

## CALIFORNIA COASTAL COMMISSION

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W96



TO: Commissioners and Interested Parties

FROM: Peter Douglas, Executive Director

RECORD PACKET COPY

DATE: December 6, 1995

SUBJECT: **ATOC Status Update**

Scripps Institution of Oceanography (Scripps)  
Acoustic Thermometry of Ocean Climate Project (ATOC) and Marine  
Mammal Research Program (MMRP)  
Coastal Commission File No. CC-110-94/CDP 3-95-40

Background

On December 1, 1994, Scripps submitted a consistency certification to the Coastal Commission for the ATOC/MMRP project, located at Pioneer Seamount, 48 miles offshore of Half Moon Bay, with a power cable to shore at Pillar Point in San Mateo County (Exhibits 1 & 2). On January 24, 1995, the Commission received notice of Scripps' permit application to the Monterey Bay National Marine Sanctuary (MBNMS). On March 10, 1995, the Office of Ocean and Coastal Resource Management (OCRM) confirmed the Commission's jurisdiction over the ATOC sound source, by ruling that the ATOC project "can be reasonably expected to affect marine mammals of the coastal zone, including the humpback and blue whales that are sensitive to low frequency noise and which swim at depths where the noise would be audible." Thus OCRM granted the Commission permission to "review Scripps' application for a MBNMS permit renewal for the ATOC project" (Exhibit 10). (Other federal agency permits and involvement are summarized in Exhibit 11.)

On June 15, 1995, the Coastal Commission concurred with Scripps' consistency certification for the ATOC/MMRP project. A summary of the Commission's action is attached (Exhibit 3). The Commission also reviewed a coastal development permit; however that action was limited to the cable within the 3 mile limit of state waters and on land to the Pillar Point Station. Thus, the primary action before the Commission was the activity (and its associated facilities) covered under the federal (MBNMS) permit for this project.

On October 28, 1995, Scripps commenced ATOC transmissions in a series of 12 tests occurring over a 5-day period (10/28/95 to 11/2/95). Each test lasted 20 minutes, except one which lasted 40 minutes. Four of the tests were at 185 dB and eight at 195 dB. A number of concerns were raised by these tests, including: (1) inadequate notification of the commencement of operations to permitting agencies that had required such notification (e.g., the National Marine Fisheries Service (NMFS)); (2) inadequate coordination with and control over the transmissions by MMRP biologists, who were supposed to be in control of the transmissions according to Scripps' commitments to the Commission, federal permitting agencies, and other interested parties; and (3) the discovery of three dead humpback whales in the greater project vicinity (one at Stinson Beach and two off the Farallones Islands), all of which appeared to have died near the dates on which the ATOC transmissions took place.

On November 17, 1995, both the National Marine Fisheries Service (NMFS) and the Office of Ocean and Coastal Resource Management (OCRM), Sanctuaries and Reserves Division, wrote Scripps informing it that violations had occurred of both NMFS' Scientific Research Permit No. 968 and MBNMS Permit MBNMS-12-95. Scripps responded to these agencies with its explanation of the events that had transpired (Exhibit 6), including a statement that the transmissions were "engineering tests" related to source installation that "could not ... have been related" to the whale deaths. Nevertheless, based on the concerns raised, Scripps ceased transmissions, and NMFS subsequently decided to further postpone commencement of the MMRP until NMFS could report on the link, if any, between the MMRP transmissions and the whale deaths.

On November 21, 1995, at the Commission's direction and utilizing the procedures contained in the federal consistency regulations (see page 4), the Commission staff expressed its concerns to Scripps, the federal permitting agencies, and the federal funding agency (Exhibit 4). One of the concerns stated in this letter was the need for Scripps to adhere to its commitment that "The MMRP [Marine Mammal Research Program] research group will maintain control over the sound source for the entire 2 year period." In this letter, the Commission staff requested that Scripps:

- (1) determine the cause of the deaths of the three humpback whales and analyze whether ATOC could have contributed to these deaths, and inform us and the other interested parties of the results of this analysis; and
- (2) take steps to ensure that control of the transmission source is in fact with the MMRP. These actions should be taken prior to resumption of any ATOC transmissions.

On November 27, 1995, Scripps responded to the Commission staff (Exhibit 5), including the statement that:

You understand correctly that ATOC's MMRP team will maintain control over the sound source for the duration of Pilot Study (18-24 months).

... [S]everal checkout procedures were carried out, which should not be confused with normal source transmissions ... were described fully in the APL/UW document, "Cruise Plan: ATOC Pioneer Seamount Source Deployment", which was distributed on September 25 to participants including the MMRP Principal Investigators. The National Marine Sanctuaries of Monterey and the Farallones received copies of the cruise plan, and sent an observer, Aaron King on the installation vessel, the M/V Independence for the duration of the source deployment.

... Even though there was no apparent link between ATOC source installation activities and the whale deaths, NMFS decided to further postpone the commencement of the MMRP until its SW Region Office had reported fully on the strandings. The MMRP Advisory Board will review the stranding report and make a recommendation to NMFS about when it is appropriate to commence the MMRP Pilot Study.

On November 28, 1995, NMFS issued a report analyzing the whale deaths; this report concluded:

Based on the available information, the NMFS-SWR is unable to determine the cause or causes of the recent humpback whale deaths. However, the NMFS-SWR does not believe that the engineering tests of the ATOC sound source were responsible for the humpback whale deaths since: 1) the two dead floating humpback whales most likely died north of their first sighted position based on their observed drifting pattern, and 2) the state of decomposition of the two whales indicates that they died 4-7 days or more prior to their first sighting.

Based on the estimated times of death, the Stinson Beach animal most likely died prior to the start-up of the ATOC sound source engineering tests on October 28, while the two dead whales floating off the Farallon Islands probably died between November 1 and November 4. If the ATOC sound source engineering tests were responsible for the whale deaths, the sound generated by the tests would have had to result in an injury to the whales severe enough to cause mortality within two days of exposure to the sound source. The ATOC sound source does not produce an explosive shock wave and thus is not capable of producing this kind of injury (i.e., blast injury). Therefore, the NMFS-SWR recommends that the ATOC sound source transmissions be allowed to resume.

On November 29, 1995, the MMRP Advisory Board requested that the project be revised to include the measures shown in Exhibit 7, p. 4, including: (1) clearer MMRP oversight of the project; (2) improved plans for responses to any marine mammal strandings; (3) independent monitoring of the cable power output to enable verification of the source strength and transmission schedule; and (4) public disclosure of all future changes to the transmission schedule. The MMRP Advisory Board also responded to the following questions (Exhibit 7):

1. What is the likelihood that there was any relationship between the Pioneer Seamount ATOC engineering test transmissions (28 Oct - 2 Nov) and the three dead humpback whales?
2. Has the MMRP research protocol been confounded by the engineering test transmissions and/or the resultant delay in startup? If so what modifications are recommended?
3. What, if any, modifications in ATOC/MMRP communications or responsibilities are recommended?
4. Does the Advisory Board recommend, at this time, that NMFS authorize the MMRP to initiate transmissions under the provisions of the previously-agreed protocol, with or without modification?
5. If the Advisory Board does not now recommend initiating transmissions, what alternative(s) are recommended?

In part of this discussion, the Advisory Board concluded that it is "unlikely" that the ATOC transmissions were responsible for the whale deaths, but that it:

... cannot categorically rule out a relationship between the ATOC transmissions and the whale deaths. However, such a link would be possible only if there were a kind and level of injury not previously known or predictable for any continuous sound.

The Advisory Board also concluded that:

... contrary to some recent ATOC statements, a partial breakdown in communication did occur among ATOC, the MMRP, and the Advisory Board regarding the engineering test transmissions, and that this affected the MMRP negatively.

On November 30, 1995, Scripps agreed to revise the project to include the measures recommended by the Advisory Board (see previous page and Exhibit 8). On November 30, 1995, NMFS authorized resumption of the transmissions (i.e., commencement of the normal ATOC/MMRP schedule) (Exhibit 9). On December 2, 1995, Scripps commenced normal ATOC/MMRP transmissions.

### Procedures

The ATOC sound source is located well outside the coastal zone. The coastal zone extends 3 miles offshore of the mainland and 3 miles offshore of each of the Farallones Islands. As stated on page 1, the primary action before the Commission was the activity (and its associated facilities) covered under the federal permit(s) (and, arguably, federal funding) for this project. Therefore, any enforcement action the Commission wishes to pursue over the sound source transmissions is governed by Section 307(c)(3)(A) and (d) of the Coastal Zone Management Act (16 U.S.C. Sections 1456(c)(3)(A) and (d)), and the accompanying federal consistency regulations (15 CFR Part 930). These regulations include the following provision:

The State agency shall request that the Federal agency take appropriate remedial action following a serious disagreement resulting from a State agency objection to a Federally licensed or permitted activity which was: (1) Previously determined to be consistent with the State's management program, but which the State agency later maintains is being conducted or is having coastal zone effects substantially different than originally proposed and, as a result, is no longer consistent with the State's management program; .... [15 CFR Part 930, Section 930.66(b) and 930.100(b); see Exhibit 4 (Attachment 1) for the full text of Section 930.66]

In light of the above, the Executive Director does not believe the events that have occurred and/or the proposed modifications to the project warrant a determination that the project "... is being conducted or is having coastal zone effects substantially different than originally proposed and, as a result, is no longer consistent with the State's management program." Therefore the Executive Director is not recommending that the Federal agency take any further remedial action beyond the measures discussed above. The Commission staff will continue to monitor the project and the Executive Director will continue to report to the Commission as circumstances warrant.

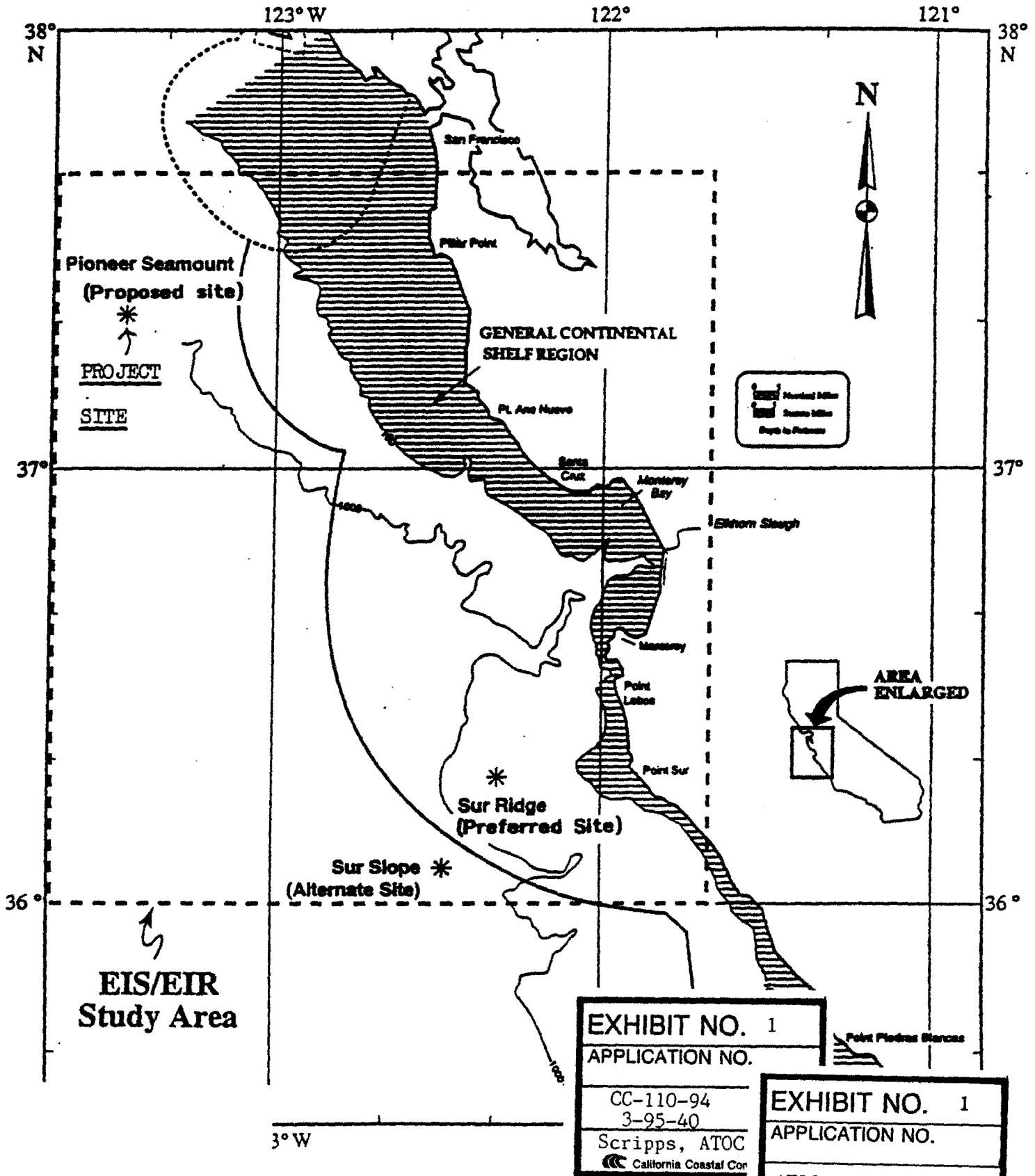


Figure 1.1.6-2 General EIS/EIR study area and ATOC preferred

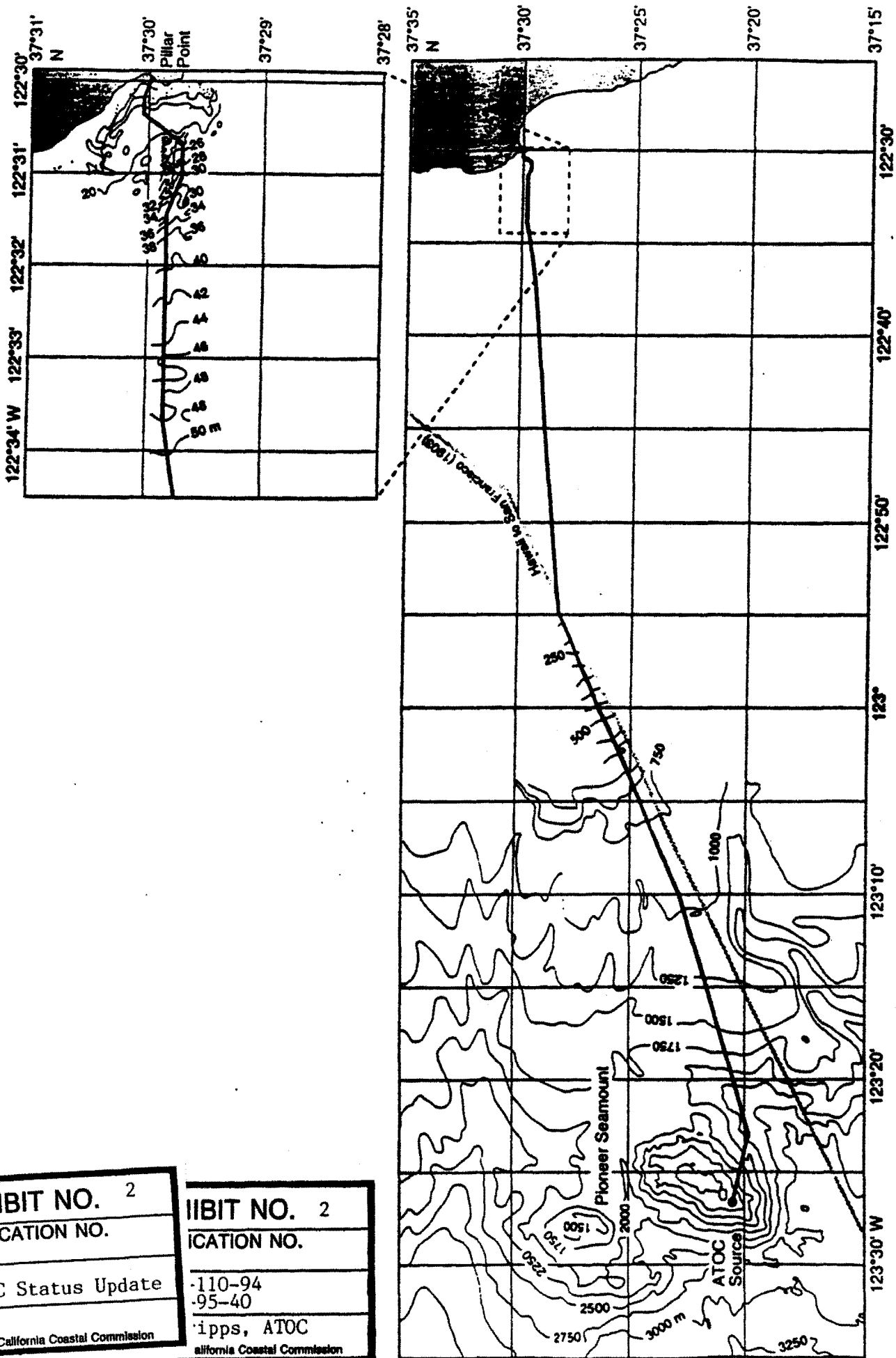


Figure 1.1.6-4 Proposed Pillar Point cable route.

EXHIBIT NO. 2	EXHIBIT NO. 2
APPLICATION NO.	APPLICATION NO.
ATOC Status Update	110-94 95-40
California Coastal Commission	Phillips, ATOC California Coastal Commission

## EXECUTIVE SUMMARY

Scripps Institution of Oceanography (Scripps) proposes the Acoustic Thermometry of Ocean Climate (ATOC) project, consisting of placing a sound-emitting device at Pioneer Seamount, 48 nautical miles offshore of Half Moon Bay, connected with a power cable to shore at the Pillar Point Air Force Tracking Station. The project goal is studying global warming by measuring the speed of sound transmitted through an underwater channel. The sound source will be 980 meters deep and will emit high intensity (195 dB), low frequency sounds. The sound transmissions would last for 20 minutes every 4 hours, on four out of 11 days, which equates to a duty cycle of 3% (i.e., the source will be silent 97% of the time).

Because a number of species of marine animals hear and communicate at low frequencies, concerns have been raised over whether or not the project would cause adverse effects on marine resources, such as sperm whales, sea turtles, and elephant seals. Very little is known about the effects of low frequency sound on marine animals, particularly marine mammals and sea turtles. Scripps has included within the project a Marine Mammal Research Program (MMRP), which will monitor the biological effects of the sound transmissions. The MMRP monitoring studies would continue throughout all ATOC transmissions.

In addition to the monitoring Scripps has agreed: (1) to use a "ramp up period" during which the sound will be turned up gradually, rather than starting at "full blast;" (2) to operate ATOC at "the minimum duty cycle necessary to support MMRP objectives and ATOC feasibility objectives;" (3) to cease the ATOC project in the event significant adverse impacts are occurring; (4) to allow the MMRP research group to maintain control over the sound source for the entire 2 year period; (5) to expand the scope of the independent MMRP advisory board; (6) to remove the sound source as soon as is feasible after the 2 year project; (7) that project authorization at this time is not a commitment to use of this location (Pioneer Seamount) for future ATOC studies; (8) to prepare a Programmatic EIS/R prior to any long term ATOC activities; (9) that an essential siting criterion for a long term site will be: Location in an area with minimal abundances of marine life that might possibly be adversely affected by low frequency sound; and (10) to include a fisheries biologist on the MMRP advisory board and include monitoring of impacts on fish behavior.

Given the potential scientific and environmental benefits from the research proposed, and since the only way to determine the project's impacts is to allow it to proceed in the short term and study its impacts, the authorization of a two year initial ATOC project is warranted. This conclusion is dependent on the combination of the monitoring and protective measures incorporated into the project, the relatively short (two-year) duration of the project, and the relocation of the ATOC sound source outside the Monterey Bay National Marine Sanctuary. This conclusion is also based on the future involvement of the Commission in reviewing the results of the MMRP, in consultation with NMFS, MMC, and other reviewers. Such review may lead to modifications and/or cessation of the project, depending on the results of the monitoring. Finally, additional federal consistency review by the Commission will be triggered in the event that: (1) Scripps makes any significant modifications to either (a) the MMRP or other mitigation measures or (b) the ATOC project itself; (2) any evidence materializes documenting adverse effects on marine resources "substantially different" than those originally proposed (see Exhibit 21, Section 930.66 of federal consistency regulations); or (3) any extension beyond the two-year initial ATOC operation.

EXHIBIT NO. 3
APPLICATION NO.
ATOC Status Update

## CALIFORNIA COASTAL COMMISSION

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



November 21, 1995

Andrew Forbes  
Scripps Institution of Oceanography  
University of California, San Diego  
9500 Gilman Drive  
La Jolla, CA 92093

Re: CC-110-94 Scripps Institution of Oceanography (Scripps)  
Acoustic Thermometry of Ocean Climate Project (ATOC)

Dear Mr. Forbes:

As you are aware, the Coastal Commission concurred with Scripps' consistency certification for the above-referenced project on June 15, 1995. In doing so, many Commissioners expressed grave concerns about the potential adverse impacts of the project on marine life, given the unknowns and uncertainties a project such as this entails. The primary reason the Commission authorized the project was because Scripps modified it to incorporate a number of commitments that addressed many of our concerns about impacts on coastal resources.

One of the commitments Scripps incorporated into its consistency certification during the Coastal Commission review process consisted of the assurance that "The MMRP [Marine Mammal Research Program] research group will maintain control over the sound source for the entire 2 year period."

In addition, incorporated into the Commission's findings for concurrence with Scripps' consistency certification (page 3, and reiterated on page 20) was the understanding that:

Finally, additional federal consistency review by the Commission will be triggered in the event that: (1) Scripps makes any significant modifications to either (a) the MMRP or other mitigation measures or (b) the ATOC project itself; [or] (2) any evidence materializes documenting adverse effects on marine resources "substantially different" than those originally proposed (see Section 930.66 of the federal consistency regulations)....

We now understand that Scripps commenced ATOC transmissions on October 28, 1995, without informing Scripps' own MMRP, thus failing to comply with the commitment described above that the MMRP "maintain control over the sound source."

In addition, three dead humpback whales were discovered in the greater project vicinity (one at Sinson Beach and two off the Farallones Islands), all of which appeared to have died near the date the ATOC transmissions occurred. As a consequence, the National Marine Fisheries Service (NMFS) has at least temporarily ordered transmissions to cease.

EXHIBIT NO. 4
APPLICATION NO.
ATOC Status Update



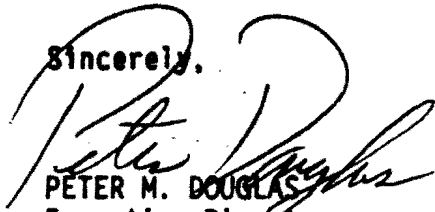
These circumstances have given rise to serious questions as to whether: (1) Scripps has made "significant modifications" to the MMRP and/or the ATOC project itself as described in Scripps' consistency certification; and (2) the ATOC project is having "adverse effects on marine resources 'substantially different' than those originally proposed" in Scripps' certification.

Prior to taking any action pursuant to Section 930.66 of the federal consistency regulations (the full text of which is attached), we are requesting that Scripps take the following remedial actions: (1) determine the cause of the deaths of the three humpback whales and analyze whether ATOC could have contributed to these deaths, and inform us and the other interested parties of the results of this analysis; and (2) take steps to ensure that control of the transmission source is in fact with the MMRP. These actions should be taken prior to resumption of any ATOC transmissions.

If Scripps does not take these actions, then we will request that the federal permitting agencies (NMFS and the U.S. Army Corps of Engineers) and the federal funding agency (the Advanced Research Projects Agency (ARPA)) require that they be taken, or, alternatively, that Scripps submit the ATOC project to further consistency review by the Commission. Clearly, if evidence materializes that the transmissions affected the health of these whales, this situation would trigger the need for major project modifications, if not cancellation, and would most certainly indicate that impacts are 'substantially different' than those originally proposed.

Please contact Mark Delaplaine, Federal Consistency Supervisor at (415) 904-5289 if you have questions.

Sincerely,

  
PETER M. DOUGLAS  
Executive Director

Attachment

cc: ARPA  
NMFS  
U.S. Army Corps of Engineers  
Central Coast Area Office  
NOAA Assistant Administrator  
Assistant Counsel for Ocean Services  
OCRM  
MBNMS  
Governor's Washington D.C. Office

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EX. 4 P. 2

Attachment 1

Section 930.66, federal consistency regulations: Availability of mediation for previously reviewed activities.

(a) Federal and State agencies shall cooperate in their efforts to monitor Federally licensed and permitted activities in order to make certain that such activities continue to conform to both Federal and State requirements.

(b) The State agency shall request that the Federal agency take appropriate remedial action following a serious disagreement resulting from a State agency objection to a Federally licensed or permitted activity which was: (1) Previously determined to be consistent with the State's management program, but which the State agency later maintains is being conducted or is having coastal zone effects substantially different than originally proposed and, as a result, is no longer consistent with the State's management program; or (2) previously determined not to be an activity affecting the coastal zone, but which the State agency later maintains is being conducted or is having coastal effects substantially different than originally proposed and, as a result, the activity affects the coastal zone in a manner inconsistent with the State's management program. The State agency's request must include supporting information and a proposal for recommended remedial action; a copy of the request must be sent to the applicant. [Emphasis added]

(c) If, after a reasonable time following a request for remedial action, the State agency still maintains that a serious disagreement exists with the Federal Agency, either party may seek the Secretarial mediation services provided in Subpart G of this part.

EX. 4 P. 3



SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093

11.27.95

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

Re: Acoustic Thermometry of Ocean Climate Project; CC-110-94;

Dear Mr. Douglas,

Thank you for your letter of November 21. You understand correctly that ATOC's MMRP team will maintain control over the sound source for the duration of Pilot Study (18-24 months).

During the source installation at Pioneer Seamount, several checkout procedures were carried out, which should not be confused with normal source transmissions. Starting October 28, limited checkout tests, necessary to establish functionality of the source were done in a minimal, very carefully controlled way. They were described fully in the APL/UW document, "Cruise Plan: ATOC Pioneer Seamount Source Deployment", which was distributed on September 25 to participants including the MMRP Principal Investigators. The National Marine Sanctuaries of Monterey and the Farallones received copies of the cruise plan, and sent an observer, Aaron King on the installation vessel, the M/V Independence for the duration of the source deployment.

When Dan Costa, the director of the California component of the MMRP heard of the deaths of three Humpback whales north of the study area, he voluntarily postponed the commencement of the MMRP, including of course, the start of sound transmissions. He informed NMFS of the postponement and sought their advice on the likely cause of death of the whales. Even though there was no apparent link between ATOC source installation activities and the whale deaths, NMFS decided to further postpone the commencement of the MMRP until its SW Region Office had reported fully on the strandings. The MMRP Advisory Board will review the stranding report and make a recommendation to NMFS about when it is appropriate to commence the MMRP Pilot Study.

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Scripps has not made any significant modifications to the MMRP or to the ATOC project as described in our consistency certification. I have seen no evidence to indicate that the ATOC project is having "adverse effects on marine resources 'substantially different' than those originally proposed". I anticipate that NMFS and the Advisory Board will concur. I will provide you with copies of the NMFS stranding report and the Advisory Board's recommendation, when they become available. In the meantime, I have enclosed for your information, copies of three letters between NMFS Office of Protected Resources Director, Dr. Bill Fox, and myself. They provide full details of the points I have discussed above.

Thank you for your interest in this matter.

Sincerely yours,



Andrew Forbes  
ATOC Project Manager

cc: ARPA  
NMFS  
US Army Corps of Engineers  
NOAA Assistant Administrator  
OCRM  
MBNMS  
Governor's Washington DC Office  
Alan Waltner  
Dan Costa

EX. 5. F. 2



SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093

November 14, 1995

Dr. William Fox  
Director, Office of Protected Resources  
National Marine Fisheries Service  
1335 East-West Highway  
Silver Spring, MD 20910

Dear Dr. Fox,

Over the past week, Dan Costa and Chris Clark have been in close consultation with Joe Corderro and Jim Leckey of your Long Beach office, concerning the occurrence of three dead humpback whales off central California (at Stinson Beach and off the Farallones). The sightings of the whale carcasses coincided with the planned start of the MMRP under NMFS Scientific Research Permit No. 968. Even though these deaths most probably occurred before the Pioneer Seamount ATOC source installation (October 27-November 2), which involved some engineering tests, and could not, in any case, have been related to our source installation activities, Dan Costa postponed the start of the MMRP, attempted to gather as much information as possible about the time, place and cause of their deaths, and sought the advice of NMFS western region office. Your staff may have already provided you with copies of Dan Costa's report to Jim Leckey, and his proposed response.

I am writing to provide you with some clarification of the source engineering tests during its installation and the laying of cable to shore.

Implicit in the procedures and protocols of the MMRP extended pilot study at Pioneer Seamount is the requirement that the acoustic source be operational on the first day of behavioral studies at the site. A source checkout procedure was not explicitly described in the MMRP protocols, since it was correctly assumed that the source, as with any other research tool, would be provided to the MMRP team in an operational state. A description of the proposed engineering tests was provided in the "ATOC Pioneer Seamount Source Deployment Cruise Plan" drafted by APL/ University of Washington, and provided to NOAA's SRD as required by their permit MBNMS-12-95. Under the general framework of the MMRP and its SRP, a number of performance tests were conducted at critical stages of the source and cable installation. These are described in Appendix I, attached.

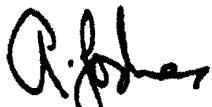
EXHIBIT NO. 6
APPLICATION NO.
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Source installation started on October 27 but an unexpected leak at the main cable-to-source connector necessitated recovery of the source. Re-deployment of the source was achieved on October 28, but early low level tests cast doubt on whether its performance was adequate, or met design specifications. A number of additional engineering tests were thus necessary while the source was still in a recoverable position, and subsequently as the cable was being laid towards shore, particularly as each major splice was completed.

When it became apparent that the number of test transmissions would exceed those described in the Cruise Plan, Dan Costa agreed to redirect the MMRP's aircraft to conduct aerial surveillance of the Pioneer Seamount Study Site to ensure that no incidental harassment of marine mammals took place. The aircraft was unable to fly on October 28-30, due to low cloud and fog, but it did manage to fly October 31 and November 1 and 2 and conducted surveys and surveillance during the engineering tests that occurred on two of those days. John Calambokidus of Cascadia Research Corp. also conducted boat-based marine mammal observations at Pioneer Seamount during those three days. In addition, a NOAA observer, Aaron King of the MBNMS, was on board the M/V Independence throughout the source installation to ensure that the permit procedures were followed.

I trust that this clarifies the nature and intent of the installation activities, including our response to unexpected circumstances as they evolved. Dan Costa has taken an extremely conservative approach to the humpback whale deaths, by applying the Source Shutdown Guidelines as prescribed in the MMRP protocols, even though it is clear that ATOC's engineering tests could not have been the cause of death.

Sincerely,



Andrew Forbes  
ATOC Program Manager

cc: Chris Clark, Dan Costa, Clay Spikes  
Walter Munk, Peter Worcester, Bob Spindel  
Ralph Alewine, Al Cheaure  
Jim Leckey, Helen Golde

EX 6 P 2

NOV 30 1995 03:25 AM LDC LIMITED 300 000 1000

## ATOC Marine Mammal Research Program Advisory Board Statement

30 November 1995

The Advisory Board for the ATOC Marine Mammal Research Program (MMRP) met via conference calls on 22 and 28 November 1995 for a total of 4.8 hours to review the situation associated with the ATOC test transmissions off California on 28 Oct-2 Nov 1995, the three dead humpback whales first sighted on 3-9 Nov 1995, and the subsequent delay in startup of the California ATOC/MMRP transmissions. Prior to these discussions, relevant letters and documents prepared by ATOC, the MMRP, and NMFS were circulated to Advisory Board members for review (see appended list, p. 6).

Participants in the conference calls were the following:

*Advisory Board Members:* P.K. Anderson, J.D. Hall, W.J. Richardson (Chair), J.A. Thomas, P. Tyack (call 2), E. Ueber, and J.E. Zeh. (Board member W.T. Ellison provided written submissions);

*Advisory Board Observers:* D.P. DeMaster, R.J. Hofman (call 1), S. Jordan, B. Killian, and (by invitation) D.R. Ketten;

*Marine Mammal Research Program personnel:* J. Calambokidis, C.W. Clark, D.P. Costa (call 2), and C.H. Spikes


Advisory Board discussions focused on five questions:

1. What is the likelihood that there was any relationship between the Pioneer Seamount ATOC engineering test transmissions (28 Oct - 2 Nov) and the three dead humpback whales?
2. Has the MMRP research protocol been confounded by the engineering test transmissions and/or the resultant delay in startup? If so what modifications are recommended?
3. What, if any, modifications in ATOC/MMRP communications or responsibilities are recommended?
4. Does the Advisory Board recommend, at this time, that NMFS authorize the MMRP to initiate transmissions under the provisions of the previously-agreed protocol, with or without modification?
5. If the Advisory Board does not now recommend initiating transmissions, what alternative(s) are recommended?

The following are the Advisory Board's conclusions and recommendations on these points:

1. What is the likelihood that there was any relationship between the Pioneer Seamount ATOC engineering test transmissions (28 Oct - 2 Nov) and the three dead humpback whales?

In addressing this question, the Advisory Board considered times and locations at which the dead whales were observed, their state of decomposition, available evidence about currents,

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historical data on humpback strandings in the area and causes of death when known, and existing data on the effects of noise on cetaceans. Much of the stranding information available to the Board is summarized in the report "National Marine Fisheries Service Southwest Region Investigation into the Humpback Whale Deaths...", distributed on 27 Nov 1995.

- 1a. The Advisory Board concluded that it is unlikely that the ATOC transmissions at Pioneer Seamount on 28-29 October and 1-2 November 1995 were responsible for the deaths of the three dead humpback whales found on 8-9 Nov. The majority of the Advisory Board members believed that it is highly unlikely that the ATOC transmissions were responsible, directly or indirectly.
- 1b. This assessment could have been made with more confidence (i) if the MMRP monitoring protocol for initial MMRP transmissions had been applied during the engineering test transmissions on 28-29 Oct., and (ii) if there had been an appropriate necropsy of at least the one whale that stranded--see item (3), Communications, below.
- 1c. Because of the lack or scarcity of information on
  - the occurrence and behavior of marine mammals near the source during the initial transmissions,
  - the cause(s) and times of death of the three humpbacks, and
  - noise effects on whales in general,the Advisory Board cannot categorically rule out a relationship between the ATOC transmissions and the whale deaths. However, such a link would be possible only if there were a kind and level of injury not previously known or predictable for any continuous sound.

2. Has the MMRP research protocol been confounded by the engineering test transmissions and/or the resultant delay in startup? If so what modifications are recommended?

- 2a. The Advisory Board concluded that the lack of MMRP monitoring during the 28-29 Oct transmissions resulted in lost research opportunities for the MMRP, but has not fundamentally compromised the overall California MMRP protocol.
- 2b. The California MMRP protocol includes special provisions during the first few transmission periods, including collection of pre-transmission control data, initially restricting the source level to 185 dB re 1  $\mu$ Pa-m, and direct aerial- and boat-based observations close to the source during transmissions. These provisions were intended as precautions against unanticipated reactions and to assist in identifying the need for modifications in protocol. The Advisory Board considered the occurrence of transmissions during what was intended to be a pre-transmission control period, the lack of MMRP monitoring during initial transmissions on 28-29 October, and the occurrence of extended early transmissions at a 195 dB source level to have interfered with the scientific objectives of the MMRP.

EX 7 P 2



- 2c. - However, the Board did not believe that these problems compromised the overall California MMRP research protocol, which is based on replicate paired observations during alternating transmission and control/recovery periods. Even if, contrary to expectation, some effects on marine mammal distribution or behavior persisted for longer than the planned 2-7 day recovery/control periods, 28 days have now elapsed since the final (2 Nov) engineering transmission.
- 2d. - The Board recommended that, when transmissions resume, the first few series of transmissions begin near mid-day, to allow aerial- and boat-based observations before and during the first transmissions of those series. The Board understood that the MMRP now plans that approach during the first two transmission periods at source level 185 dB re 1  $\mu$ Pa-m and the first two periods at 195 dB re 1  $\mu$ Pa-m.
- 2e. - The Board re-affirmed its earlier recommendations (Feb 1994 recom. #14; June 1994 recom. #24-26) that all acoustic transmissions from the ATOC sources, including any future engineering test transmissions, should be ramped up gradually. The Board understands that the 28 Oct-2 Nov test transmissions were ramped up over 5 minutes, as recommended.
- 2f. The Advisory Board also concluded that delays in startup associated with  
 - the late installation of the source, and  
 - the shutdown since 2 November 1995  
 have resulted in lost research opportunities for the MMRP but will not fundamentally compromise the MMRP research protocol if there is a compensatory extension of the MMRP. The Board also concluded that further delay in startup of transmissions would result in further and important losses of research opportunities, including anticipated observations of large whales in early December 1995 and elephant seals in Dec 1995-Jan 1996 in the Pioneer Seamount area. It was the Board's view that even a limited set of data on reactions of these animals to ATOC transmissions during Dec 1995-Jan 1996 would be very helpful in planning future work.
- 2g. - The Board recommended that the ATOC project extend the planned duration of the MMRP effort in late 1996 to compensate for the inability of the MMRP to collect data on marine mammal reactions to ATOC transmissions during much of the autumn of 1995; autumn is an important season for data collection under the MMRP protocol.
- 2h. - The Board recommended that the MMRP coordinate with the National Marine Fisheries Service, the stranding networks, and appropriate necropsy and pathology specialists to develop a more specific plan for rapid response to any future strandings or deaths of large whales or elephant seals, or mass strandings of small cetaceans, that might occur near the study area during the study period--see item (8), Communications, below. The MMRP components of the response plan should be designed to obtain all reasonably-attainable data that would be relevant for evaluating the timing, location, cause(s), and possibility of ATOC involvement in these deaths.

EX 7 P 3

2i. The Advisory Board recognized that it may take some time for ATOC to respond to recommendation (2g) and for the MMRP to implement recommendation (2h). A decision about resuming transmissions should not be delayed in the meantime.

3. What, if any, modifications in ATOC/MMRP communications or responsibilities are recommended?

3a. The Advisory Board strongly recommended that all future acoustic transmissions from the ATOC source(s), including any future engineering test transmissions, be either under the control of, or with the full knowledge and documented advance concurrence of, the MMRP.

3b. The Board also strongly recommended that the agreed-upon MMRP protocols be implemented during all future acoustic transmissions by the ATOC source(s), and that the source level (overall) should not exceed 195 dB re 1  $\mu$ Pa-m at any time.

3c. The Board further recommended that the MMRP collect and continuously log data to maintain an independent MMRP record of the times and source levels of all acoustic transmissions by the ATOC source(s). This might be done by MMRP monitoring of the electrical current being transmitted to (or, if possible, at) the ATOC source(s). These data should be reviewed by the MMRP and available to the Advisory Board and other interested groups on request.

3d. The Board concluded that, contrary to some recent ATOC statements, a partial breakdown in communication did occur among ATOC, the MMRP, and the Advisory Board regarding the engineering test transmissions, and that this affected the MMRP negatively. The MMRP and Advisory Board were, in the past, advised by ATOC that limited acoustic transmissions would be needed during source installation. However, the MMRP and Advisory Board did not recognize that this should be taken into account in the MMRP protocol. The MMRP apparently was not given further notice when transmissions were about to start. The MMRP was not in control of the source during the installation process at Pioneer Seamount. When engineering difficulties necessitated additional tests, the MMRP was not initially and fully aware of the extent of these tests. When the MMRP was notified, survey effort was rapidly redirected and communication established between the MMRP and the source vessel, but others were not aware of the transmissions. If the National Marine Fisheries Service and biologists investigating the stranded humpback on Stinson Beach had known of the possible coincidence in timing between the whale death and the ATOC transmissions, they would likely have conducted a more detailed necropsy.

- In future, adherence to recommendations (3a), (3b) and (3c) will ensure that the MMRP monitoring protocol is implemented at all appropriate times.
- Recommendation (2h), earlier, is designed to ensure an appropriate and timely response to any future marine mammal deaths that might be ATOC-related.

X. 7 P. 4

- The Board also recommended that the past and planned future transmission schedule be made public, with updates whenever changes or refinements occur. Some form of Internet-based system would be an appropriate mechanism.
  - The Advisory Board should be notified promptly about any future deviations from the protocol or potentially significant problems.
  - The Board recommended that a specific schedule be established for issuing the planned bimonthly MMRP progress reports. No such bimonthly reports have been seen by the Board despite the fact that the MMRP has been underway since July 1995 (admittedly without ATOC transmissions until 28 October).
  - The Board recognized that it would be helpful for communications if an Advisory Board meeting were convened in the near future, but there are costs, difficulties in scheduling meetings without long advance notice, and few new results to review at the present time. The Board concurred with MMRP suggestions that an Advisory Board meeting occur no later than March 1996.
- 8a. The Board had concerns about recent statements by ATOC dealing with the MMRP and the cause of the humpback deaths. These statements have appeared in letters, press releases and/or interviews. However, there are differences of opinion among Board Members as to whether the Board should take a position on this matter. Some Members believe that this is beyond the mandate of an Advisory Board to the MMRP. Other Advisory Board Members note that questionable statements about marine mammals are perceived by some as casting doubt on the integrity of the MMRP and the Advisory Board, and that this, among other consequences, may jeopardize the scientific work. One Advisory Board Member joined the Board on the condition that ATOC not make statements regarding marine mammals that were not reviewed and approved by the MMRP. The Board recognized that, when the media pose questions, it can be difficult to re-direct these questions to a more appropriate respondent. However, some Board Members requested that ATOC reaffirm that written statements regarding marine mammals will not be released without MMRP review and concurrence, and that questions regarding marine mammals will be referred to MMRP personnel. Some Board Members also requested that the Advisory Board be given the opportunity to review draft ATOC and MMRP statements that discuss Advisory Board positions (aside from direct quotations of Board statements).
4. Does the Advisory Board recommend, at this time, that NMFS authorize the MMRP to initiate transmissions under the provisions of the previously-agreed protocol, with or without modification?
- 4a. The Advisory Board recommended that NMFS authorize the MMRP to initiate transmissions as quickly as possible under the provisions of the previously-agreed California protocol, modified by points (2d), (2e), (2h) and (3a-3d), and subject to receipt of ATOC's and MMRP's written acceptance of those recommendations.

Ox 7 P 5

4b. The ATOC and MMRP response(s) should clearly indicate the procedures that will be implemented to ensure that all future acoustic transmissions from the ATOC sources will be under the control of the MMRP, with full implementation of MMRP protocols.

5. If the Advisory Board does not now recommend initiating transmissions, what alternative(s) are recommended?

Given the Board's conclusion (4), this question is not relevant.

**List of Recent Documents That Were Available to Advisory Board for Review**

- Scripps Press Release, 7 Nov 1995
- Letter, C. Clark to NMFS Off. Prot. Resour., 9 Nov 1995
- Letter, D. Costa to NMFS Southwest Region, 11 Nov 1995
- Letter, A. Forbes to NMFS Off. Prot. Resour., 14 Nov 1995
- Scripps Press Release, 14 Nov 1995
- Letter, NMFS Off. Prot. Resour. to A. Forbes, 17 Nov 1995
- Progress Report on ATOC Surveys, 28 Oct to 16 Nov 1995 (MMRP, 20 Nov 1995)
- Letter, A. Forbes to NMFS Off. Prot. Resour., 20 Nov 1995
- Memo, D. Costa to Advisory Board Members, 26 Nov 1995
- NMFS Southwest Region Investigation into the Humpback Whale Deaths..., 27 Nov 1995

Advisory Board Statement compiled by



W. John Richardson  
Chairman, MMRP Advisory Board

LGL Ltd., environmental research associates  
22 Fisher St., POB 280, King City, Ont. L7B 1A6, Canada

*EX-7 P.6*

FROM IAPP/ATOC

11.30.1995 13:58

UNIVERSITY OF CALIFORNIA, SAN DIEGO

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SANTA BARBARA • SANTA CRUZ

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92037

November 30, 1995

Dr. William Fox  
Director, Office of Protected Resources  
National Marine Fisheries Service  
1335 East-West Highway  
Silver Spring, MD 20910

Dear Dr. Fox,

In response to the ATOC MMRP Advisory Board's Statement dated 11.30.95, the ATOC Program accepts the Board's recommendations contained in points (2d), (2e), (2h) and (3a-d), and agrees with the MMRP's actions identified by the MMRP Program Manager in his letter to you of 11.30.95.

The ATOC Program reaffirms, as suggested in point (3e), that written statements regarding marine mammals will not be released without MMRP review and concurrence.

Sincerely,

Andrew Forbes  
ATOC Program Manager

cc: Hilda Diaz-Soltero  
Chris Clark  
Dan Costa  
Clay Spikes

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CALIFORNIA  
COASTAL COMMISSION

EXHIBIT NO. 8
APPLICATION NO.
ATOC Status Update
California Coastal Commission



**MARINE ACOUSTICS, INC.**

Four Crystal Park, Suite 901  
2345 Crystal Drive  
Arlington, VA 22202  
(703) 418-1888  
FAX 418-1042

30 November 1995

Dr. William Fox  
Director, Office of Protected Resources  
National Marine Fisheries Service  
1335 East-West Highway  
Silver Spring, MD 20910

Re: LGL, Ltd. ltr dtd 30 Nov 95 (ATOC Marine Mammal Research Program Advisory Board Statement, 30 November 1995)

Dear Dr. Fox:

In response to the referenced letter, the ATOC Marine Mammal Research Program accepts the recommendations specified therein; that being: "...upon authorization by NMFS to initiate transmissions as quickly as possible under the provisions of the previously-agreed California MMRP research protocol, modified by points (2d), (2e), (2h) and (3a-3d)."

The following identifies MMRP actions to comply with the above:

- 2d. The first four sets of transmissions are scheduled to begin at or about 1200L.
- 2e. All transmissions will be ramped up over a 5-minute period.
- 2h. The California MMRP Principal Investigator, Dr. D. P. Costa, has initiated action with NMFS-SWR to develop a more specific plan for rapid response to any future strandings or deaths of large whales or elephant seals, or mass strandings of small cetaceans, that might occur near the study area during the study period.
- 3a. All future acoustic transmissions from the ATOC source(s), including any future engineering test transmissions, will be under the control of, or with full knowledge and documented advance concurrence of, the MMRP. This is ensured by a modification to the SRP by NMFS that reiterates the aforementioned, the written assurance from Scripps Institution of Oceanography (ATOC Program Manager), and the fact that the MMRP plans to monitor transmission times and levels via independent continuous logging of the power output from the Pillar Point station down the sea cable to the source on Pioneer Seamount (see 3c below).
- 3b. The agreed-upon California MMRP research protocols will be implemented during all acoustic transmissions by the ATOC source(s), and the source level (overall) will not exceed 195 dB re 1 $\mu$ Pa-m at any time. This will be regulated via continuous Pillar Point station monitoring (see 3c below).

EX 8 P. 2

30 November 1995

Dr. William Fox  
Director, Office of Protected Resources  
National Marine Fisheries Service  
1335 East-West Highway  
Silver Spring, MD 20910

Re: LGL, Ltd. ltr dtd 30 Nov 95 (ATOC Marine Mammal Research Program Advisory Board Statement, 30 November 1995)

- 3c. The MMRP plans to collect and continuously log data at the Pillar Point station in order to maintain an independent MMRP record of the times and source levels of all acoustic transmissions by the ATOC source at the Pioneer Seamount site. These data will be reviewed by MMRP Research Team personnel and will be available to the Advisory Board and other interested groups on request to the MMRP Director.
- 3d. The past and planned transmission schedule is available to the public, and updates will be made whenever changes or refinements occur. The first update is being transmitted this date by the California MMRP P.I. to all Advisory Board members and interested parties, and will be passed to the public via the public affairs offices at NMFS, Scripps and UCSC. In accordance with MMRP Research Protocol endorsed by the Advisory Board, planned transmission schedules are subject to change at the discretion of the DA.

The Advisory Board will be notified promptly about any future deviations from the agreed-upon California research protocol or potentially significant problems. This action is the responsibility of the MMRP Director or, in his absence, the MMRP P.M.

A specific schedule for issuing planned bimonthly reports will be established and promulgated to all Advisory Board members and observers, interested parties, and the public via aforementioned vehicles. Bimonthly Report #1 is scheduled for 30 days after the commencement of MMRP acoustic transmissions. If transmissions start on 30 November 1995, Bimonthly Report #1 will be available on 30 December 1995.

Plans are for an Advisory Board meeting to occur by 31 March 1996.

Please contact the undersigned if you have any questions or comments, or require amplifying information on any of the above.

30 November 1995

**Dr. William Fox**  
**Director, Office of Protected Resources**  
**National Marine Fisheries Service**  
**1335 East-West Highway**  
**Silver Spring, MD 20910**

**Re: LGL, Ltd. ltr dtd 30 Nov 95 (ATOC Marine Mammal Research Program Advisory Board Statement, 30 November 1995)**

Sincerely,



**Clayton H. Spikes**  
**ATOC MMRP Program Manager**

cc:  
**Scripps (A. Forbes)**  
**NMFS-SWR (H. Diaz-Soltero)**  
**Cornell (C. Clark)**  
**UCSC (D. Costa)**  
**ARPA (A. Cheaure)**  
**LGL, Ltd. (W. J. Richardson)**



**FAX TRANSMITTAL**

# of pages ▶

To <i>Mark Replare</i>	From <i>Joe Cordaro</i>
Dept./Agency	Phone #
Fax #	Fax #

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

**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  
 TEL (310) 980-4000; FAX (310) 980-4018

NOV 30 1995 F/SW031:JGC

**RECEIVED**  
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 CALIFORNIA  
 COASTAL COMMISSION


Andrew M.G. Forbes, Ph.D.  
 Project Manager  
 Acoustic Thermometry of Ocean Climate Project  
 Scripps Institution of Oceanography  
 Institute for Geophysics and Planetary Physics  
 9500 Gilman Drive  
 La Jolla, California 92093-0225

Dear Dr. Forbes:

This is to acknowledge that the National Marine Fisheries Service, Southwest Region (NMFS-SWR), has received the Acoustic Thermometry of Ocean Climate Marine Mammal Research Program (ATOC MMRP) Advisory Board's statement relating to the deaths of three humpback whales in the Gulf of the Farallones National Marine Sanctuary and their possible relationship to engineering tests conducted on the ATOC sound source between October 28, 1995, and November 2, 1995.

The Advisory Board has concluded that it is unlikely the engineering test transmissions were responsible for the whale deaths, thereby concurring with NMFS-SWR's determination. The Advisory Board has recommended that certain provisions be added to Scientific Research Permit No. 968, and that the NMFS-SWR authorize the initiation of ATOC transmissions, contingent upon the NMFS-SWR receiving written acceptance of the Advisory Board's recommendations by the ATOC program manager and the MMRP program manager.

Scientific Research Permit No. 968 has been amended by the NMFS Office of Protected Resources, incorporating the provisions recommended by the Advisory Board. The NMFS-SWR has received written acceptance of the Advisory Board's recommendations from the ATOC program manager and the MMRP program manager. Therefore, the Scripps Institution of Oceanography may proceed with initiation of the ATOC MMRP. Please be reminded that, in the future, no engineering tests of the ATOC sound source may be conducted without prior authorization from the NMFS-SWR, as stated in Special Condition B of amended Scientific Research Permit No. 968.

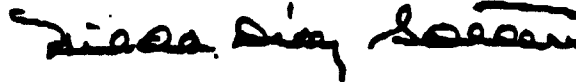
EXHIBIT NO. 9
APPLICATION NO.
ATOC Status Update
 California Coastal Commission



DEC 01 '95 02:27PM NIPS OBSERVER BRANCH(310)9804027 P.2/2

If you have any questions, please contact Jim Lecky, Chief,  
Protected Species Management Division, at (310) 980-4015.

Sincerely,



Hilda Diaz-Soltero  
Regional Director

cc: Bill Fox-F/PR  
Michael Tillman-F/SWO  
Gene Proulx-F/EN7  
Dan Costa-UC Santa Cruz

EX 9 R 2



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

MAR 10 1995

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


Dear Mr. Douglas:

This letter responds to the California Coastal Commission's ("Commission") request to review, as an unlisted activity, the Scripps Institute of Oceanography's ("Scripps") application for a Monterey Bay National Marine Sanctuary ("MBNMS") permit renewal for activities associated with the Acoustic Thermometry of Ocean Climate ("ATOC") project. The Office of Ocean and Coastal Resource Management ("OCRM") has determined that the ATOC project can be reasonably expected to affect coastal uses or resources of California's coastal zone. Therefore, Scripps must comply with the federal consistency requirements of the Coastal Zone Management Act of 1972 ("CZMA") section 307(c)(3)(A) and 15 C.F.R. Part 930, Subpart D, and the Commission may review Scripps' application for a MBNMS permit renewal for the ATOC project. OCRM, through its Sanctuaries and Reserves Division and the MBNMS, will not approve Scripps' application until the Commission has concurred with Scripps' consistency certification, or, if the Commission objects, if Scripps appeals the objection to the Secretary of Commerce and the Secretary overrides the Commission's objection.

OCRM's determination that sounds emanating from the ATOC sound source can be reasonably expected to affect marine animals that are resources of both the outer continental shelf ("OCS") and the coastal zone is based on information provided by Scripps and the Commission. Scripps also raised procedural concerns with the Commission's request. OCRM has previously determined that there are no procedural defects in the Commission's request. Letter from Jeffrey R. Benoit, Director, OCRM, to Andrew Forbes, Scripps (Jan. 27, 1995).

The Commission received Scripps' consistency certification on December 1, 1994, but did not receive the MBNMS application until January 24, 1995. OCRM previously determined that, for this particular case, the Commission's receipt of the application constitutes federal agency notice for purposes of 15 C.F.R. § 930.54(a). *Id.* Therefore, in accordance with 15 C.F.R. § 930.54(e), the Commission must complete its review within six months from the receipt of the MBNMS application: by July 24, 1995. This assumes that the certification, draft environmental impact statement for the ATOC project ("DEIS"), and the MBNMS application contain all the necessary information.

EXHIBIT
APPLICATIC
CC-110- 3-95-4
Scripps

EXHIBIT NO. 10
APPLICATION NO.
ATOC Status Update
 California Coastal Commission

OCRM has determined that the marine animals at issue that ply the waters of the coastal zone and the OCS are coastal resources. The CZMA and its legislative history indicate that the effects test is to be construed broadly. In addition, Secretary of Commerce consistency appeal decisions have held that coastal resources are not bound by jurisdictional limits, and they may be affected when outside of the coastal zone. The California coastal management program requires that:

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.

Cal. Pub. Res. Code § 30230. The Commission considers marine mammals that migrate through or are found in California waters as coastal resources. Letter from Peter M. Douglas, Executive Director, Commission, to Jeffrey Benoit, Director, OCRM (Dec. 30, 1994), letter from Mark Delaplaine, Commission, to Andrew Forbes, Scripps (Dec. 29, 1994). (Thus, an activity that affects or is reasonably likely to affect these coastal resources that migrate through or use California waters, whether they may be affected while in or outside the coastal zone, is subject to federal consistency in accordance with the CZMA and 15 C.F.R. Part 930.)

In this case, the Commission asserts that the ATOC project can be reasonably expected to affect marine mammals of the coastal zone, including the humpback and blue whales that are sensitive to low frequency noise and which swim at depths where the noise would be audible. Further, the zone of influence of the noise source includes portions of California waters and the program may affect commercial fishing and coastal recreation. Letter from Peter M. Douglas, Executive Director, Commission, to David W. Hyde, Scripps, and Terry Jackson, MBNMS, at 2 (July 14, 1994). The State is concerned with the health of populations of marine resources that spend all or portions of their lives within the coastal zone.

Scripps asserts that effects will be temporary and localized at the sound source. Letter from Andrew Forbes, Scripps, to Jeffrey Benoit, Director, OCRM, at 5 (Jan. 13, 1995). However, Scripps states that there will be "minor or uncertain impacts" and derivative effects on commercial fisheries. While Scripps and the DEIS assert minimal effects on all marine resources, they make it clear that there will be some effects, and that there is a substantial amount of uncertainty regarding these effects. *Id.*; DEIS at 4-12, 15. While stating that effects are minimal, ATOC project proponents recognize this uncertainty and the potential to affect marine resources. The DEIS states that, "very little is known about effects of low frequency sound on marine animals, particularly marine mammals and sea turtles," DEIS at 1-4, and "[t]he lack of information is particularly acute" for large whales. DEIS at 4-12. Hence the proposal to conduct a pilot research study to accompany

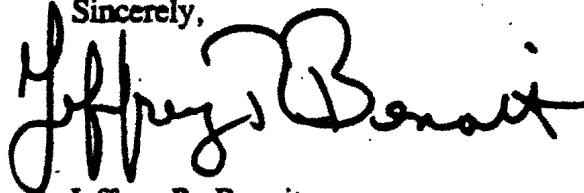
10 2

the ATOC project. Further, there could be direct impacts from the installation of cables needed for the sound source. DEIS at 4-9. These impacts are expected to be minimal, but there is the potential for effects to coastal resources. Id.

Therefore, OCRM approves the Commission's request to review Scripps' application for a MBNMS permit renewal. As such, the Commission's review includes a review of all associated facilities in accordance with 15 C.F.R. § 930.21. An associated facility is subject to consistency if it is covered by 15 C.F.R. § 930.21(a) and (b). This is further clarified by 15 C.F.R. § 930.21 which states, "the proponent [(federal agency or entity seeking federal approval or funding)] of a Federal action must consider whether the Federal action and its associated facilities affect the coastal zone . . . ." (emphasis added). Thus, an applicant for federal approval must include a discussion of individual and cumulative effects from associated facilities in making its consistency certification. The associated facilities for the ATOC project are those project components that are designed, operated or otherwise used, in full or in major part, to meet the needs of the project, and without which the project could not be conducted. See 15 C.F.R. § 930.21.

Please call David Kaiser, OCRM's Federal Consistency Coordinator, at (301) 713-3098, x 144, or John King, Assistant Regional Manager, Pacific Region, Coastal Programs Division, OCRM, at (301) 713-3121, x 188, if you have any questions.

Sincerely,



Jeffrey R. Benoit  
Director

cc: Tami Grove  
Andrew Forbes  
Dr. Ralph W. Alewine, III  
Ann Terbush  
CDR Terry Jackson  
Dr. Charlie Wahle

20 3

## Exhibit 24

### Related Permits, Approvals and Actions

A number of federal approvals, federal funding and direct implementation actions are involved in the California ATOC project, as follows:

1. National Marine Fisheries Service (NMFS). Scripps applied to NMFS on December 8, 1993, for a scientific research permit under the Marine Mammal Protection Act and Endangered Species Act to "take" by harassment marine mammals and protected species that may be affected by the operation of the proposed sound source. This application is still pending. ARPA (the Advanced Research Projects Agency, the lead federal agency) is also currently undertaking consultation with NMFS under Section 7 of the Endangered Species Act.

2. Monterey Bay National Marine Sanctuary. A revised permit to install the source cable across the Monterey Bay National Marine Sanctuary will be needed.


3. U.S. Army Corps of Engineers. A request for authorization to utilize one or more Section 10 Nationwide Permits (NWP) will be needed from the Corps. The three NWPs applicable to the ATOC cables are NWP 5 for scientific measurement devices, NWP 6 for survey activities, and NWP 18 for small structures.


4. U.S. Navy. The ATOC project has been authorized to use certain facilities at the Point Sur Naval Facility, specifically an existing building, utility line easement, offshore cables, and an existing horizontal line array (HLA).

5. U.S. Air Force. The ATOC project is currently negotiating arrangements for use of certain facilities at the Pillar Point Air Force Station, specifically an existing building to house the onshore electronics that support the sound source. Scripps expects this authorization to be completed in the near future.

6. Continued ARPA Funding. Funding for the ATOC project is provided primarily by a grant from ARPA (Advanced Research Projects Agency). Following completion of the EIS/EIR, ARPA will determine whether to authorize continued use of ARPA funds for ATOC and MMRP activities.

In addition to the above federal authorizations, several state agency reviews and/or approvals are needed, including State Lands Commission lease approval, State Historic Preservation Officer consultation, Department of Fish and Game consultation, and University of California approval.

<b>EXHIBIT NO.</b> 11
<b>APPLICATION NO.</b>
ATOC Status Update
 California Coastal Commission

CC-110-94 3-95-40
Scripps, ATOC
 California Coastal Commission