

CALIFORNIA COASTAL COMMISSION

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November 8, 2007

Mandy Allen
Operations Administrator
Monterey Bay Aquarium Research Institute
7700 Sandholt Road
Moss Landing, CA 95039

RE: Monterey Bay Aquarium Research Institute (MBARI) Proposal for MARS Cable Experiments (CDP E-05-007/Consistency Certification CC-076-05)

Dear Ms. Allen:

On September 15, 2005, the Coastal Commission approved Coastal Development Permit E-05-007 and Consistency Certification CC-076-05 to install and operate a 31.7-mile long marine research fiber optic cable offshore of Moss Landing and within the Monterey Bay National Marine Sanctuary (called the "MARS" project). The project included placement in federal waters of an instrument node at the seaward end of the cable that provides power and data transmission to and from shore. The Commission's approval of the project did not include future attachment to the node of scientific instrumentation or additional cable.

By letter dated September 17, 2007, (as modified by e-mail dated October 30, 2007), MBARI proposes a number of MARS cable-related experiments that include placing additional structures on the seafloor. MBARI believes these experiments will not affect resources of the coastal zone. The proposed experiments are:

Eye-In-The-Sea (EITS)

The EITS is a deep-sea data collection system designed for connection to the MARS node to provide real-time *in-situ* measurements of deep-sea marine activity. The EITS will collect video, audio, bioluminescent activity and current data. In addition to a camera, the EITS will be equipped with a photomultiplier tube (PMT), bait deployment arms and a hydrophone. MBARI will deploy the EITS in February 2008 for six months. The base weighs 155 lbs. and functions as an anchor allowing the EITS to be removed for servicing without the need for anchor removal. MBARI will collect no specimens for this project.

Benthic Rover

MBARI proposes to deploy a Benthic Rover on MARS in spring 2008 for one year to conduct a diverse series of measurements at the deep-sea, sediment-water interface. These experiments will contribute to an understanding of biogeochemical cycling in the ocean. MBARI also proposes up to six autonomous deployments of the Benthic Rover, i.e., unconnected from the

MARS, to take place over the course of a year, as needed, to perfect systems of scientific data collection. All deployments will take place in the vicinity of the MARS note site.

Sedimentation Sensor/time-Lapse Camera

This system is a free vehicle array with a tethered, releasable flotation package. The array will consist of a camera and lights, a sedimentation sensor, a current meter, and a controller mounted on a titanium frame. At the seafloor, using the flotation package, the ROV *Ventana* will manipulate the system, placing it approximately 500 meters from the MARS node. Once the system is in place, the *Ventana* will connect it to the node. The array sits on the seafloor on four "feet" that will have a negligible effect on benthic habitat.

Cabled Free Ocean CO₂ Enrichment System (FOCE)

The FOCE is a system to supply CO₂-enriched seawater to the seafloor to study the effects of CO₂ enrichment of the oceans caused by increasing levels of CO₂ in the atmosphere. The purpose of the experiment proposed at this time is to design, fabricate and test such a system. MBARI will not attempt to measure effects on sea life, and expects to have no effects on sea life with this experiment. The ROV *Ventana* will deploy and test the components. No pure CO₂ liquid or gas will be discharged. CO₂ used to enrich the local seawater will not exceed 20 liters. The MBARI plans on three or four FOCE series in 2008 of two to four days duration.

Under the federal consistency procedures (15 CFR Section 930.65), the Commission reviews project modifications and any changed circumstances to determine whether a previously concurred-with activity remains consistent with the Coastal Act, or whether the modifications/changes render the project; (1) substantially different than originally described; and (2) no longer consistent with the applicable Coastal Act policies. Based on the information included in your submittals, the Coastal Commission staff agrees with MBARI that the experiments would not affect the coastal zone, and that, as modified, the originally concurred-with activity remains consistent with the applicable Coastal Act policies.

If you have any questions, please call me at 415-904-5205.

Sincerely,



Alison Dettmer
Deputy Director
Energy, Ocean Resources and Federal Consistency Division

cc: Santa Cruz District Office
MBNMS (Deirdre Hall)
State Lands Commission (Sue Young)