legitimacy of these models and to enhance their effect on public policy formulation, with the goal of resultant reductions in greenhouse gas emissions and the reduction or avoidance of the impacts of global warming described above. The Chancellor therefore finds that the benefits of the Project outweigh and override any significant adverse environmental effects for the reasons just described.

VII. ADDITIONAL FINDINGS

FINDING D. CEQA requires the lead agency approving a project to adopt a monitoring program for the changes or alterations to the Project which it has adopted or made a condition of project approval in order to ensure compliance during project implementation. The monitoring program set forth in the Final EIS/EIR is designed to serve this purpose for the Project. Although not required by CEQA, the monitoring program also applies to mitigation measures for less than significant impacts. Its implementation is hereby made a condition of this approval.

FINDING E. The text of the Draft EIS/EIR, as revised by the Final EIS/EIR, is hereby incorporated into these findings in their entirety. Without limitation, this incorporation is intended to elaborate on the scope and nature of mitigation measures, the

basis for determining the significance of impacts, and the comparative analysis of alternatives.

1. Short-Term and Long-Term Impacts

The EIS/EIR concludes that the Project would not result in adverse environmental effects that would permanently alter the physical, biological, economic or social resources of California. The MMRP and ATOC activities would not result in environmental effects which could permanently narrow the range of beneficial uses of the environment by California residents, or pose any long-term risks to the health, safety, or general welfare of the public.

The Project would result in local short-term increases in boat traffic and air traffic as part of the MMRP. The Project could also result in minor short-term, and possibly long term, changes in the local marine environment as a result of the operation of the ATOC sound source. The operation of the ATOC source is not anticipated to adversely affect the maintenance and enhancement of the long-term productivity of the environment.

The MMRP research would have beneficial biological, economic and social implications in the long-term.

2. Irreversible and Irretrievable Changes

The Project will not result in any significant irreversible environmental changes because all equipment can be removed from the site should the Project be discontinued. Furthermore, the Project will not result in significant irreversible changes to the marine environment because the protective measures included will prevent any irreversible harm to marine organisms.

3. Energy and Resource Requirements

Anticipated energy requirements of the ATOC program and associated MMRP will be well within the energy supply capacity of the California fuel supply and power grid. No new power generation capacity or energy supply facilities would be required for ATOC acoustic signal generation or for related MMRP activities.

Other than the various structural materials used for fabrication of the ATOC acoustic source system, and fuels, no natural or depletable resources are required for the implementation of the ATOC program or the MMRP.

4. Growth Inducing Impacts

Because the Project is a scientific research project, as opposed to a land development project, the Project will not result in any appreciable growth-inducing effects.

5. Environmental Justice

The Project would cause no adverse environmental effects on any minority communities and/or low-income communities. Furthermore, the public, including minority communities and low-income communities, have full and open access to this EIS/EIR and all public information that was compiled and incorporated in its development.

6. Recirculation

A public announcement of the proposed change in the source site was made on March 10, 1995, through press releases to major newspapers, written notice to interested environmental organizations, and posting of the notice to the MARMAM Internet newsgroup. This notice also resulted in newspaper articles being written in newspapers of general circulation in the project area. In response, one written request and one verbal request was received for an additional public comment period based upon the change in proposed source site. The written request listed a series of questions resulting from the change in proposed site, particularly regarding effects on the design and implementation of the MMRP, that have all been addressed through revisions to Appendix C of the Final EIS/EIR.

Because the Final EIS/EIR reflects relatively minor changes to the Project, concludes that changes in the proposed action result in the reduction of impacts in all areas, and contains very limited text changes by virtue of the selection of the Pioneer Seamount alternative site, the Chancellor finds that recirculation of the EIS/EIR is not required before certification.

CEQA Guideline Section 15088.5 provides for recirculation of an EIS/EIR when it is "changed in a way that deprives the public of a meaningful opportunity to comment on a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement." Recirculation is also indicated when there is a disclosure showing: "A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented." However, recirculation is not required where "the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in

an adequate EIR."

Based upon a review of the Final EIS/EIR as compared to the Draft EIS/EIR, the Chancellor finds that any new information added to the Final EIS/EIR merely clarifies or amplifies or makes insignificant modifications in an already adequate EIS/EIR. The selection of the Pioneer Seamount site, instead of the Pt. Sur site identified in the Draft EIS/EIR as the preferred alternative, does not surpass the threshold criteria for recirculation. The Pioneer Seamount alternative site was analyzed in detail in the draft EIS/EIR, including information about the environmental setting, impacts and mitigation measures. It was concluded under all of the alternatives that, applying CEQA criteria, all impacts of the Project would be less than significant, particularly after mitigation. In addition, the selection of the Pioneer Seamount alterative reduces any impacts that might have resulted from any conflicts with the resources of, and plans applicable to, the Monterey Bay National Marine Sanctuary.

In sum, all impacts of the Project, which are already less than significant applying CEQA criteria, will be unaffected or reduced by the Pioneer Seamount alternative. In addition, because the Pioneer Seamount alternative was already analyzed in detail in the Draft EIS/EIR and only minor textual clarifications or elaborations are included in the Final EIS/EIR, no "significant new information" has been added. As a result, recirculation is not required.

7. Finding Regarding Comments on the Preliminary Final EIS/EIR

To address the requirements of Public Resources Code Section 21092.5, a preliminary Final EIS/EIR was circulated on April 11, 1995, to state and local agencies that commented on the Draft EIS/EIR, and (although not required by CEQA) on April 12, 1995 to the two public interest law firms that requested an opportunity for additional public participation. All comments received in response to that circulation have been reviewed and considered. Most of those comments are conclusory, reiterating the commenters' position that the EIS/EIR is inadequate and that the comments have not been responded to; as to these comments it is generally responded that the EIS/EIR is adequate and that the comments adequately addressed the significant environmental issues and concerns raised by the commenters. Commenters also expressed concern over impacts to the wildlife of the Farallon Islands, which include marine mammal habitats and seabird breeding sites. However, the proposed site is not at the Farallon Islands, but at Pioneer Seamount, approximately 30 nautical miles distant. At that range, ATOC sounds will be less than 100 dB, comparable to ambient levels. Commenters also

asserted that marine life abundances at Pioneer Seamount were greater than stated in the Final EIS/EIR, but provided no evidence to support those assertions. These marine life abundances are adequately considered and addressed in the Final EIS/EIR, which demonstrates that for most species, abundances are lower at Pioneer Seamount as compared to Sur Ridge, and for those few species with greater abundances, the difference is minor and is more than compensated by the reduced sound field areas that will be experienced at the Pioneer Seamount site. Concern was also expressed that the abundances of marine life at Pioneer Seamount were not adequately documented. However, the Draft EIS/EIR, as modified by the Final EIS/EIR, fully analyze the marine life resources at the Pioneer Seamount site. In fact, much of the primary source information relied upon in the EIS/EIR was developed in the context of an EIS for a dredge disposal Project (EPA, 1993) in the Pioneer Seamount vicinity (approximately 10 miles to the north of the Pioneer Seamount site). The comments also asserted inadequate discussion of playback (mobile sound source) studies added to the MMRP at the request of environmental organizations (some of which are the same organizations now objecting to the analysis of the effects of the playbacks); however, the potential impacts from exposing marine animals to low frequency sounds, whether from fixed or mobile sources, are exhaustively analyzed in the EIS/EIR and there is no evidence to support the assertion that mobile sources have greater impacts or different impacts than fixed sources. Comments also asserted that the impacts of cable laying through Golden Gate National Recreation Area and Fitzgerald Marine Reserve were inadequately discussed, but the Final EIR/EIR contains a full presentation of these impacts. Other commenters questioned the statistical power of the MMRP observations; the statistical power of the MMRP is analyzed in the Final EIS/EIR.

No significant new comments or information were provided, and/or all of the comments or information were adequately addressed in the Final EIS/EIR. The findings and conclusions set forth herein are unaffected by comments made and/or information provided in response to the preliminary Final EIS/EIR.

SUMMARY

Based on the foregoing findings and the information contained in the record, it is determined that:

1. All impacts of the Project are less than significant applying CEQA criteria.

2. All impacts have been substantially lessened where feasible.

3. If any of the uncertain or subtle impacts prove to be significant, those impacts are found to be unavoidable and are acceptable due to the factors described in the Statement of Overriding Considerations.

RECOMMENDED FOR ADOPTION

Jeffrey A. Steindorf
Assistant Vice Chancellor

4-28-95
Date

ATOC and MMRP Project Approval, EIR Certification and Findings

PROJECT APPROVAL

Having reviewed, considered and certified the Final EIS/EIR as adequate, conditioned the Project as set forth in the foregoing findings, and adopted the foregoing findings and Statement of Overriding Considerations, the University hereby approves the California Acoustic Thermometry of Ocean Climate (ATOC) project and its associated Marine Mammal Research Program (MMRP) as conditioned herein.

FINDINGS ADOPTED AND PROJECT APPROVED

Richard C. Atkinson — April 28, 1995

Chancellor Richard C. Atkinson — Date

Attachment - Final Environmental Impact Report

cc: P. Aguilar
R. Albertson
A. Forbes
W. Munk
M. Phegley
A. Waltner
P. Worcester
J. Zimmerman

CALENDAR PAGE	319.27
MINUTE PAGE	783.1