



# United States Department of the Interior



MINERALS MANAGEMENT SERVICE  
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Camarillo, California 93010-6064

7300

## Memorandum

To: Files: 1703-02a(1) Santa Ynez Unit Correspondence (Vault)

From: Chief, Office of Environmental Evaluation

Subject: Finding of No Significant Impact (FONSI)

Project: ExxonMobil's Proposal to Repair the C1 Power Cable

Area: Lease OCS-P 0182, Santa Ynez Unit, Santa Barbara Channel, Offshore Santa Barbara County

**The Proposed Action.** The MMS's proposed action is to concur with ExxonMobil's proposal to repair the C1 power cable which ceased operating in the fall of 2007. The proposal is to conduct an at-sea repair of the C1 cable using a dynamically positioned vessel by inserting a splice using spare cable. The project will occur in the western Santa Barbara Channel near ExxonMobil's Platform Heritage in 1,125 ft (393 m) water depth and is expected to take up to 25 days.

**Summary of Impact Analyses and Conclusions.** The MMS prepared the attached Environmental Assessment (EA) for ExxonMobil's project, "Proposal to Repair the C1 Power Cable." In this analysis, MMS determined that the following environmental resources potentially could be affected by the proposed project: air quality, water quality, benthic resources, commercial fishing, cultural resources, and environmental justice. The MMS assessed the project's potential effects on these resources and performed an analysis of the expected impacts from the proposed project when added incrementally to past, present, and reasonably foreseeable projects. The MMS concluded that potential impacts on all resources that could be affected during the C1 cable repair project will be insignificant based on significance criteria utilized in the analyses and that the incremental increase of the proposed action to cumulative impacts is negligible for all resources.

**Finding Statement.** Based on the evaluation of ExxonMobil's proposal and the potential impacts discussed in the attached EA, the Minerals Management Service has determined that concurrence with ExxonMobil's C1 Cable Repair Project (the Proposed Action) would not constitute a major Federal action significantly affecting the quality of the human environment pursuant to the National Environmental Quality Act §102 (2)(C) and therefore no Environmental Impact Statement is required.

  
\_\_\_\_\_  
Lynnette L. Vesco  
Chief, Office of Environmental Evaluation  
Pacific OCS Region  
Minerals Management Service

9-15-08  
Date

Attachment

# **Environmental Assessment**

**ExxonMobil Production Company's**

**Santa Ynez Unit C1 Cable Repair**

**2008**

**September 15, 2008**

**Environmental Assessment (Final)**  
**September 15, 2008**

**Proposed Action:** Minerals Management Service Concurrence with ExxonMobil's Proposal to Repair the C1 Power Cable

**Operator:** ExxonMobil

**Area:** Lease OCS-P 0182, Santa Ynez Unit, offshore Santa Barbara County, California

**Responsible Agency:** Minerals Management Service  
Pacific OCS Region  
Office of Environmental Evaluation

**Abstract:** The MMS's proposed action is to concur with ExxonMobil's proposal to repair the C1 power cable which ceased operating in the fall of 2007. ExxonMobil's proposal is to conduct an at-sea repair using a dynamically positioned (DP) vessel by inserting a splice using spare cable. The proposed project is expected to take up to 25 days on-site. Environmental resources examined in this Environmental Assessment (EA) are: Air Quality, Water Quality, Benthic, Commercial Fishing, Cultural, and Environmental Justice. The primary potential impacting agents are: air emissions, sedimentation, discharges from the repair vessel, and space-use conflicts. Projects and activities considered in the Cumulative Analysis include: on-going Federal oil and gas projects, offshore tankering and other shipping, commercial fishing, and point source and nonpoint source discharges. No significant impacts are anticipated as a result of the proposed action.

**Related Environmental Documents<sup>1</sup>**

- ExxonMobil. 2008a. Santa Ynez Unit C1 Cable Repair. Contains Project Description, Mitigations, Environmental Report, and Equipment Descriptions. April 17, 2008.
- Santa Barbara County and Minerals Management Service. (SBC and MMS). 2003. Mitigated Negative Declaration/Environmental Assessment (MND/EA), ExxonMobil Offshore Power System Repair Project (02-ND-35).

In addition to the project description (ExxonMobil, 2008a), ExxonMobil submitted a set of DVDs containing a ROV survey of the seafloor including sonar sweeps, which were used to detect seafloor anomalies such as hard bottom. A map was also submitted which depicted the project area, the proposed location of the laydown area of the additional spliced cable, known hard bottom areas, the location of the existing C1 cable, and pipelines and other features.

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<sup>1</sup> See References Cited

The EA is available via the following ways:

**On the Web:**            <http://www.mms.gov/omm/pacific>

**By Mail:**                Minerals Management Service  
                                  Attn: ExxonMobil C1 Cable Repair EA  
                                  Office of Environmental Evaluation  
                                  770 Paseo Camarillo  
                                  Camarillo, Ca 93010-6064

**By Phone:**              800.672.2627

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## **1.0 Introduction**

### **1.1 The Proposed Action**

On April 17, 2008, ExxonMobil Production Company (hereafter referred to as ExxonMobil) submitted an application for the Santa Ynez Unit (SYU) C1 Cable Repair Activity for its SYU operations to Federal and local regulatory agencies for permits and evaluation. The proposed activity involves repairing the C1 Cable, which provides electrical power from Las Flores Canyon (LFC) to Platform Heritage, and removing the failed section.

The proposed project would restore redundancy (with Cable E; Figure 1-1) to the offshore electrical power system that supports oil and gas production operations at Platform Heritage. The redundancy was lost in November 2007 when a failure occurred in the C1 Cable that connects Platform Heritage and the onshore Cogeneration Facility in LFC. The proposed repair would be located on Lease OCS-P 0182, approximately 2,750 ft (838 m) southeast of Platform Heritage in approximately 1,125 ft (343 m) of water depth.

ExxonMobil estimates that the project will require about 25 days, including a transit time of one-half day each way between the Santa Barbara County line and the project site and up to 24 hours for repair operations on Platform Heritage. The work is expected to commence and be completed sometime during the late third quarter of 2008.

### **1.2 Purpose and Need**

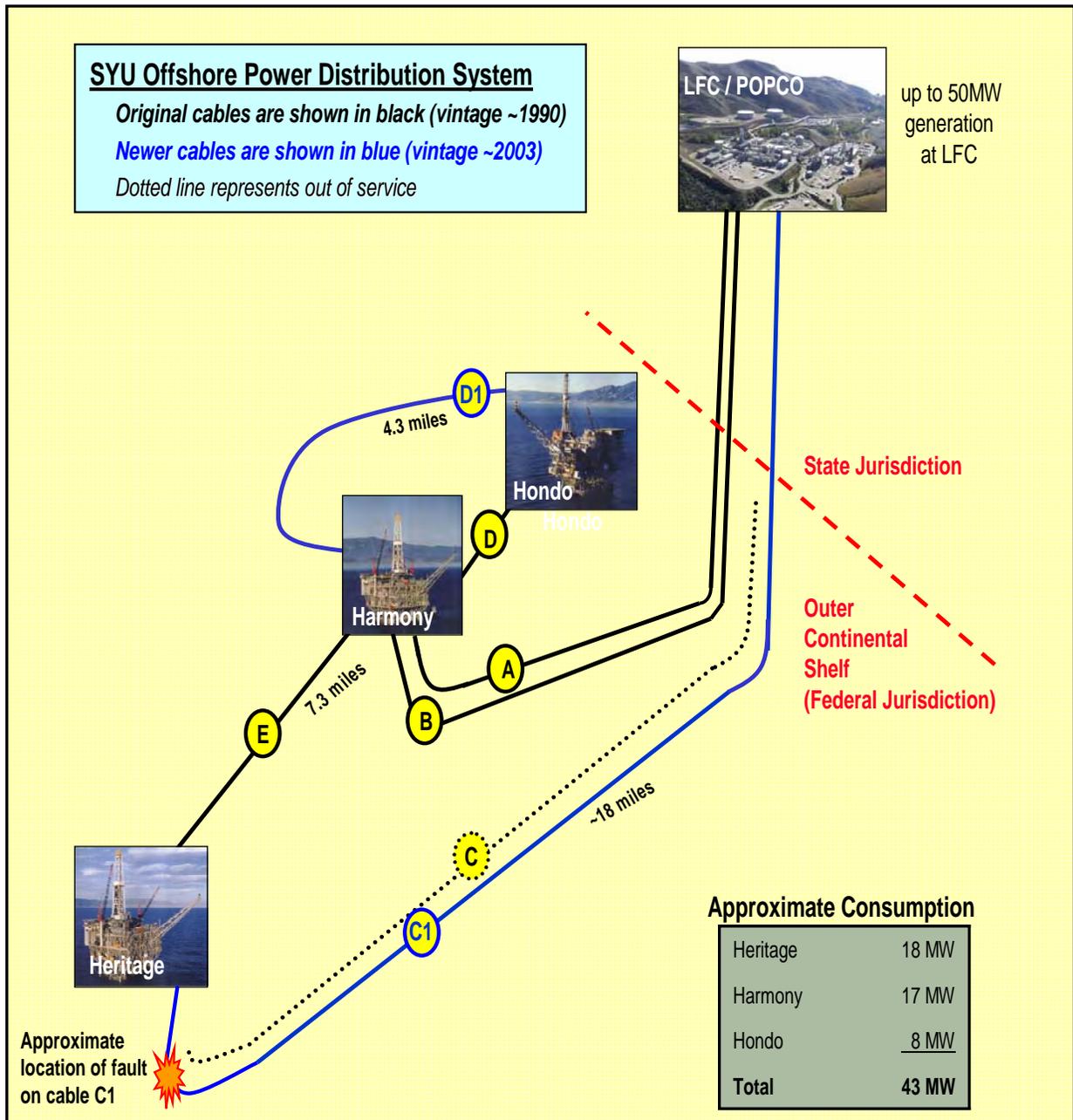
ExxonMobil's need is to restore full redundant electrical power to Platform Heritage and allow continued development and production of oil and gas resources from the platform. ExxonMobil's purpose is to continue production of oil and gas from Platform Heritage and achieve an equitable return on investment.

The Minerals Management Service's (MMS) purpose is to balance orderly and optimal energy resource development with protection of the human, marine, and coastal environment consistent with the requirements of the 1978 Outer Continental Shelf Lands Act (OCSLA), as amended. The OCSLA directs the Secretary of the Department of the Interior to establish policies and procedures that expedite exploration and development of the OCS in order to achieve national energy goals, assure national security, reduce dependence on foreign sources, and maintain a favorable balance of payments in world trade. The Secretary's responsibilities under OCSLA have been delegated to the MMS. In addition, this project continues to reduce dependence on foreign energy sources, which has led to an unfavorable balance of payments and a less secure national economy. A secondary benefit is the collection of royalties, bonuses, and rents. These monetary benefits represent a significant source of revenue for the Federal government.

### **1.3 Decisions to be Made by MMS and Other Agencies**

MMS: The MMS must concur with the proposed project, including the mitigations submitted by ExxonMobil, and decide whether the project is technically and environmentally sound.

U.S. Army Corps of Engineers (USACE): The USACE must decide whether to issue a Rivers and Harbors Act Section 10 authorization. This will authorize ExxonMobil to conduct work within, or which will affect, navigable waters of the United States, in this case the Santa Barbara Channel. The USACE issued the authorization on August 11, 2008. (see Section 4, Consultation and Coordination and Appendix B).



**Figure 1-1.** Santa Ynez Unit Offshore Power Distribution System showing the location of the offshore facilities, the power cables, and the location of the failed C1 Cable.

U.S. Fish and Wildlife Service (FWS): The FWS must decide whether to issue an opinion on the potential effects of the project on listed species. MMS asked FWS via e-mail for their concurrence with MMS's determination that the cable repair project would have no effect on listed species. Via response e-mail, dated June 19, 2008, FWS concurred (see Section 4, Consultation and Coordination and Appendix B).

National Marine Fisheries Service (NMFS): The NMFS must decide whether to issue an opinion on the potential effects of the project on marine mammals. MMS asked NMFS via e-mail for their concurrence with MMS's determination that the cable repair project would have no effect on marine mammals. Via response e-mail, dated June 18, 2008, NMFS concurred (see Section 4, Consultation and Coordination and Appendix B).

The NMFS must also decide whether the proposed project would have an effect on Essential Fish Habitat (EFH). MMS asked NMFS, via a phone call and e-mail dated June 24, 2008, for their concurrence with MMS's determination that the proposed project could have no effect on EFH. NMFS stated via response e-mail, dated June 25, 2008, that while the project would adversely affect EFH via disturbances to the benthos and increased turbidity in the immediate vicinity of the cable, they concurred that the impacts would be temporary and minimal and that no additional EFH conservation recommendations were necessary to avoid, minimize, or otherwise offset the impacts to EFH (see Section 4, Consultation and Coordination and Appendix B).

State Historic Preservation Officer (SHPO). The SHPO must decide whether to advise agencies on the potential effects of the project on cultural resources. By phone on July 16, 2008 and in a July 24, 2008 e-mail, MMS contacted the Project Review Unit Supervisor for the SHPO, summarizing the project and indicating that the potential cultural resource had been videotaped by ROV and would be avoided. The SHPO has not indicated the need to further consult on this project (see Section 4, Consultation and Coordination and Appendix B).

Santa Barbara County Air Pollution Control District (SBCAPCD): The SBCAPCD must decide how the proposed project would affect the air quality of Santa Barbara County and then determine what kind of permit to issue. The SBCAPCD has modified the existing Permit to Operate (No. 9102-04) for Platform Heritage on July 11, 2008. This permit was supported with a California Environmental Quality Act analysis in the form of a Mitigated Negative Declaration which was finalized on July 7, 2008 (see Section 4, Consultation and Coordination and Appendix B).

## **1.4 Description of the Proposed Project**

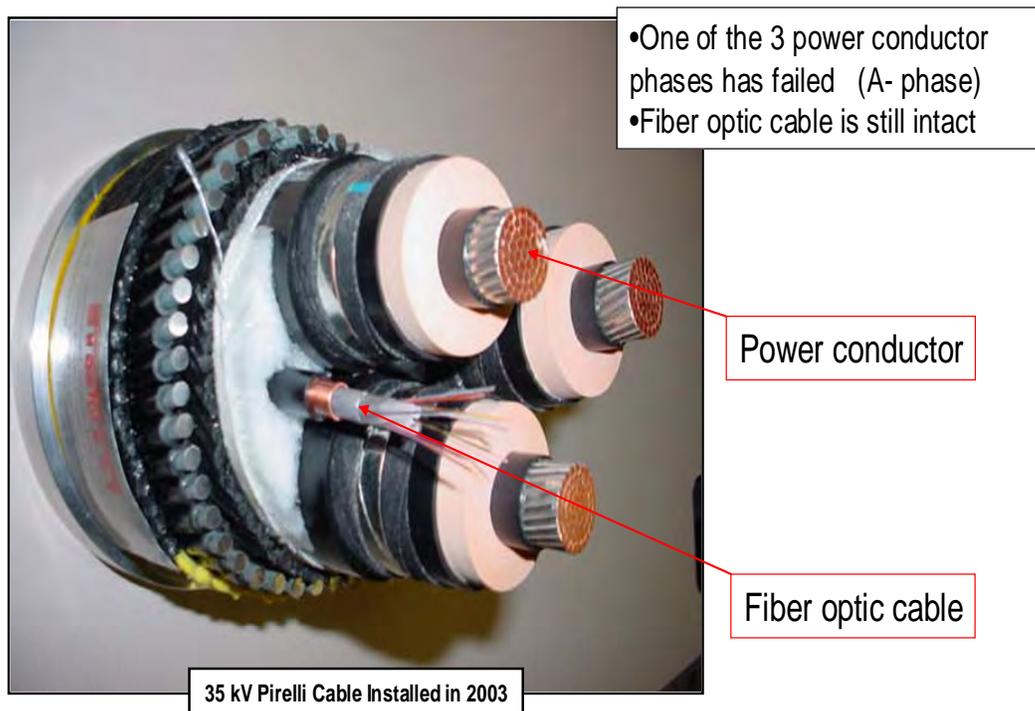
### **1.4.1 Background Information and Description of Existing Facilities**

ExxonMobil's SYU offshore facilities include three OCS platforms—Hondo, Harmony, and Heritage—and a series of connecting pipelines and power cables. Six offshore power cables provide electricity to and between the three platforms (Figure 1-1). Three power cables (A, B, and C1) provide power to the platforms from the LFC substation and cogeneration facility. Cables A and B connect to Platform Harmony while the C1 Cable connects to Platform Heritage. Cables D and D1 provide power from Harmony to Hondo while Cable E connects Harmony to Heritage. The C1 Cable was installed in 2003 from LFC to Platform Heritage following the failure of Cable C.

In November 2007, a cable insulation failure occurred in the C1 Cable. After a short power outage and temporary production disruption on Platform Heritage, the power to the platform was restored by isolating the failed circuit and switching power to Cable E which runs from Platform Harmony to Platform Heritage.

ExxonMobil conducted several tests as well as an ROV inspection of the C1 Cable following the failure. The tests and inspection indicated a direct ground fault on phase A approximately 2,750 ft (838 m) from the bottom of the Platform Heritage power cable J-tube. The fault is located southeast of Platform Heritage in the OCS in approximately 1,125 ft (393 m) of water depth. In order to more easily find the exact location of the fault during the repair phase of this project, ExxonMobil placed two clamps and an acoustic pinger at the location of the fault. The distance between the fault and the power cable J-tube will allow a sea-based repair to be conducted which includes a splice of approximately 2,300 ft (701 m) inserted as a replacement section into the cable to repair the fault. An example of the failed power cable is shown in Figure 1-2.

While the actual cause of the insulation failure could not be determined, no external damage was evident during the ROV inspection. Once the faulted section is retrieved, it will be inspected and sent to a testing company for forensic analysis to determine the most probable cause of the failure.



**Figure 1-2.** Photo of a sample of a cable identical to the failed power cable.

Circuit C1 (land cable and submarine C1 Cable) begins as direct buried, land based cable (approximately 5,100 ft (1,555 m) long) and transitions to submarine cable approximately 800 ft

(244 m) north of the shoreline at the south end of LFC. The transition splice from land cable to submarine cable occurs approximately 200 ft (61 m) north of the cable /pipeline tunnel that extends beneath Highway 101 and the railroad tracks. The south end of the tunnel contains a 12 in (0.3 m) diameter conduit for the cable that is buried across the beach and surf zone and ends approximately 1,000 ft (330 m) away in about 25 ft (7.6 m) of water depth. From the end of the conduit, the cable is laid directly on the seafloor to the J-tube on the platform. In 2003, the failed Cable C was removed from the onshore splice to the State Lands/OCS boundary and from the Platform Heritage to a point some several hundred feet to the south of the platform. The remaining section of Cable C in the OCS was left in place until the decommissioning of the SYU offshore facilities. The new C1 Cable was installed from the splice in LFC to Platform Heritage.

#### **1.4.2 Project Description**

After analyzing several potential replacement and/or repair scenarios, ExxonMobil selected the option which involves removing the failed section of the C1 Cable at the location of the fault and replacing it with spare cable. Sufficient spare cable and splice kits are available from the 2003 C1 Cable project and the cable manufacturer to complete the repair. Since the existing C1 Cable has water blocking capabilities, any water intrusion due to the fault and cutting of the cable on the sea bottom is expected to be limited to a short distance (approximately 10% of the water depth). The schedule for completing the repair is estimated to be less than 25 days including one-half day for transit to and one-half day transit from the repair site and an estimated 24 days for the repair operations at the work site.

Proposed Project Repair Vessel. Based on the project needs, ExxonMobil and Prysmian, the cable manufacturer and original installer, selected the *Ocean Intervention III* owned and operated by Oceaneering International, Incorporated. The vessel has the following general features:

- DNV AUR (Class 2) dynamically positioned (DP) System
- Five-1,889 kw Engine/ Generator Sets
- Two-2,500 kw Main Azimuth Thrusters
- Three-833 kw Side Thrusters
- Fugro Survey Chance Subsea Positioning
- 1,300 Ton Deck Capacity
- 8,200 sq ft of Clear Deck
- Large Moonpool
- Two Oceaneering Work Class ROVs, Tool Suite and Heavy Weather Side Launch
- 154 ton Crane with Active Heave Compensation and 10,000 ft. of Wire
- Accommodations for 75 Persons
- Helideck
- Dimensions: Length- 297 ft; Beam- 61.6 ft; Molded Depth- 24.9 ft; Draft- 19.7 ft
- Gross Tonnage: 3,996 Tons

Detailed descriptions of the repair vessel and the ROVs are contained in Appendix A.

Repair Project Steps. The sea-based repair is anticipated to require the following steps; some of the description of the activities in each step may change slightly or the order of the steps may change depending on actual conditions encountered during the repair:

- Mobilize repair vessel to local California port, most likely Port Hueneme;

- Install necessary equipment including Prysmian Linear Cable Machines and Winch;
- Board necessary personnel;
- Conduct any required inspections and visits by agency personnel at dock;
- Transit vessel to location outside Santa Barbara County waters and test systems (DP, survey, ROV, instrumentation, etc.);
- Transit vessel to work location (approximately one-half mile southeast of Platform Heritage);
- Monitor implementation of agreed-to mitigation measures, plans and air permit conditions including transmitting daily reports to agencies containing status information and emissions;
- Utilize Safe Access and Egress Plan to transfer contractors and agency personnel on and off the repair vessel, as required, for work assignments, inspections, visits, etc.;
- Utilize ROV to locate clamps with sonar buoys at fault on the C1 Cable;
- Utilize ROV to cut cable on one side of fault and attach line to recovery section 1 (RS-1) of cable;
- Utilize Linear Cable Machine, Prysmian Winch, or other appropriate lifting mechanism on vessel to lift cable RS-1 section onto vessel deck;
- While on deck, test cable RS-1 section to verify operability, cut out any section with damage or water intrusion (and store for later inspection and testing), seal end and re-lay RS-1 section on sea bottom with Linear Cable Machine, Prysmian Winch or other appropriate lifting mechanism on vessel;
- Utilize ROV to attach line to recovery section 2 (RS-2) of cable;
- Utilize Linear Cable Machine or other appropriate lifting mechanism on vessel to lift cable RS-2 section onto vessel deck;
- While on deck, test cable RS-2 section to verify operability, cut out any section with damage or water intrusion (and store for later inspection and testing) and splice cable RS-2 section to spare cable on vessel;
- Utilize Linear Cable Machine or other appropriate lifting mechanism on vessel to lay cable RS-2 section and spliced section on sea bottom while retaining spare cable end on vessel;
- Utilize Prysmian Winch or other appropriate lifting mechanism on vessel to lift cable RS-1 section onto deck;
- While on deck, test cable RS-1 section to verify operability, cut out any section with damage or water intrusion (and store for later inspection and testing), splice cable RS-1 section to spare cable end on vessel (spare cable length will be approximately two times the water depth);
- Any sections that are cut from the existing C1 Cable will be stored on vessel and, if not required for later testing or inspection, will be sent to an appropriate onshore disposal site as part of vessel demobilization;
- Utilize Rear Deck Crane, Prysmian Winch, or other appropriate lifting mechanism on vessel to lay cable RS-1 section and spliced section on sea bottom in predefined location, clear of any obstructions as confirmed from April 2008 ROV inspection bottom survey;
- Utilize ROV to verify that the cable is not laying on any significant obstructions;
- Utilize ROV to complete final as-built measurements and video cable on sea bottom;

- Utilize test equipment on shore and Platform Heritage to test laid cable and verify suitability for energization;
- Transit repair vessel back to local port for demobilization of Prysmian and other equipment, personnel, removed sections of C1 Cable (send to test company or disposal facility), and remaining spare cable (return to storage). Collect all required information from vessel and conduct post project debriefing;
- Submit required reports and documents.

The repaired cable and all splices will be tested prior to making final cable connections. Upon completion of the testing of the cable and cable interconnection to the switchgear, energization preparations will begin. Energization plans will be reviewed, the repaired C1 Cable will be energized, and platform power distribution systems will be properly configured for load balance. With close coordination with production operations, circuit energization and power flow monitoring will begin as the platform load is transferred to the C1 Cable. Upon completion of the repair, all installation and testing equipment and the C1 Cable sections will be removed from the repair vessel during demobilization at a local port. In addition, any testing equipment will be removed from Platform Heritage and the onshore area.

## **1.5 Scope of Environmental Resources**

**Environmental Resources Included in the EA.** The MMS followed a multi-step process in conducting the environmental analysis presented in this EA. The first step involved conducting an initial screening analysis to determine the resources that are in the project area and potentially could be impacted by the proposed activities. This was accomplished by reviewing the marine and coastal resources that were considered in the 2003 MND/EA (SBC and MMS, 2003) which described the repair and laying of the C1 Cable. Resources were also identified from the 2005 EA written for the repair of the Hillhouse-to-shore power cable (MMS, 2005). Based on this examination, MMS determined that the following environmental resources could be potentially impacted:

- Air Quality: Potential impacts to due to emissions from cable repair vessels, support vessels, and associated equipment.
- Water Quality: Potential impacts to due to disturbance of sediments during the cable retrieving and laying processes and discharges of wastes from the repair and support vessels.
- Benthic Resources: Potential impacts due to disturbance of sediments.
- Commercial Fishing: Potential impacts due to (a) preclusion from fishing grounds, (b) damage and loss of fishing gear, and (c) lost fishing time due to (a) and/or (b).
- Cultural Resources: Potential impacts from cable laying activities.
- Environmental Justice: Required by Presidential Executive Order.

**Environmental Resources Not Included in the EA.** The MMS also determined which environmental resources would not be potentially impacted from cable repair activities. The following resources were not included for analysis in this EA because they are not in the project area and/or would not be affected by the activities: Marine Mammals, Marine and Coastal Birds, Marine Turtles, Intertidal Resources, Fish Resources and Essential Fish Habitat, Wetlands, Refuges, Preserves, and Marine Sanctuaries, and Recreation and Tourism.

## 1.6 Projects and Activities Considered in the Cumulative Analysis

A cumulative impact analysis has two parts: (1) development of a cumulative scenario, specific to the proposed project area, and an assessment of cumulative impacts from past, present, and reasonably foreseeable projects and (2) an analysis of the expected impacts from the proposed project when added incrementally to the cumulative scenario developed above. This section provides a brief description of projects that have been considered in the analysis of cumulative impacts in this EA. A project or other anthropogenic or natural event with which the proposed project could have cumulative impacts was evaluated using the following criteria (40 CFR 1508.7):

- The project/event should be *reasonably foreseeable*, which is defined as those for which formal applications have been approved, submitted, or are pending and;
- The project/event could have *impacts in space (geographically)* that co-occur with the proposed project or;
- The project/event could have *impacts in time (temporally)* that co-occur with the proposed project.

Two types of projects were considered: (1) approved and pending energy projects and (2) other non-energy projects and activities that occur or may occur in the vicinity of the C1 cable repair project. All of the projects described are located in the Santa Barbara Channel offshore Santa Barbara County.

**Federal Offshore Energy Projects.** Future oil and gas activities on existing Federal OCS leases are described below but are limited to activities occurring on existing platforms. No new offshore energy projects are reasonably foreseeable this time.

Activities Occurring on Existing Platforms: There are 23 oil and gas platforms located on the Federal OCS. Nineteen of the platforms are located off the coast of Santa Barbara County and Ventura County. Activities that could overlap with the proposed project are limited to drilling on Platform Harmony as well as routine production operations at the Santa Ynez Unit platforms (Hondo, Harmony, and Heritage) and accidental oil spills from these platforms. Routine operations involve air emissions, discharges of permitted effluents, and transportation of personnel and supplies by crew and supply boats and helicopters. Accidental oil spills may occur during the short timeframe of the proposed project and will be responded to according to ExxonMobil's approved Oil Spill Response Plan.

**State Offshore Energy Projects.** There are four State offshore energy projects in various stages of application, all from Venoco, Inc. None of them are expected to overlap temporally with the proposed project due to the project's short-term nature (an estimated 25 days including transit time) and so are not considered further in this analysis. The projects are:

- Ellwood Full Field Development
- Resumption of State Lease PRC-421 Development
- Paredon Project
- Ellwood Marine Terminal Lease Renewal

### **Non-Energy Projects and Activities.**

Shipping Activity. Traffic through the Santa Barbara Channel originates at the Ports of Los Angeles, Long Beach, and Port Hueneme and by the anchorages of Gaviota, Santa Barbara,

Carpinteria, Ventura, Mandalay Beach, and El Segundo (ADL, 1985). Approximately 93 percent of the vessels in the Santa Barbara Channel use the Vessel Traffic Separation Scheme (VTSS) (U.S. Navy, 2002). This is an internationally sanctioned set of traffic lanes that has been established for marine safety. The lanes in the Channel are one nm (1.8 km) wide and the separation zone is two nm (3.6 km). The estimated annual traffic through the Santa Barbara Channel VTSS is 6,000 vessel movements. The Santa Barbara Channel is also extensively used by smaller commercial, fishing, and recreational vessels. Accidents and the subsequent spillage of fuel oil is a possibility for vessels transiting the Santa Barbara Channel but no significant spillage has occurred since the VTSS was established.

Commercial Fishing. Commercial fishing occurs at various locations off the coast of southern and central California. The area is biologically productive due to upwelling and there are favorable habitats for commercially important fish species. Fishes in southern and central California waters support important commercial and recreational fisheries; more than 100 species appear in the catches. The high productivity of the area is conducive to commercial fishing of most gear types, including trawl, hook and line, troll, purse seine, trap, and drift and set gill net. Crab and lobster traps are fished heavily in State waters near the project area. Many fishers in the area do not fish for a single species or use only one gear type, but they switch fisheries during any given year depending on the market demand, prices, harvest regulations, weather conditions, and fish availability.

Marine Protected Areas. The 1999 Marine Life Protection Act (MLPA) directed the State of California to design and manage a network of marine protected areas (MPA) in order to protect marine life and habitats, marine ecosystems, and marine natural heritage, as well as improve recreational, educational, and study opportunities provided by marine ecosystems. This process has replaced the previous system of reserves and ecological reserves that were not standard in regulation or nomenclature. MPAs include State marine reserves, State marine parks, and State marine conservation areas that confer different levels of restrictions on recreational and commercial fishing (California Department of Fish and Game (CDFG), 2008; <http://www.dfg.ca.gov/mlpa/>).

In 2002, a network of MPAs was established within the nearshore waters of the Federally protected Channel Islands National Marine Sanctuary (CINMS). The Federal government expanded the MPA network into the deeper waters in 2006 and 2007. The entire MPA network in this area consists of 11 marine reserves where all take and harvest is prohibited, and two marine conservation areas that allow limited take of lobster and pelagic fish. This MPA network encompasses 318 sq mi (824 sq km) making it the largest network off of the continental United States (U.S. Department of Commerce, 2006; <http://channelislands.noaa.gov>). Nine marine protected areas are established along the three western islands in the Santa Barbara Channel (San Miguel, Santa Rosa, and Santa Cruz Islands), which are the islands closest to the C1 cable repair project.

Along the mainland, the MPA process was completed for the central coast in April 2007 and extends from Pigeon Point to Point Conception. Nine protected areas were created in State waters south of Point Piedras Blancas. MPAs in State waters south of Point Conception along the mainland coast are in the planning phases.

Point Source Discharges. The nearest point source discharge to the proposed project area is from the Goleta waste water treatment plant, approximately 20 miles eastward of the project location.

This plant collects and treats wastewater from the cities of Goleta, Santa Barbara, and other outlying communities. The plant discharges 4.7 million gallons per day of wastewater at a mixed primary/secondary level of treatment (Southern California Coastal Water Research Project (SCCWRP, 2003)). The outfall runs about one mile out to sea and rests on the seafloor about 95 ft (30 m) beneath the surface.

Nonpoint Source Discharges. The nearest potential sources of nonpoint source pollution are the numerous small and intermittently flowing streams that run out of the coastal range along the mainland of the Santa Barbara Channel. River runoff is difficult to quantify and is seasonally variable. The Santa Ynez River plume, carrying sedimentary material and pollutants, may sometimes flow eastward around Point Conception and deposit material in the project area, particularly during periods of high flow. Pollutants carried by the plume would be well-diluted but, perhaps, still detectable by the time they arrive in the project area. Pollutants that could be associated with rivers and streams in the area are predominantly agriculturally based and may include dairy and ranching-related pollutants (for example, animal wastes) and pesticides.

## **1.7 Mitigations Submitted by ExxonMobil as a part of the Proposed Project**

### **1.7.1 Mitigations Included in the Analysis**

Table 1-1 lists the potential impacts, impacting agents, company-initiated mitigation measures, and the residual impact levels expected after the mitigation has been applied. In all cases, the residual impact levels are insignificant. Four types of mitigations appear in Section 1.7.1 and 1.7.2 which were submitted by ExxonMobil, each designed to fulfill a particular kind of mitigation. The following provides brief descriptions: Comp (Compliance) – These are specific actions ExxonMobil will do which will reduce or minimize impacts to the environment; Plan – ExxonMobil will submit plans prior to the project beginning which will be subject to approval or modification by MMS; Train (Training) – ExxonMobil will provide several specific types of training prior to the project beginning to all personnel who are involved in the project; Rep (Reports) – ExxonMobil will submit reports after the project is completed.

**Table 1-1.** Potential Impacts, Impacting Agents, Company Initiated Mitigation Measures, and Residual Impact Level.

Description of Potential Impacts	Impacting Agents	Company Initiated Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
<p><b><u>Air Quality</u></b></p> <p>Potential violation of ambient air quality standards due to emissions during project activities.</p>	<ul style="list-style-type: none"> <li>• NO<sub>x</sub> emissions due to the use of propulsion and stationary combustion equipment.</li> </ul>	<ul style="list-style-type: none"> <li>• Require construction contractors to utilize appropriate means to reduce vessel engine emissions wherever possible.</li> <li>• Prepare an Emissions Reporting Plan prior to repair activities that contain information on all marine vessel internal combustion (IC) engines and other emissions generating equipment as well as the cable handling support IC engines. Estimate the amount of emissions that are expected to be generated during the repair activities. Submit report to the MMS with a copy to the Santa Barbara County Air Pollution Control District (SBCAPCD) and other agencies, as requested.</li> <li>• Prepare an Emissions Daily Report which determines fuel use and estimated emissions on a daily basis during repair activities when the repair vessel is within 25 miles of SYU. Submit this information to the MMS with a copy to the SBCAPCD and other agencies, as requested. At the conclusion of the repair activities, prepare and submit a report summarizing the total actual repair activity emissions.</li> <li>• Require repair vessel IC engines and other associated IC engines to comply with the Santa Ynez Unit (SYU) Permit to Operate (PTO) condition (i.e. Platform Heritage Section 4.4.1) by using fuel with less than 0.0015% sulfur by weight when operating within Santa Barbara County.</li> <li>• Exxon/Mobil has agreed to contribute financial support to the SBCAPCD for the 10 tons of permitted emissions to fully mitigate the emissions associated with the repair of the failed C1 power cable.</li> </ul>	<p>Insignificant</p>
<p><b><u>Water Quality</u></b></p> <p>Degradation of water quality from increased turbidity and discharge of effluents from project vessels.</p>	<ul style="list-style-type: none"> <li>• Increase in sediment and organic material in water column during the repair procedures.</li> <li>• Discharge of treated sewage.</li> </ul>	<ul style="list-style-type: none"> <li>• Comp-4: Dynamically Positioned (DP) Vessel for Cable Repair – Repair vessel to have DP capabilities to maintain position without anchors.</li> <li>• None.</li> </ul>	<p>Insignificant</p> <p>Insignificant</p>

Description of Potential Impacts	Impacting Agents	Company Initiated Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
<p><b><u>Benthic Resources</u></b></p> <p>Degradation of benthic habitat from manipulating the cable on the seafloor.</p>	<ul style="list-style-type: none"> <li>• Potential increase in turbidity in the water column during the repair procedures.</li> <li>• Direct physical disturbance to seafloor habitats including both soft and hard bottom.</li> </ul>	<ul style="list-style-type: none"> <li>• Comp-4: DP Vessel for Cable Repair – Repair vessel to have DP capabilities to maintain position without anchors.</li> <li>• Comp-14: ROV Monitor and Video Operation – ExxonMobil to require contractors to utilize an ROV to monitor and videotape selected portions of the offshore repair activities. If the ROV observes a rocky outcrop, the ROV to assist the DP vessel in adjusting the cable laydown to avoid a feature, whenever it is feasible to do so. A copy of videotaped repair activities to be provided to MMS in Post Repair Report.</li> </ul>	<p>Insignificant</p> <p>Insignificant</p>
<p><b><u>Commercial Fishing</u></b></p> <p>Cable repair boat and associated traffic may preclude fishers from fishing grounds or generate space-use conflicts</p>	<ul style="list-style-type: none"> <li>• Preclusion and/or space-use conflicts</li> </ul>	<ul style="list-style-type: none"> <li>• Notify the Joint Oil Fisheries Liaison Office (JOFLO) within 72 hours of completion of cable repair activities.</li> <li>• Comp-4: DP Vessel for Cable Repair – Repair vessel to have DP capabilities to maintain position without anchors.</li> <li>• Comp-5: JOFLO Project Status – ExxonMobil to submit a daily report of repair activity status to MMS, SBCAPCD, JOFLO and other interested agencies during offshore repair activities.</li> <li>• Comp-6: Notice to Mariners – ExxonMobil to file a timely advisory with the local U.S. Coast Guard District office for publication in the Local Notice to Mariners and to notify fishermen at least 15 days prior to the commencement of offshore activities.</li> <li>• Comp-7: Fishing Impacts and Conflicts – ExxonMobil to continue to consult with JOFLO and commercial fishermen, as appropriate, during the planning stages and repair activities to identify and mitigate any unanticipated impacts regarding the power cable repair. If JOFLO determines that conflicts with commercial fishing operations in the SYU area develop during this project, ExxonMobil to make all reasonable efforts to satisfactorily resolve any issues with affected fishermen. Possible resolutions may include physical modification of identified problem areas on the cable repair, the establishment of temporary preclusion zones or off-site out-of-kind measures.</li> <li>• Comp-8: Fishing Design and Installation – ExxonMobil to review design concepts and installation procedures with JOFLO prior to start of offshore repair activities to</li> </ul>	<p>Insignificant</p>

Description of Potential Impacts	Impacting Agents	Company Initiated Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
<p>Repaired cable, lost equipment or other items (“marine debris”) could cause loss or damage to commercial fishing gear.</p>	<ul style="list-style-type: none"> <li>• Damage or loss of fishing gear</li> </ul>	<p>minimize impacts to commercial fishing to the maximum extent possible.</p> <ul style="list-style-type: none"> <li>• Train-1: WSPA Fisheries and Wildlife Training – ExxonMobil to show video to provide awareness training to all personnel participating in repair activities concerning importance of fisheries and types of fishing vessels that could be encountered in area. <ul style="list-style-type: none"> <li>○ All personnel on repair activity to attend training and sign log indicating completion of training;</li> <li>○ Training to be conducted prior to repair vessel arriving at repair site; and</li> <li>○ Any personnel arriving after initial training completed to be provided training by ExxonMobil representative onboard vessel.</li> </ul> </li> <li>• Provide maps, free of charge, indicating the exact location of the laid repaired cable to the JOFLO within 90 days of work completion for use by interested fishermen.</li> <li>• Comp-4: DP Vessel for Cable Repair – Repair vessel to have DP capabilities to maintain position without anchors.</li> <li>• Comp-5: JOFLO Project Status – ExxonMobil to submit a daily report of repair activity status to MMS, SBCAPCD, JOFLO and other interested agencies during offshore repair activities.</li> <li>• Comp-7: Fishing Impacts and Conflicts – ExxonMobil to continue to consult with JOFLO and commercial fishermen, as appropriate, during the planning stages and repair activities to identify and mitigate any unanticipated impacts regarding the power cable repair. If JOFLO determines that conflicts with commercial fishing operations in the SYU area develop during this project, ExxonMobil to make all reasonable efforts to satisfactorily resolve any issues with affected fishermen. Possible resolutions may include physical modification of identified problem areas on the cable repair, the establishment of temporary preclusion zones or off-site out-of-kind measures.</li> <li>• Comp-8: Fishing Design and Installation – ExxonMobil to review design concepts and installation procedures with JOFLO prior to start of offshore repair activities to minimize impacts to commercial fishing to the maximum extent possible.</li> <li>• Comp-9: Recovery of Fan Channel Supports and Subsea Equipment – ExxonMobil to require the repair contractor to recover any fan channel supports that escape, if used, and repair activity equipment or support items from seafloor prior to demobilization from site.</li> <li>• Comp-10: Recover Items Lost Overboard – ExxonMobil to require repair contractors, to the extent reasonable and feasible, to recover items that could be a hazard which are lost overboard during activities associated with the cable repair.</li> </ul>	<p>Insignificant</p>

Description of Potential Impacts	Impacting Agents	Company Initiated Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
<p>Marine vessel traffic to and from project area could cause loss or damage to commercial fishing gear.</p>	<ul style="list-style-type: none"> <li>• Damage or loss of fishing gear</li> </ul>	<p>Logs to be maintained on the cable repair and any support vessels that identify the date, time, location, depth, and description of all items lost overboard. Vessel operator to minimize potential for items to be lost overboard by securing loose items, where feasible. Vessel operator to place name of vessel on all items on deck that have the potential to be lost overboard.</p> <ul style="list-style-type: none"> <li>• Comp-11: Survey and Plans to NOAA – ExxonMobil to provide final as-built survey maps of repaired C1 Cable location to NOAA, as requested, and in the appropriate format.</li> <li>• Require repair vessel to utilize approved traffic corridors established by the JOFLO during vessel transits to and from local ports, when feasible.</li> <li>• Comp-4: DP Vessel for Cable Repair – Repair vessel to have dynamic positioning (DP) capabilities to maintain position without anchors.</li> <li>• Comp-5: JOFLO Project Status – ExxonMobil to submit a daily report of repair activity status to MMS, SBCAPCD, JOFLO and other interested agencies during offshore repair activities.</li> <li>• Comp-6: Notice to Mariners – ExxonMobil to file a timely advisory with the local U.S. Coast Guard District office for publication in the Local Notice to Mariners and to notify fishermen at least 15 days prior to the commencement of offshore activities.</li> <li>• Train-1: WSPA Fisheries and Wildlife Training – ExxonMobil to show video to provide awareness training to all personnel participating in repair activities concerning importance of fisheries and types of fishing vessels that could be encountered in area. <ul style="list-style-type: none"> <li>○ All personnel on repair activity to attend training and sign log indicating completion of training;</li> <li>○ Training to be conducted prior to repair vessel arriving at repair site; and</li> <li>○ Any personnel arriving after initial training completed to be provided training by ExxonMobil representative onboard vessel.</li> </ul> </li> </ul>	<p>Insignificant</p>
<p><b><u>Cultural Resources</u></b></p> <p>An anomaly, identified as being of potential cultural origin on the Marine Archeological Survey, could be harmed by cable repair</p>	<p>Possible anchoring in an emergency situation in the unlikely event that the dynamically positioned vessel loses power from the primary</p>	<ul style="list-style-type: none"> <li>• Require contractors to avoid potential cultural resources by a 300-foot radius to the extent possible during all offshore repair activities. <u>Note:</u> Exxon further committed to protecting the identified anomaly by developing an exclusion zone which is a square 800 ft (244 m) on a side. This commitment was made in consultation with the Corps of Engineers and MMS (see EA Section 4)</li> </ul>	<p>None.</p>

Description of Potential Impacts	Impacting Agents	Company Initiated Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
activities.	and two back-up engines.	<ul style="list-style-type: none"> <li>• Comp-12: Cultural Site Avoidance with Vessel Captain – ExxonMobil to meet with vessel captain prior to start of offshore repair activities to review avoidance procedures for the potential cultural resource and locations where there are potential cultural sites that must be avoided. Vessel operator to insert cultural site coordinates in vessel navigation system.</li> <li>• Plan-3: Cultural Site Avoidance Plan – ExxonMobil to submit to MMS as least 30 days prior to start of offshore repair activities a plan that details the procedures to be followed to avoid cultural resources in the repair activity area.</li> <li>• Train-3: Cultural Site Avoidance Offshore Training – ExxonMobil to provide cultural site avoidance awareness training to all personnel participating in repair activities concerning the requirements to avoid distributing cultural resources and what procedure to follow if a previously undetected resource site is discovered. Additional training conditions:               <ol style="list-style-type: none"> <li>1) All personnel on repair activity to attend training and sign log indicating completion of training.</li> <li>2) Training to be conducted prior to repair vessel arriving at repair site;</li> <li>3) Any personnel arriving after initial training completed to be provided training by ExxonMobil representative onboard vessel.</li> </ol> </li> </ul>	
<p><b><u>Environmental Justice</u></b></p> <p>Disproportionate effects on low income minority populations</p>	<ul style="list-style-type: none"> <li>• Traffic from passenger vehicles and tasks.</li> </ul>	<ul style="list-style-type: none"> <li>• None.</li> </ul>	Insignificant

## 1.7.2 Other Mitigations

The following list of mitigations were submitted by ExxonMobil (ExxonMobil, 2008) and are generally applicable to the overall project, but they are not specifically germane to the individual environmental resources that are analyzed in the EA. These ExxonMobil-initiated mitigations are part of the project that MMS is analyzing in the EA and upon which MMS will make a decision.

- Comp-13: Engineering Design Standards – ExxonMobil to provide design information on spare cable to be used for subsea splice to MMS at least 30 days prior to start of offshore repair activities.
- Comp-15: DP Material Transfer – ExxonMobil to require repair vessel contractor to not make any material transfers between vessel and another vessel or a platform when the vessel is located over an active pipeline or power cable.
- Comp-18: As-Built Repair Activity Drawings/Documents –ExxonMobil to maintain clear, complete and up-to-date copies of all as-built drawings and documents generated during the repair activities. A copy of as-built drawings and documents to be provided to MMS in Post Repair Report.
- Comp-21: Cable Splice Information – ExxonMobil to submit design information and installation procedures on subsea splice between existing C1 Cable and spare cable to MMS at least 30 days prior to start of offshore repair activities.
- Comp-22: Maps in Digital Format – ExxonMobil to submit maps of as-laid cable location in the requested format to MMS in Post Repair Report. [MMS previously requested a GIS layer and associated metadata, if available.]
- Comp-23: Plans, Permits, and Procedures – ExxonMobil to submit copies of all major permits, approvals, plans, and procedures for the repair activities to MMS at least 30 days prior to start of offshore repair activities.
- Plan-2: Safe Access and Egress Plan – ExxonMobil to submit to MMS at least 30 days prior to start of offshore repair activities a plan defining a specific procedure for how personnel can safely access and egress the repair vessel to allow permitting agencies and their representatives access during repair and repair-related activities.
- Plan-4: Oil Spill Response Plan – ExxonMobil to submit to MMS at least 30 days prior to start of offshore repair activities an addendum to existing SYU Oil Spill Response Plan (OSRP) to address specific repair activities that clearly identifies responsibilities of contractor and ExxonMobil personnel. The plan to list and identify the location of oil spill response equipment on repair vessel and response times for deployment. The plan to include potential minor and major spill scenarios, prevention measures, equipment available onsite, spill notification protocol and procedures and information on immediate call out of additional spill containment and clean up resources in the event of an incident that exceeds the rapid clean up capability of the onsite work force.
- Plan-5: Critical Operations and Curtailment Plan – ExxonMobil to submit to MMS at least 30 days prior to start of offshore repair activities a plan that detailed the critical operations and curtailment conditions for the repair vessel to define the limiting condition of sea state, wind, currents or any other weather conditions that exceeds the safe operation of the vessel and/or repair equipment and that could hinder potential spill clean up, or in any way pose a threat to personnel or the safety of the environment. The plan needs to provide for a minimum ongoing five (5) day advance favorable weather forecast during offshore

operations. The plan also needs to identify the onsite person with authority to determine whether critical conditions are present and suspend the work operations when needed.

- Plan-6: Cable Release Prevention Plan – ExxonMobil to submit to MMS at least 30 days prior to start of offshore repair activities a Cable Release Prevention Plan which details the specific measures to be taken at all locations where a cable is suspended and could fail and fall to the ocean floor. The plan to detail design measures, engineering measures, safety measures, and redundancy in safety equipment.
- Rep-1: Daily Agency Report – ExxonMobil to provide daily report of repair activity status to MMS, SBCAPCD, JOFLO and other interested agencies during the offshore repair activities.
- Rep-3: Post Repair Report – Within 90 days of the completion of the offshore repair activities, ExxonMobil to submit to MMS, SBCAPCD, JOFLO and other interested agencies, a report containing the following:
  - As-built drawings showing final location of repaired C1 Cable in the appropriate format;
  - Post activity narrative confirming completion of the work in accordance with the following:
    - Mitigation Compliance Summary that includes a listing of the identified mitigation measures, the status of each mitigation and how each mitigation was complied with;
    - Design and execution plans with a description of any field changes with the justification;
    - Any accidents or spills affecting the OCS waters and the corrective measures taken; and
    - Any other extraordinary conditions that occurred during the course of the repair activities;
  - A post-activity ROV video of the repaired C1 Cable in the final sea bottom location to verify the as-built condition; include a video of sea bottom work area to confirm seafloor cleanup and final site condition. Video copies to have a resolution equivalent to the original version that will result in as clear a picture as possible for viewing. The video should include, where possible, a digital copy of the time, latitude and longitude and/or the ROV tracks as a geo-referenced image compatible with ArcGIS.
- Train-4: C1 Cable Repair Activity Training – ExxonMobil to provide awareness training to all personnel participating in repair activities concerning specific agreed to mitigation measures and work specific safety requirement. Also discuss communications, logistics and respond to questions from participants.
  - All personnel on repair activity to attend training and sign log indicating completion of training;
  - Training to be conducted prior to repair vessel arriving at repair site; and
  - Any personnel arriving after initial training completed to be provided training by ExxonMobil representative onboard vessel.

## **2.0 Description of the Affected Environment and Impact Analysis**

### **2.1 Oil Spills**

The operation of the primary repair vessel and the supply and crew vessels supporting the repair activity would involve the use of petroleum hydrocarbons, including small volumes of lubricating oils, hydraulic fluids, and waste oils. Spillage of these materials on any vessel could result in their release to the marine environment. The repair vessel maintains an oil spill response plan and will have spill containment and cleanup equipment on board in the event of local deck spills. If an oil spill to the ocean occurs from the vessel, ExxonMobil will respond and assist the vessel in accordance with its agency-approved Oil Spill Response Plan (OSRP) for Pacific OCS Operations. Response procedures for an incident include mobilization of an Onsite Response Team at the platforms, and, if necessary, callout of vessels from the Clean Seas Oil Spill Response Cooperative. If additional resources are required, the ExxonMobil Local Interfunctional Response Team and the Emergency Response Team would be mobilized. An ExxonMobil representative will be onsite at all times to activate these resources, as required (see Mitigation Plan-4, Section 1.7).

The incidental spillage of lubricating oil, hydraulic fluids, and waste oil would result in an insignificant impact to the marine environment due to the small volume of such spills, the onsite oil spill response capability, and other spill response resources in the immediate area. A large oil spill is not expected from this project because anchors will not be used near any large sources of oil such as the pipeline between Platforms Heritage and Harmony.

Further, ExxonMobil has committed that project vessels will refuel at Port Hueneme. However, due to the short duration (an estimated 25 days including transit time) of the proposed project, refueling of the primary repair vessel should not be necessary. Equipment and small boat refueling, if necessary, can be carried out onboard the primary repair vessel in accordance with vessel procedures and with spill containment equipment immediately available.

Due to the short project time-frame, the lack of a source for a large oil spill, and the capability of a response to a spill of any size by ExxonMobil's on-site spill response organization, oil spills are not further analyzed in this document.

### **2.2 Air Quality**

#### **2.2.1 Affected Environment**

The climate, meteorology, air quality, and air quality trends of the Santa Barbara County area have been described in detail in several planning and environmental documents and are best summarized in the Santa Barbara County 2007 Clean Air Plan (SBCAPCD, 2007). Santa Barbara County can be described as having a Mediterranean climate characterized by warm, dry summers and cooler, mildly damp, winters. The unique combination of prevailing wind conditions, generated by a persistent offshore high pressure system, and the topography of coastal mountains, result in variations of airflow which are conducive to the formation and retention of air pollutants.

The Federal government has established ambient air quality standards to protect public health (primary standards) and, in addition, has established secondary standards to protect public welfare. The State of California has established separate, more stringent ambient air quality standards to protect human health and welfare. California and National standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate

matter 10 microns (PM<sub>10</sub>), suspended particulate matter 2.5 microns (PM<sub>2.5</sub>), and lead. In addition, California has standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles.

The Federal attainment status of Santa Barbara County is found in 40 CFR 81.305. Currently, Santa Barbara County is in attainment of all the National Ambient Air Quality Standards (NAAQS), including the Federal 8-hour ozone standard. Santa Barbara County is considered nonattainment for the California Ambient Air Quality Standards (CAAQS) 1-hour ozone and the 24-hour PM<sub>10</sub> air quality standards. There is not yet enough data to determine the attainment status for either the Federal standard for PM<sub>2.5</sub> or the state PM<sub>2.5</sub> standard.

Section 328 of the 1990 Clean Air Act Amendments (CAAA) transferred authority for air quality on the OCS to the EPA. On September 4, 1992, the EPA Administrator promulgated requirements (40 CFR Part 55) to control air pollution from OCS sources to attain and maintain Federal and State air quality standards and to comply with CAAA provisions for the Prevention of Significant Deterioration. The promulgated regulations require OCS sources to comply with applicable onshore air quality rules in the corresponding onshore area (COA). EPA delegated authority to the SBCAPCD on November 5, 1993 to implement and enforce the requirements of 40 CFR Part 55. The full transfer of authority to SBCAPCD to regulate OCS air emissions pursuant to 40 CFR Part 55 transpired on September 4, 1994. ExxonMobil's proposed SYU C1 cable repair project is located in the OCS, offshore Santa Barbara County within the South Central Coast Air Basin. The SYU offshore facilities include three OCS platforms—Hondo, Harmony and Heritage—and a series of connecting pipelines and power cables. Platforms Hondo, Harmony, and Heritage are currently within the jurisdiction of the SBCAPCD including permits which regulate emissions from the SYU facilities.

Greenhouse gases (GHG) are defined as any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include, but are not limited to, water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O). These greenhouse gases lead to the trapping and buildup of heat in the atmosphere near the earth's surface, commonly known as the Greenhouse Effect. The primary source of GHG in the United States is energy use-related activities, which include fuel combustion, as well as energy production, transmission, storage, and distribution. These activities generated 85 percent of the total U.S. emissions on a carbon equivalent basis in 1998 and 86 percent in 2004. Fossil fuel combustion represents the vast majority of the energy related GHG emissions, with CO<sub>2</sub> being the primary GHG.

### 2.2.2 Impact Analysis

**Significance Criteria.** The following significance criteria would apply as provided in the Scope and Content of Air Quality Sections in Environmental Documents prepared by the SBCAPCD (SBCAPCD, 2006). SBCAPCD has determined that revisions reflecting equipment and throughput changes with the proposed project to the existing PTO for SYU was needed. The modified PTO (No. 9102-04) was issued on July 7, 2008.

A proposed project will not have a significant air quality effect on the environment, if operation of the project will:

- Emit (from all project sources) less than the daily trigger for offsets in the SBCAPCD New Source Review Rule for any pollutant; and
- Not cause or contribute to a violation of any CAAQS or NAAQS (except O<sub>3</sub>); and

- Be consistent with the adopted Federal and State air quality plans for Santa Barbara County.

**Impacting Factors.** Emissions resulting from the proposed project may have the potential to increase concentrations of pollutants onshore. The primary regulated pollutants of concern in Santa Barbara County are oxides of nitrogen (NO<sub>x</sub>) and reactive organic compounds (ROC). Both NO<sub>x</sub> and ROC are considered precursors to ozone formation, for which Santa Barbara County is presently in attainment. The primary impacting agents associated with projects of this type and duration are emissions from propulsion and stationary combustion equipment. The major emission of concern for this project is NO<sub>x</sub>.

Table 2-1 provides a summation of SBCAPCD threshold requirements relating to the application of Best Available Control Technology (BACT), air quality impact analysis (AQIA), and emission offsets.

**Table 2-1. SBCAPCD BACT, AQIA, and Emission Offset Requirements.**

<i>BACT Requirements</i>	<p>≥ 25 lbs/day for any non-attainment pollutant (except CO)</p> <p>≥ 150 lbs/day for CO</p>
<i>AQIA Requirements</i>	<p>≥ 120 lbs/day for any non-attainment pollutant (except CO and PM<sub>10</sub>)</p> <p>≥ 550 lbs/day for CO; ≥ 80 lbs/day for PM<sub>10</sub></p>
<i>Offsets Requirements</i>	<p>≥ 55 lbs/day or ≥ 10 tons/yr for any non-attainment pollutant (except CO and PM<sub>10</sub>)</p> <p>≥ 150 lbs/day or ≥ 25 tons/yr for CO; ≥ 80 lbs/day or ≥ 15 tons/yr for PM<sub>10</sub></p>

Several environmental documents associated with the offshore activities in the SYU have been prepared by MMS and other agencies and provide background discussions of air quality impacts. Included below are a synopsis of the original SYU project activities and the 2003 ExxonMobil Offshore Power System Repair Project. Various Authority to Construct (ATC) permits and PTO have also been issued by the SBCAPCD associated with SYU modifications and operations and may be examined by contacting SBCAPCD offices.

- Original SYU Development and Production Plan (DPP) (Exxon, 1982a;b). Details on the original SYU DPP are discussed in Exxon (1982a). The Environmental Report (Exxon 1982b), submitted at the same time as the DPP, performed an analysis of air quality as required by MMS regulations.
- Environmental Impact Statement/Environmental Impact Report (EIS/EIR) on the effects of the DPP and potential alternatives (SAI, 1984a). An air quality analysis on the proposed OCS development and potential alternatives was also prepared (SAI, 1984b).
- ExxonMobil Offshore Power System Repair Project Mitigated Negative Declaration/Environmental Assessment (MND/EA) (SBC and MMS, 2003). The MND/EA was prepared in coordination with Santa Barbara County’s Energy Division to evaluate the environmental impacts of replacing the failed C power cable with the C1 power cable to supply electricity from Los Flores Canyon to Platform Heritage. The document concluded that the project was a construction project and exempt from

SBCAPCD permits. Air quality mitigation included limitations on total project emissions, fuel use and emission calculations, and fuel sulfur content limits. ExxonMobil was additionally required to contribute financial support to SBCAPCD to compensate for emission increases.

**C1 Cable Repair Impacts.** The proposed project is to locate and repair a fault in the C1 offshore submarine power cable that provides electrical power and communication services to Platform Heritage. The C1 cable runs from shore to Platform Heritage and the fault is located approximately 2,750 ft (838 m) southeast of Platform Heritage in about 1,125 ft (343 m) of water. The basis of this analysis is information provided by ExxonMobil to the SBCAPCD giving equipment specifications and emission estimates for the C1 cable repair project. This information was included in ExxonMobil’s Emissions Reporting Plan which was used in support of the modification of the Platform Heritage PTO (No. 9102-04).

Emission sources for the repair activities will only occur in the OCS offshore area. Offshore equipment includes internal combustion (IC) engines associated with the proposed cable repair vessel, the *Ocean Intervention III*, and associated auxiliary engines. Existing permitted SYU supply boats will be utilized to deliver supplies or remove items during regularly scheduled trips. The repair activities will not generate any significant number of worker commute trips and supply/equipment delivery trips within Santa Barbara County.

For this work, the repair vessel engines and emissions generating equipment will be included in a revision to the Platform Heritage PTO. The modified PTO allows a maximum of 10 tons total of NO<sub>x</sub> from the cable repair vessel engines for this project. Cable repair activities on-site are expected to take an estimated 25 days including one-half day transit to and from the Santa Barbara County line and the worksite. Cable repair operations will be 24 hours/day. Several of the auxiliary cable-handling support engines will have California Air Resources Board's (CARB) Statewide Portable Equipment Registration Program (PERP) certifications. Other engine support will be covered under SBCAPCD Rule 202.D.5. Estimated emissions from the power cable repair vessel are contained in Table 2-2.

**Table 2-2.** Estimated Power Cable C1 Repair Emissions.

<b>Equipment Category</b>	<b>NO<sub>x</sub></b>	<b>ROC</b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>PM</b>	<b>PM<sub>10</sub></b>
<b>Peak Hourly (lbs/hr)</b>						
<i>Vessel Transit</i>	49.73	2.27	5.24	1.37	0.79	49.73
<i>Cable Repair</i>	<u>42.15</u>	<u>2.35</u>	<u>11.89</u>	<u>1.19</u>	<u>1.36</u>	<u>42.15</u>
Total Hourly Vessel	91.88	4.61	17.13	2.55	2.15	91.88
Total Hourly Auxiliary	3.26	0.33	1.21	0.05	0.25	3.26
<b>Peak Daily (lbs/day)</b>						
<i>Vessel Transit</i>	1,193.52	54.42	125.73	32.77	18.95	1,193.52
<i>Cable Repair</i>	<u>924.71</u>	<u>2.35</u>	<u>225.44</u>	<u>27.26</u>	<u>26.00</u>	<u>924.71</u>
Total Daily Vessel	2,118.23	56.77	351.17	60.04	44.95	2,118.23
Total Daily Auxiliary	30.38	3.12	13.04	0.55	2.28	30.38

Equipment Category	NO <sub>x</sub>	ROC	CO	SO <sub>x</sub>	PM	PM <sub>10</sub>
<i>Peak Quarterly (tpq)</i>						
<i>Vessel Transit</i>	0.60	0.03	0.06	0.02	0.01	0.60
<i>Cable Repair</i>	<u>9.21</u>	<u>0.48</u>	<u>2.23</u>	<u>0.27</u>	<u>0.26</u>	<u>9.21</u>
Total Quarterly Vessel	9.81	0.51	2.29	0.29	0.27	9.81
Total Quarterly Auxiliary	0.22	0.02	0.12	0.00	0.00	0.22
<i>Peak Annual (tpy)</i>						
<i>Vessel Transit</i>	0.60	0.03	0.06	0.02	0.01	0.60
<i>Cable Repair</i>	<u>9.21</u>	<u>0.48</u>	<u>2.23</u>	<u>0.27</u>	<u>0.26</u>	<u>9.21</u>
Total Annual Vessel	9.81	0.51	2.29	0.29	0.27	9.81
Total Annual Auxiliary	0.22	0.02	0.12	0.00	0.00	0.22

**Mitigation proposed as part of the project.** ExxonMobil submitted the following mitigation measure as a part of the C1 cable repair project to further reduce and minimize impacts to air quality:

- Require construction contractors to utilize appropriate means to reduce vessel engine emissions wherever possible.
- Prepare an Emissions Reporting Plan prior to repair activities that contain information on all marine vessel IC engines and other emissions generating equipment as well as the cable handling support IC engines. Estimate the amount of emissions that are expected to be generated during the repair activities. Submit report to the MMS with a copy to the SBCAPCD and other agencies, as requested.
- Prepare an Emissions Daily Report which determines fuel use and estimated emissions on a daily basis during repair activities when the repair vessel is within 25 miles of SYU. Submit this information to the MMS with a copy to the SBCAPCD and other agencies, as requested. At the conclusion of the repair activities, prepare and submit a report summarizing the total actual repair activity emissions.
- Require repair vessel IC engines and other associated IC engines to comply with the SYU PTO condition by using fuel with less than 0.0015% sulfur by weight when operating within Santa Barbara County.
- ExxonMobil has agreed to contribute financial support to the SBCAPCD for the 10 tons of permitted emissions to fully mitigate the emissions associated with the repair of the failed C1 cable.

### 2.2.3 Conclusion

The data presented in Table 2-2 indicate that the expected actual emissions for the repair activities will be less than 10 tons of NO<sub>x</sub> and lesser amounts of the other criteria pollutants. The permitted and actual emissions for the SYU facilities will not change as a result of the repair activities. Comparison of modeled peak hour emissions with the proposed cable repair project NO<sub>x</sub> emissions show that the peak hour emissions are considerably less than those previously analyzed and are therefore not expected to result in any exceedances of either the California or Federal ambient air quality standards from equipment and vessels needed to repair the C1 cable.

Therefore, there is no change to previous AQIA and no exceedances of the CAAQS, NAAQS, or National PSD Increment Standards. In addition, there would be no change in public health risks associated with the SYU facilities that are currently below the SBCAPCD health risk notification thresholds. Based on these considerations the impacts of the C1 cable repair activities on air quality are expected to be temporary and insignificant.

#### **2.2.4 Cumulative Analysis**

Section 1.6 describes the assumptions and lists the projects considered in the cumulative analysis for the C1 cable repair project. Potential sources of cumulative air quality impacts in the project area which overlap both spatially *and* temporally include emissions from on-going and proposed oil and gas activities in Federal and State waters and offshore shipping and tankering operations. All of the cumulative projects and activities considered in this document occur in the South Central Coast Air Basin (SCCAB) composed of San Luis Obispo, Santa Barbara and Ventura Counties. For this analysis, it is assumed that due to the prevailing onshore wind conditions, the geographic scope for cumulative air quality impacts will be those projects or actions which exist or are pending or approved in the northern Santa Barbara Channel and southern Santa Barbara County.

**Federal Oil and Gas Projects.** Federal and State oil and gas activities considered in this analysis include only on-going oil and gas activities from existing Pacific OCS platforms.

On-going Oil and Gas Activities. The existing energy-related projects considered in Federal and State waters include air emissions from the SYU Platforms Hondo, Harmony, and Heritage and the Point Arguello Unit Platforms Harvest, Hermosa, and Hidalgo. The existing platforms identified within the vicinity of the proposed project are within the jurisdiction of the SBCAPCD and all have current PTOs. The emission sources from those facilities have been controlled and fully offset and are in full compliance with SBCAPCD Rules and Regulations. To date, the SYU Expansion Project emissions of NO<sub>x</sub> and ROC have been well below permitted levels, and no exceedances of the NO<sub>2</sub> standard have occurred at applicable monitoring sites during the highest emission intensive phases of the OCS construction. Thus, the additional incremental emissions levels expected with the proposed project have been offset and are not expected to have a cumulative air quality impact with existing controlled and fully offset Federal oil and gas activities.

**Non-Energy Projects and Activities.** The only non-energy project or activity that could overlap spatially or temporally with the proposed project is marine shipping and tankering. Emissions from marine vessels traversing the Santa Barbara Channel are not regulated by Federal, State, or local air authorities and may combine with emissions from the proposed project to affect onshore air quality. Approximately 80 percent of the vessels calling on the Ports of Los Angeles and Long Beach are of foreign registry and most use engines produced outside the United States (California Air Resources Board (CARB), 2000).

The 2000 emission inventory for Santa Barbara County estimates that NO<sub>x</sub> emissions from OCS ships and commercial boats account for approximately 40 tons per day of NO<sub>x</sub> or about 42.71 percent of the total NO<sub>x</sub> inventory. Maritime shipping on the OCS also accounts for approximately 3 tons of PM per day. Regulatory efforts are in development through the U.S. EPA, International Maritime Organization, and California Air Resources Board to control emissions and engines associated with marine shipping and tankering. As emissions from the proposed C1 cable repair project are within allowable permitted levels that have been fully offset

per SBCAPCD Rules and Regulations, it is expected that the cumulative air quality impact of marine shipping and tankering will not change with the proposed project.

**Cumulative Conclusion.** The potential for the incremental emissions increase associated with the C1 cable repair project to cumulatively impact regional air quality is considered to be insignificant. Emission increases associated with the proposed project will be fully offset and permitted by SBCAPCD and are not expected to contribute significantly to the potential impact to regional air quality that may be expected from existing offshore oil and gas activities and marine shipping and tankering emissions.

### 2.2.5 Overall Conclusions

The potential impacts to onshore air quality resulting from emissions from vessels and equipment used in the C1 cable repair project are considered to be insignificant based on the significance criteria utilized in this analysis. Increased emissions from the repair of the fault in the C1 cable are within allowable emission levels currently permitted by the SBCAPCD and have been fully offset in accordance with SBCAPCD Rules and Regulations. Mobile source emissions are expected to be minimal based on the short duration of the project. The incremental increase associated with the proposed project will not cause a significant impact in cumulative effects. Thus, the potential for violations of the ambient air standards from the proposed project are considered to be negligible, through existing emission offset agreements and the implementation of the existing permit requirements in place for Platform Heritage. Overall, the potential impacts to air quality resulting from the repair of the C1 cable are considered to be insignificant and mitigated to the maximum extent feasible.

## 2.3 Water Quality

### 2.3.1 Affected Environment

This section describes the marine water quality and sediments in the Santa Barbara Channel, where the cable repair activities will occur. The water quality resources in this region have been previously described by Arthur D. Little (ADL, 1986), Science Applications, Inc. (SAI, 1984a; c), in the MND/EA written for the previous cable repair project (SBC and MMS, 2003), and by Minerals Management Service (MMS, 2001). Some water quality characteristics, such as dissolved oxygen and water clarity, are of fundamental importance to the health of marine life. Other parameters, such as temperature and salinity, provide information about circulation patterns; these factors can also influence organisms and contaminant fate. Water quality parameters typical for the Santa Barbara Channel are given in Table 2-3.

**Table 2-3.** Key Water Quality Parameters.

Parameter	Characteristics
Temperature	At surface ranges from 12-13 °C in April to 15-19 °C in July-October.
Salinity	33.2-34.3 parts per thousand.
Dissolved oxygen	Maximum about 5-6 ml/L at the surface, decreasing with depth to 2 ml/L at 200 m; below 350 m, as low as 1 ml/L; upwelling can bring this oxygen-poor water to the surface waters, especially from May to July.
pH	Range from about 7.8 to 8.1 at surface and with depth.

Parameter	Characteristics
Nutrients	Important for primary production; include nitrogen, phosphorus, and silicon; other micronutrients include iron, manganese, zinc, copper, cobalt, molybdenum, vanadium, vitamin B12, thiamin, and biotin. Depleted near the surface but increasing with depth.
Suspended sediment (turbidity)	Concentrations about 1mg/L in the nearshore, surface waters with higher values in near-bottom waters (and after storms); lower levels (0.5 mg/L) in offshore regions. Highest turbidities correspond to periods of highest upwelling, primary production, and river runoff. Controls the depth of the euphotic zone, has applications for (absorbed) pollutant transport and is of aesthetic concern.
Metals	Include barium, chromium, cadmium, copper, zinc, mercury, lead, silver, and nickel all of which can serve as micronutrients in low levels (parts per trillion or parts per billion) and be potentially toxic at high levels (parts per million or higher).
Organics	May enter the marine environment from municipal and industrial wastewater discharges, runoff, natural oil seeps, and offshore oil and gas operations. Total dissolved hydrocarbon concentrations near Point Conception are in the range of 0.2-3.5 µg /L.

**Sources of Pollution.** Sources of marine pollution in the Santa Barbara Channel include publicly owned treatment works (municipal sewage) and river runoff (MMS, 2001). The nearest point source discharge to the proposed project area is from the Goleta waste water treatment plant, approximately 20 miles eastward of the project location. This plant collects and treats wastewater from the cities of Goleta, Santa Barbara, and other outlying communities. The plant discharges 4.7 million gallons per day of wastewater at a mixed primary/secondary level of treatment (SCCWRP, 2003). The outfall runs about one mile out to sea and rests on the seafloor about 95 ft (30 m) beneath the surface.

The nearest potential sources of nonpoint source pollution are the numerous small and intermittently flowing streams that run out of the coastal range along the mainland of the Santa Barbara Channel. River runoff is difficult to quantify and is seasonally variable (pers. comm. Jon Warrick, 2002). Sedimentary material from the Santa Ynez River may sometimes flow eastward around Point Conception and deposit material in the project area, particularly during periods of high flow at which time the pollutants carried by the plume would be well-diluted but, perhaps still detectable. Pollutants that could be associated with these rivers are predominantly agriculturally based and may include dairy and ranching-related pollutants (for example, animal wastes) and pesticides.

Overall, water quality in the project area may be characterized as good. This is due the lack of nearby point or nonpoint pollution sources such as any sewage outfalls, urban-associated storm drains, and major river out flow.

### 2.3.2 Impact Analysis

**Significance Criteria.** A significant impact on water quality is:

- Any liquid effluent or solid material discharged to the marine receiving waters (ocean) that cause changes in standard water quality parameters (Table 2-3) resulting in unreasonable degradation to the water quality.<sup>1</sup>
- An increase in sedimentation above the normal range and which is persistent and not dispersed by natural processes within a few days.

**Impacting Factors.** The impacting factors from this project that could affect water quality are the increase in sediment that will be raised from the seafloor, small amounts of sediment and organic material that will be spread throughout the water column during the repair procedures, and the discharge of treated sewage from the repair vessel.

**Sediments and Organic Material.** These materials will be spread into the water column during the raising, lowering, and cleaning of the cable during the repair process. Small volumes of sediments will be displaced when the cable is lifted from the seafloor after the ROV makes the initial cut, again when the cable is replaced on the seafloor and the other end is lifted, and again when the repaired cable, with the 2,000 ft (609 m) splice, is laid on the seafloor.

Approximately 2,000 ft (609 m) of cable will be lifted from the seafloor near Platform Heritage where sediments are characterized by silt-sized particles with some clay. After the splice is finished, the repaired, newly spliced, cable will be placed in the lay-down area. Based upon the previous C1 cable repair project which entailed similar procedures, the entire process will displace between five and ten cubic yards (3.8 and 7.6 m<sup>3</sup>) of sediment (SBC and MMS, 2003). Bottom currents, which average 0.3 to 0.6 ft/sec (10 to 20 cm/sec), would gradually spread the sediments down-current allowing the suspended particles to eventually settle. These activities would cause only a small increase in turbidity and impacts to water quality would be short-term, localized, and insignificant.

Some sediment would adhere to the cable on its way to the surface, leaving a gradually decreasing trail of sediment in the water column. Impacts to the water quality would be negligible because most of the disturbed sediment would remain close to the sea floor, settling relatively quickly while the remainder will be dissipated by the currents throughout the water column.

As much as 200 to 400 ft (60 to 120 m) of the failed cable will need to be cleaned before it is sent ashore for disposal. A small amount of sediment and encrusting marine growth will be washed off the cable and flow into the sea. This will cause a small and temporary cloud of turbidity at the sea surface which will dissipate quickly once the cleaning process is completed. Impacts to water quality from this process will be negligible.

**Repair Vessel Discharges.** The proposed repair activities will utilize a repair vessel that will discharge ballast, bilge, and sanitary wastes. These types of routine discharges, regulated by the U.S. Coast Guard (USCG) via the Federal Water Pollution Control Act, ensure that vessel effluents such as sewage and cooling water do not leave a sheen or other foreign material on navigable waters. Ballast and bilge waters will be treated by the vessel's onboard oil separation system which is designed and operated to meet the USCG-required limit of 15 ppm oil in the

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<sup>1</sup> EPA's regulations at 40 CFR 125.121(e)(1-3) state, "unreasonable degradation of the marine environment means: (1) Significant adverse changes in ecosystem diversity, productivity and stability of the biological community within the area of discharge and surrounding biological communities; (2) Threat to human health through direct exposure to pollutants or through consumption of exposed aquatic organisms; (3) Loss of esthetic, recreational, scientific or economic values which is unreasonable in relation to the benefit derived from the discharge."

effluent. Similarly, the sewage treatment plant onboard the vessel is USCG-approved and is designed and operated to meet the USCG-required limits. Surface currents, wind, and waves will combine to dissipate these effluents. All the repair vessel discharges will be conducted in accordance with applicable USCG regulations and will not have a significant impact on the water quality of the project area during the short time the project occurs.

**Mitigation proposed as part of the project.** ExxonMobil submitted the following mitigation measure as a part of the C1 cable repair project to further reduce and minimize impacts to water quality:

- Comp-4: DP Vessel for Cable Repair – Repair vessel to have DP capabilities to maintain position without anchors.

### **2.3.3 Conclusion**

The impacting agents that could affect water quality are increases in turbidity and the discharge of treated effluents from the repair vessel. Based on the significance criteria for water quality established for this EA, neither of these agents will cause a significant impact because no unreasonable degradation to the water quality due to turbidity or discharges will occur.

### **2.3.4 Cumulative Impacts**

Section 1.6 describes the projects considered in the cumulative analysis for the proposed C1 cable repair project. Possible sources of cumulative impacts to water quality in the project area include on-going oil and gas activities in Federal waters and point and nonpoint pollution sources.

#### **Federal Offshore Oil and Gas Projects.**

Activities Occurring on Existing Platforms: Of the oil and gas platforms located near the project area, only Platform Harmony may be conducting drilling operations while the proposed project is underway. Also, routine operations at only three platforms, Hondo, Harmony, and Heritage, could overlap temporally and spatially with the proposed project. These are not expected to have a cumulative impact on water quality because of the short-term nature of the project and the small amount of sediment that would be raised from the seafloor during the manipulation of the cable.

#### **Non-Energy Projects and Activities.**

Point Source and Nonpoint Source Discharges: Sewage and other discharges from the vessels used for the proposed project will contribute a negligible quantity to the pollution from the Goleta waste water treatment plant, the only existing point source of pollution in the area, and to any pollution from the numerous small and intermittently flowing streams that run out of the coastal range along the mainland of the Santa Barbara Channel. The temporary increase in turbidity from project activities will not result in a significant incremental increase to existing turbidity sources such as that coming from river runoff during storms.

**Cumulative Conclusion.** The primary source of turbidity from the project would arise from the manipulation of the cable during the repair process. Significant cumulative impacts to water quality are not expected from the proposed project when added to other activities in the area. Impacts from the C1 cable repair project represent an insignificant incremental increase of cumulative impacts to water quality resources.

### **2.3.5 Overall Conclusions**

The potential impacts to water quality from the proposed project are considered to be insignificant based on the significance criteria utilized in this analysis. This is due to the short time-frame of the project (an estimated 25 days including transit time), the negligible amount of sediment that will be disturbed compared to the existing natural sediment movement and the small volume of discharges from the repair vessel. Additionally, the incremental increase of the proposed action to cumulative impacts is negligible. Overall, the potential impacts to water quality resulting from the repair of the C1 cable are considered to be insignificant and mitigated to the maximum extent feasible.

## **2.4. Benthic Resources**

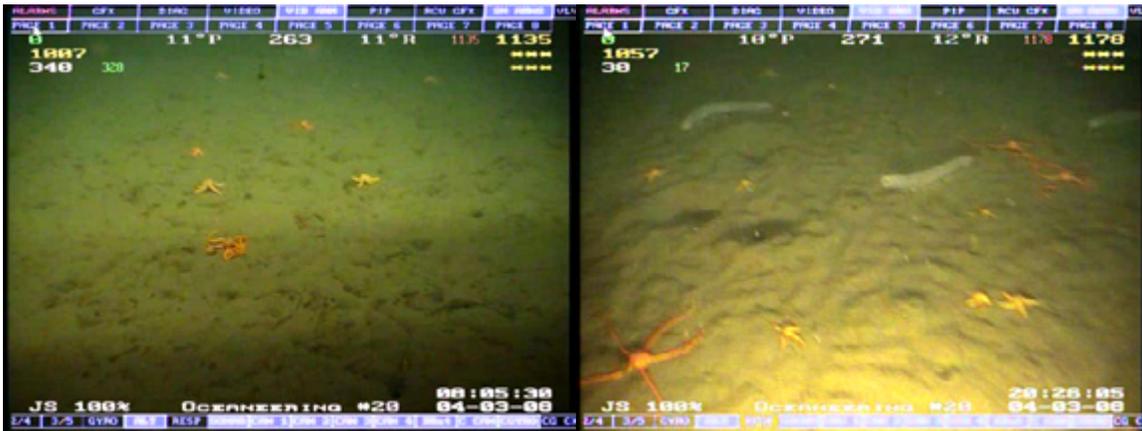
### **2.4.1 Affected Environment**

The proposed ExxonMobil C1 cable repair project is located offshore of the Gaviota coast in approximately 1,100 and 1,300 ft (335 and 396 m) of water between Platforms Heritage and Harmony. The project location is on the upper slope (meso-benthic) of the continental shelf and is typical of the habitat found in similar water depths of southern California (Fauchald and Jones, 1979; MMS, 2001; SBC and MMS, 2003), which are described as uniform silty sand or sandy silt with occasional rocky outcrops (Greene et al., 2004; Allen et al., 2007). Regional bottom trawl surveys (Thompson et al., 1993; Allen et al., 2007) found the upper slope to be a distinct life zone connecting the shelf and deeper (1,640-3,281 ft (500-1000 m)) bathy-benthic slope communities. The seafloor surrounding the repair project has been surveyed using multibeam sonar in 1998 (Monterey Bay Aquarium Research Institute, 1998); Remotely Operated Vehicles (ROV) in 2001, 2003, and 2008 (de Wit, 2001; 2003; ExxonMobil, 2008b); and sidescan sonar in 1992 and 2001 (ExxonMobil 1993; 2002).

The soft bottom macrobiota in the area is dominated by sea pens, sea stars, urchins, shrimp, and sea cucumbers (Chambers, 1983), whereas polychaete worms, clams, and amphipods characterize the infauna (SAI, 1984a). Echinoderms dominated all other phyla sighted in the 2008 ROV survey, which agrees with the 2003 regional survey finding that 84 percent of the biomass was composed of four urchin species (Echinoidea; fragile sea-urchin, northern heart urchin, California heart urchin, Pacific heart urchin). Sea cucumbers (Holothuroidea) and sea stars (Asteroidea and Ophiuroidea) were also common echinoderms associated with soft bottom in the 2008 ROV survey (Figure 2-3). Fishes seen in the ROV survey were representative of outer shelf/ upper slope assemblages (Allen et al., 2007).

Hard bottom habitats are uncommon in deep waters of southern California (SAIC, 1985). These habitats can support biologically diverse communities (Diener and Lissner, 1995) and are sensitive to impacts because of the slow recovery rates of some invertebrate species from oil and gas operations (Lissner et al. 1991; Battelle, 1991). Previous sidescan surveys of the area revealed several potential hard bottom features. The 2008 ROV survey (ExxonMobil, 2008b) was an extensive visual and sonar survey along a 4,500 ft (1,372 m) segment of the 6 in (15 cm) C1 cable that extended roughly 1,000 ft (305 m) north and south of the cable. Six features were identified in the ROV survey. Two features were debris, a metal pipe and metal cage of unknown origin. Two features were ridges of exposed consolidated substrate 5 and 3 ft (1.5 and 0.9 m) high, respectively. The ridges were populated with basket stars and urchins common to the survey although no obligate hard bottom species were seen. The two remaining features were hard substrate and were at least 1 ft (0.3 m) high and approximately 187 and 950 ft<sup>2</sup> (17.4 and

88.3 m<sup>2</sup>), respectively. Animals associated with these rocky outcrops include invertebrate species common to the region but not typically found in the soft bottom areas such as anemones and sponges. In addition, rocky areas provided shelter/habitat for some species of rockfish (*Sebastes* spp.) and crab (e.g., Galatheididae). Only one of the six features identified in the 2008 survey is close enough to proposed project activities to be potentially affected. This one feature is also a potential cultural resource but ExxonMobil has established an exclusion zone around it (see Section 2.6, Cultural Resources, for additional information).



**Figure 2-3.** Representative snapshots of seafloor near C1 cable from Remotely Operated Vehicle (ROV) survey, April 2008.

ROV surveys of the area have shown that only soft bottom occurs near the cable repair area. The ROV surveys also showed that power cables in the vicinity of the platforms are partially buried with approximately one-half to one-third of the cable diameter exposed (de Wit, 2001). Typically, the up-current side is partially or completely buried with the down-current side more exposed. Limited burial on portions of the 6 in (15 cm) C1 cable were observed from the 2008 ROV survey. Exposed portions were sparsely fouled with anemones and bryozoans. Rockfish, flatfish, and sea cucumbers were often seen resting next to the cable.

#### 2.4.2 Impact Analysis

**Significance Criteria.** The impact analysis for the marine biological resources in this EA adopts significance criteria developed for all biological resources, including threatened and endangered species. An impact from the proposed project is significant if it is likely to cause any of the following:

- A measurable change in population abundance and/or species composition beyond normal variability. For threatened and endangered species, this includes any change in population that is likely to hinder the recovery of a species.
- Displacement of a major part of the population from either feeding or breeding areas, or from migration routes for a biologically important length of time.
- A measurable loss or irreversible modification of habitat in several localized areas or in 10 percent of the habitat in the affected area. An example of a significant change in habitat would be one that prevents the re-establishment of pre-disturbance biological communities over a significant portion of their range.
- Disturbance resulting in biologically important effects on behavior patterns.

An example of a significant change in habitat would be one that prevents the re-establishment of pre-disturbance biological communities over a significant portion of their range. Loss or irreversible modification of habitat protected by Federal, State or local laws or regulations is considered significant.

**Impacting Factors.** The impacting factors associated with the proposed project that could affect the benthic environment are increased turbidity within several hundred feet of the cable repair area and direct physical disturbance to seafloor habitats including both soft and hard bottom. Disturbance of the seafloor includes harm to animals near or on the cable when the cable is cut, lifted from, or returned to the seafloor as well as the remote possibility of laying the spliced section of the cable on or near a hard bottom feature. As described in Section 1.4.2, the cable will be lifted roughly 1,000 ft (305 m) and returned to the bottom three times to complete the repair. The final return to the bottom will include an additional 2,300 ft (701 m) of cable laid in a loop to the south of the main cable path. Cable manipulations on the seafloor and lifting the cable to and from the surface will disturb roughly 5,000 ft (1,524 m) of soft bottom seafloor adjacent to the cable. The cable section to be removed and cleaned is estimated to be 200 to 400 ft (60 to 120 m).

**Physical Disturbance.** Direct disturbance to animals on the seafloor would occur in soft bottom habitat in the immediate area of the cable splice. No physical impacts would occur to hard bottom features because of their distance from the repair area. ExxonMobil has excluded an area around the closest hard bottom feature from any repair activities. Animals most likely to be crushed due to cable and ROV manipulations are a few slowly moving creatures, such as urchins and sea cucumbers, within a few feet of the cable. These animals have been found to be very common, with a broad range throughout southern California. Movement of roughly 5,000 ft (1,524 m) of cable may cause animals resting on or next to the cable to be moved. The ROV video shows this process to be gentle and likely occurs naturally from bottom currents. Animals killed or disturbed from the 200 to 400 ft (60 to 120 m) of cable removed would be minimal because a visual inspection showed that section of cable to be lightly fouled with animals common to the region. The only long-term change to the seafloor will be the addition of 2,300 ft (701 m) of cable. The splice planned to repair the failed C1 cable will have a diameter and appearance essentially the same as the original cable and not require a splice box. Therefore, localized and negligible impacts to the soft bottom habitat would result from the proposed project.

**Turbidity.** Cable manipulations on the seafloor would also increase turbidity in the water column, which could cause physical irritation, clog feeding structures, and subject benthic biota to an increase in sediment deposition. Although some turbidity would occur from cable manipulations and ROV operations, the resultant plumes (Section 2.3.1) would be intermittent. Ocean currents should allow a plume to spread down-current from the contact point followed by a gradual settling of the particulate matter to the seafloor. Studies of resuspended sediments, although conducted for greater concentrations (1,073 yd<sup>3</sup> (820 m<sup>3</sup>)) than this project, showed that clay silt at low current velocities took 56 hrs to sink (SAIC and MEC, 1995a). Therefore for this project, it is likely that ambient conditions would be quickly attained within several hundred feet of where the disturbance occurred on the seafloor. Natural turbidity averages 0.4 mg/L near the seafloor in the project area (MMS, 2001) with periods of highest turbidity corresponding to periods of high primary production and river runoff from storm events (SAIC and MEC, 1995b). Hard bottom communities can be more sensitive to turbidity than soft bottom communities but

the ROV surveys show that species present on features in the project area are subjected to frequent and large natural fluxes in turbidity and are well adapted to this environment (Lissner et al., 1987; Diener and Lissner, 1995). Considering the projected levels of activity, the effects of turbidity on bottom assemblages is expected to be highly-localized, temporary, and cause negligible impacts.

**Mitigation proposed as part of the project.** ExxonMobil submitted the following mitigation measures as a part of the C1 cable repair project to further reduce and minimize impacts to benthic resources.

- Comp-4: DP Vessel for Cable Repair – Repair vessel to have DP capabilities to maintain position without anchors.
- Comp-14: ROV Monitor and Video Operation – ExxonMobil to require contractors to utilize an ROV to monitor and videotape selected portions of the offshore repair activities. If the ROV observes a rocky outcrop, the ROV to assist the DP vessel in adjusting the cable laydown to avoid a feature, whenever it is feasible to do so. A copy of videotaped repair activities to be provided to MMS in Post Repair Report.

### 2.4.3 Conclusion

Due to the small area of the benthos affected and the ubiquitous nature of both the soft bottom habitat and the benthic species in the project area, the proposed project activities would cause insignificant impacts over a highly localized area on soft bottom habitats. Localized, temporary turbid conditions and the exclusion of operations around the nearest hard bottom area will cause insignificant impacts to hard bottom habitats.

### 2.4.4 Cumulative Analysis

Section 1.6 describes the projects considered in the cumulative analysis for the proposed C1 cable repair project. Possible sources of cumulative impacts to benthic resources include ongoing Federal offshore energy projects and non-energy projects and activities.

**Federal Offshore Energy Projects.** Of the oil and gas platforms located near the project area, only Platform Harmony may be conducting drilling operations while the proposed project is underway. Also, routine operations at only the three platforms in the SYU, Hondo, Harmony, and Heritage, could overlap temporally and spatially with the proposed project. The proposed C1 cable repair project does not significantly add any cumulative impacts to benthic resources because of the small amount of sediment that would be raised from the seafloor during the manipulation of the cable and the short-term nature of the project.

**Non-Energy Projects and Activities.** Activities that overlap project impacts to benthic resources include commercial fishing and turbidity from storms.

Commercial fishing. Commercial fishing, which may include trawling activities and trapping, impact the benthic environment by altering the habitat and removing species. Commercial fishing will not be allowed in the C1 cable repair area for the duration of the repair and therefore, potential impacts to benthos are lessened within the area of the repair activities. Disturbances to the seafloor during the repair are negligible and represent an insignificant increase of cumulative impacts to benthic resources.

Turbidity. The soft bottom habitats in the project area are subjected to periods of greater turbidity during storm conditions, which resuspend bottom sediments and introduce sediment from coastal

runoff. These existing turbidity sources are of a greater duration and intensity than the turbidity that would arise from manipulation of the cable during the repair process. Increases in turbidity from the cable C1 project represent an insignificant incremental increase of cumulative impacts to benthic resources

**Cumulative Conclusion.** Activities from the proposed C1 cable repair project represent an insignificant incremental increase of cumulative impacts to benthic resources. Sources of cumulative impacts to the benthos from the C1 cable repair include increased turbidity and bottom disturbance from manipulating the cable. The largest sources of turbidity in the project area would come from drilling operations on Platform Harmony and during storms, neither of which, when combined with the temporary and short-term increase in turbidity from the project, will result in a significant cumulative impact to benthic resources.

#### **2.4.5 Overall Conclusions**

The potential impacts to benthic organisms and their habitat from the proposed project are considered to be insignificant based on the significance criteria utilized in this analysis. This is due to the intermittent and very local benthic disturbances from cable and ROV manipulations and the negligible and temporary increase in turbidity. This project is not expected to add significantly to cumulative impacts on the benthic environment in the Santa Barbara Channel. Overall, the potential impacts to benthic resources resulting from the C1 cable repair project are considered to be insignificant and mitigated to the maximum extent feasible.

### **2.5 Commercial Fishing**

#### **2.5.1 Affected Environment**

The proposed ExxonMobil C1 cable repair project is located offshore of the Gaviota coast in approximately 1,100 to 1,200 ft (333 m to 367 m) of water. Marine habitat in the cable repair area is typical of the habitat found in similar water depths of southern California (Fauchald and Jones, 1979; MMS, 2001), which are described as uniform silty sand or sandy silt with occasional rocky outcrops (Greene et al., 2004; Allen et al., 2007).

Due to the influence of two distinct marine biogeographic provinces, the Santa Barbara Channel region contains a diverse assemblage of finfish, shellfish, and other invertebrates, many of which are commercially exploited (CDFG, 2002; 2003; 2004; 2005a; 2006). Commercial fishing activities in the central Santa Barbara Channel have been described in previous studies and environmental documents (Fusaro et al., 1986; Kronman, 1995; MMS, 1995; 2001; SBC and MMS, 2003; Culver et al., 2007). Gear used to harvest these species includes trawl, hook-and-line, longline, handline, stick gear, troll, hand rake, purse seine, drum seine, trap, and drift and set gill nets. However, limited fishing activities presently occur or historically occurred in the repair activity area. These fishing activities consist of traps (sablefish), drift netting, purse seining, and trawling. Additionally, the water depths of the proposed repair activities are deeper than the current range of depths where fishing generally occurs.

In the last few decades, commercial fisheries in California have undergone dramatic changes. The number of commercial fishing licenses has declined nearly 70 percent, from approximately 20,400 in 1980 to 6,300 in 2004. In the same time frame, the number of registered commercial fishing vessels has declined by 64 percent, from approximately 9,200 to 3,300 (CDFG, 2005b). The decline in commercial fishing activity results from a number of factors including, (1) the reduction of fishing effort due to increasingly restrictive fishery management regulations and (2)

bycatch of sensitive species (CDFG, 2005b). It is reasonable to assume that these State-wide trends in commercial fishing reflect trends in the project area as well. This declining trend in active fishing permits combined with the diminishing types of local fishing activities indicates that the project area is only lightly used by commercial fishers.

### **2.5.2 Impact Assessment**

**Significance Criteria.** An impact from the proposed project is significant if it is likely to cause any of the following:

- Any activity or combination of activities that causes a 10 percent or greater loss of available regional fishing grounds for all or most of a fishing season.
- Any activity or combination of activities that affects, through preclusion from fishing grounds, 10 percent or more of the fishermen using the project area for all or most of a fishing season.

**Impacting Factors.** The major commercial fisheries impacting factors associated with the proposed cable repair project are the socioeconomic impacts on fishers associated with (a) preclusion from fishing grounds (space-use conflicts), (b) damage and loss of fishing gear, and (c) lost fishing time due to (a) and/or (b).

The impacting factors associated with this project that may affect commercial fishing include a space-use conflict that precludes fishing from the area during the project, and the repaired cable or lost debris that could damage or entangle fishing gear when fishing resumes after the project is completed.

**Space-use conflicts.** As described in Section 1.4.2, one vessel would be involved in the project that may preclude fishing activities for an estimated 25 days. This vessel will use DP to maintain station, and thus no anchoring is expected during the cable repair activities, making the preclusion footprint very small compared to the available fishing grounds in the region. Because the repair vessel will be slow-moving or stationary, fishers will be able to avoid any potential operational conflicts. Given the significance criteria, space-use conflicts associated with the project are expected to be negligible.

**Damage to fishing gear from the repaired cable or lost debris.** It is not anticipated that the proposed repair activities will result in any long-term impacts associated with fishing hazards. During repair activities, equipment or other large items (“debris”) may be lost overboard. Lost debris may impact future commercial fishing by damaging or entangling gear. The only fishing activity that could potentially be impacted by sub-sea hazards would be trawling, which currently is severely restricted in the project area, and is not likely to increase given current the regulatory environment. Purse seining and drift gill netting activities do not typically have contact with the seafloor in deeper water and thus would not be expected to be impacted by seafloor hazards. Anchoring will be eliminated through the use of a DP vessel, and thus no scarring of the seafloor is anticipated. The cable is small, round, and smooth so that the potential for snagging of fishing gear is minimal. The splices between the two parts of the cable will be of approximately the same diameter as the original cable and smooth, which will eliminate the potential for snagging bottom-contact fishing gear. A previous comprehensive search of all JOFLO claims records showed no indication of any interference from power cables on commercial fishing (SBC and MMS, 2003). In addition, the cable will have a tendency to sink into the soft seafloor due to its small size and relatively heavy weight. Due to the lack of fishing activity, lack of anchoring

anticipated for the project, and the smoothness and small size of the cable, significant impacts to fishing are not anticipated.

**Mitigation proposed as part of the project.** ExxonMobil submitted the following mitigation measure as a part of the C1 cable repair project to further reduce and minimize impacts to commercial fishing:

- Require repair vessel to utilize approved traffic corridors established by the JOFLO during vessel transits to and from local ports, when feasible.
- If span supports are installed in the fan channel, conduct an ROV survey of the cable to insure the supports are installed correctly.
- Provide maps, free of charge, indicating the exact location of the laid repaired cable to the JOFLO within 90 days of work completion for use by interested fishermen.
- Comp-4: DP Vessel for Cable Repair – Repair vessel to have DP capabilities to maintain position without anchors.
- Comp-5: JOFLO Project Status – ExxonMobil to submit a daily report of repair activity status to MMS, SBCAPCD, JOFLO, and other interested agencies during offshore repair activities.
- Comp-6: Notice to Mariners – ExxonMobil to file a timely advisory with the local U.S. Coast Guard District office for publication in the Local Notice to Mariners and to notify fishermen (and JOFLO) at least 15 days prior to the commencement of offshore activities.
- Comp-7: Fishing Impacts and Conflicts – ExxonMobil to continue to consult with JOFLO and commercial fishermen, as appropriate, during the planning stages and repair activities to identify and mitigate any unanticipated impacts regarding the power cable repair. If JOFLO determines that conflicts with commercial fishing operations in the SYU area develop during this project, ExxonMobil to make all reasonable efforts to satisfactorily resolve any issues with affected fishermen. Possible resolutions may include physical modification of identified problem areas on the cable repair, the establishment of temporary preclusion zones, or off-site out-of-kind measures.
- Comp-8: Fishing Design and Installation – ExxonMobil to review design concepts and installation procedures with JOFLO prior to start of offshore repair activities to minimize impacts to commercial fishing to the maximum extent possible.
- Comp-9: Recovery of Fan Channel Supports and Subsea Equipment – ExxonMobil to require the repair contractor to recover any fan channel supports that escape, if used, and repair activity equipment or support items from seafloor prior to demobilization from site.
- Comp-10: Recover Items Lost Overboard – ExxonMobil to require repair contractors, to the extent reasonable and feasible, to recover items that could be a hazard which are lost overboard during activities associated with the cable repair. Logs to be maintained on the cable repair and any support vessels that identify the date, time, location, depth, and description of all items lost overboard. Vessel operator to minimize potential for items to be lost overboard by securing loose items, where feasible. Vessel operator to place name of vessel on all items on deck that have the potential to be lost overboard.
- Comp-11: Survey and Plans to NOAA – ExxonMobil to provide final as-built survey maps of repaired C1 Cable location to NOAA, as requested, in the appropriate format.

- Comp-19: Repair Notification – ExxonMobil to provide notice to MMS, SBCAPCD, JOFLO, and other interested agencies at least 15 days before the start of repair activities and within 72 hours of the completion of all repair activities.
- Train-1: WSPA Fisheries and Wildlife Training – ExxonMobil to show video to provide awareness training to all personnel participating in repair activities concerning importance of fisheries and types of fishing vessels that could be encountered in area.
  - All personnel on repair activity to attend training and sign log indicating completion of training;
  - Training to be conducted prior to repair vessel arriving at repair site; and
  - Any personnel arriving after initial training completed to be provided training by ExxonMobil representative onboard vessel.

### 2.5.3 Conclusion

Considering the very small preclusion area that cannot be fished, the short duration of the project, and the requirements for reducing marine debris, the impact on commercial fishing from this project is expected to be insignificant.

### 2.5.4 Cumulative Analysis

Section 1.6 describes the projects and activities considered in the cumulative analysis for the proposed ExxonMobil C1 cable repair project. Possible sources of cumulative impacts specific to commercial fishing are those that cause space-use and preclusion conflicts and include on-going and proposed oil and gas activities and marine protected area (MPA) closures (Section 1.6). Potential cumulative impacts are discussed below.

**Federal Offshore Energy Projects.** The cumulative effects of these structures and development activities can be found in numerous reports and environmental documents (MMS, 1992; 1995; 1996; 2001). The proposed C1 cable repair project does not significantly add to the currently existing preclusion impacts and space-use conflicts to commercial fisheries, including existing Federal platforms, because the duration of the project is very brief, because the project area is only lightly fished, and because the preclusion area is very small compared to the available fishing grounds.

Culver et al. (2007) summarized other factors and activities identified by 86 commercial fishers in the Santa Barbara Channel area that affect their industry. Aside from MPA closures, top-ranking concerns included operating costs, competition from foreign and domestic markets, and marine mammal interactions. Oil and gas industry activities were not listed as factors likely to impact the future of local commercial fisheries and foreseeable activities from the proposed repair activities will not increase the duration, intensity, or scope of impacts from these other activities.

#### **Non-Energy Projects and Activities.**

**MPA closures.** A number of MPA closures exist in or nearby the project area which limit fishing activity. Due to the light fishing activity and current fishing regulations in the project area, the proposed C1 cable repair project will not add significant preclusion impacts to local commercial fishing activities.

**Cumulative Conclusion.** The proposed C1 cable repair project does not significantly add to the cumulative preclusion impacts generated by oil and gas projects and MPA closures to

commercial fisheries due to the low levels of fishing activity in the project area, the short duration of the repair activities, and because the preclusion area is very small compared to the available fishing grounds.

### **2.5.5 Overall Conclusions**

The potential impacts to commercial fishing from the proposed project are considered to be insignificant based on the significance criteria utilized in this analysis. This is because no space-use conflicts or fishing gear damage from sub-sea hazards are expected. No significant incremental increase to cumulative impacts are expected. Overall, the potential impacts to commercial fishing resulting from the proposed project are considered to be insignificant and mitigated to the maximum extent feasible.

## **2.6 Cultural Resources**

### **2.6.1 Affected Environment**

Cultural resources include any prehistoric or historic sites, buildings, districts, structures, traditional use areas or objects considered to be important to a culture, subculture or community for scientific, traditional, religious or other reasons. Cultural resources encompass three categories: archaeological resources (both historic and prehistoric), architectural resources, and traditional cultural resources.

The MMS, under various Federal laws and regulations, ensures that regulated OCS activities do not adversely affect significant cultural resources. The National Historic Preservation Act of 1966, Section 106, requires Federal agencies to identify historic properties that their actions could affect, determine whether or not there could be a harmful or adverse affect, and if so, to try to avoid or reduce the effect. The Archaeological and Historic Preservation Act of 1974 requires Federal agencies to notify the Secretary of the Interior when they find that any federally permitted activity or program may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data.

The Santa Barbara Channel was rich in trade both within the native populations and with Europeans. The Pacific coast was explored by the Spanish, Russians, and others in their quest to develop trade, establish missions, and start settlements. Native Americans (Chumash) in the Santa Barbara Channel routinely traveled to the Channel Islands and along the coast to trade with other Chumash and other tribes. However, the rocky coast, prominent points, and the especially strong currents and winds off Point Conception made travel difficult and has given rise to many shipwrecks along the central California coast. (ADL, 1984; SAI, 1984a)

The shoreline and coastal waters adjacent to the project area was inhabited by Chumash Indians in prehistoric and historic times. The adjacent shoreline is rich with evidence of this culture. California missions and other historic buildings also exist on the adjacent shoreline.

**Survey history and findings.** Because of the rich heritage and the possibility of finding shipwrecks or other cultural artifacts offshore in this area, MMS requires operators to survey the area of operations prior to submitting plans that propose activities on the seafloor. These surveys provide a thorough review of the potential resources in proximity to the project. The survey data are analyzed by a qualified marine archeologist. In this case, the review of the original SYU Platform and Pipeline survey identified 4 anomalies of potential cultural origin. (Dames and Moore, 1982). One of these identified anomalies lies within the project area proposed for the

current cable repair project. This anomaly is in deep water over 1,000 ft (330 m) but is comparatively close to shore (about 8 miles (13 km)).

An additional survey was run in 2001 to examine the area proposed for the first cable repair project (ExxonMobil, 2002). The scope of that survey was very narrow and only looked at the cable corridor. In 2008 an ROV survey was also done. This survey provided a visual examination of the anomaly within the cable repair area of operation (ExxonMobil, 2008c).

**Consultation.** The State Historic Preservation Officer (SHPO) provided a formal consultation of the original SYU 1993 construction, consulting on the four originally identified anomalies. The SHPO was also informally consulted on the 2003 cable repair project for the same four anomalies. The SHPO has been informally consulted on this cable repair project, including the mitigation proposed as part of the project, via e-mail and phone (Section 4.0). The current informal consultation covers the one anomaly that could be affected by the proposed project and which was included in both the formal consultation and in the first cable repair project. At the time of the finalization of this EA, the SHPO has not indicated the need for additional information or any further action on the part of the applicant or MMS.

Further, information from the SHPO consultation process was forwarded to the USACE on July 30, 2008. The USACE used this information in the development of their Rivers and Harbors Act Section 10 authorization (Sections 1.3 and 4.0).

## **2.6.2 Impact Analysis**

**Significance criteria.** The impact to a cultural resource is significant when:

- The integrity of a significant or potentially significant site or isolated artifact is eliminated or reduced.

**Impacting Factors.** The only impacting factor associated with this project that could have an effect on an offshore cultural resource is the potential anchoring of vessels in an emergency if the vessel loses power and drops the anchor on or drags an anchor over the resource. The primary cable repair operation assumes use of a DP vessel which will not have direct impacts on the seafloor. The DP vessel has two redundant engines so the likelihood of power loss, and the resulting need to resort to anchors, is extremely low.

The anomaly identified as potentially cultural is not located in the direct proximity of the cable corridor. Since an exact location is known, however, efforts to completely avoid the resource are expected to be successful. MMS inspectors, present during the construction activity in the field, will also provide oversight.

It is unlikely that previously unidentified cultural resources would be located, however, the possibility exists. If it happened during the operation, the stipulation on the lease and the mitigations proposed as part of the of the project (see below) require that Exxon would immediately notify MMS and avoid the site, or halt the operation and perform an investigation, according to MMS instructions, to assess whether the site is significant. If the site is significant, Exxon would protect the resource according to MMS instructions. Neither previously identified nor currently unidentified potential cultural resources are expected to be significantly impacted by activities associated with this project.

**Mitigation proposed as part of the project.** ExxonMobil submitted the following mitigation measure as a part of the C1 cable repair project to further reduce and minimize impacts to cultural resources:

- Provide an exclusion zone which is a square 800 ft (244 m) on a side. This commitment was made in consultation with the USACE and MMS (Section 4).
- Comp-12: Cultural Site Avoidance with Vessel Captain – ExxonMobil will meet with the vessel captain prior to the start of offshore repair activities to review avoidance procedures for the potential cultural resource and to review locations where there are potential cultural sites that must be avoided. Vessel operator will insert cultural site coordinates in vessel navigation system.
- Plan-3: Cultural Site Avoidance Plan – ExxonMobil will submit to MMS, at least 30 days prior to start of offshore repair activities, a plan that details the procedures to be followed to avoid cultural resources in the repair activity area.
- Train-3: Cultural Site Avoidance Offshore Training – ExxonMobil will provide cultural site avoidance awareness training to all personnel participating in repair activities concerning the requirements to avoid disturbing cultural resources and what procedure to follow if a previously undetected resource site is discovered. Additional training conditions:
  - 1) All personnel on repair activity to attend training and sign log indicating completion of training;
  - 2) Training to be conducted prior to repair vessel arriving at repair site;
  - 3) Any personnel arriving after initial training completed to be provided training by ExxonMobil representative onboard vessel.

### **2.6.3 Conclusion**

Because a thorough survey of the area of operations has been completed, and the anomaly identified as potentially cultural within this area has been located and will be completely avoided, no impacts to cultural resources are expected.

### **2.6.4 Cumulative Analysis**

The source of cumulative impacts to submerged cultural resources is physical disturbance from non-project related activities. The sources include commercial trawl fishing, anchoring, and unauthorized removal of artifacts by recreational scuba divers. Because of the proximity of this cable operation to the existing facility, the depth of water, and the inherent limited other uses of the area, few cumulative activities could potentially affect the resource. The proposed project completely avoids impact to the resource, and therefore does not contribute to cumulative impacts.

**Cumulative Conclusions.** The proposed project will not impact cultural resources and therefore does not incrementally contribute to cumulative impacts on the resource.

### **2.6.5 Overall Conclusions**

The potential impacts to cultural resources from the proposed project are considered to be insignificant based on the significance criteria utilized in this analysis. This is because of the low likelihood that the DP vessel will suffer a power loss in its redundant engines and resort to an emergency use of anchors. Since no other offshore operations are expected to take place during the project operations in this area, and given that there are no impacts expected from project

activities on cultural resources, the project does not contribute to cumulative impacts on cultural resources. Overall, the potential impacts to cultural resources resulting from the C1 cable repair project are considered to be insignificant and mitigated to the maximum extent feasible.

## **2.7 Environmental Justice**

### **2.7.1 Affected Environment**

On February 11, 1994, President Clinton issued Executive Order 13084 to address questions of equity in the environmental and health conditions of impoverished communities. In response to this Executive Order an Environmental Justice analysis of the community affected by a Federal action is required.

To determine whether the proposed C1 cable repair project would be likely to result in disproportionately high and adverse human health or environmental effects on low income minority populations, demographic information was obtained from the U.S. Census Bureau on the potential area of effect (the coastal area from which project operations would be staged). The definitions of minority and low-income populations used for the purposes of this Environmental Justice analysis are those of the Council of Environmental Quality, whose definitions are widely used to assess the potential for adverse effects on Environmental Justice in the environmental review process. The potential for adverse effects on minorities occurs when the following criteria are met:

- Where the minority population percentage of the affected area is greater than 50 percent, or,
- Where the minority population percentage of the affected area is meaningfully greater than the minority population percentage of the general area or other appropriate unit of geographic analysis.

The onshore area affected by the proposed C1 cable repair project is the City of Oxnard, which includes Port Hueneme, the primary staging area for the project. In the year 2000, the City of Oxnard was reported to have a minority population of 58.1 percent, which is higher than the State of California minority population of 40.6 percent, and higher than the 24.9 percent for the entire United States. Based on the criteria described above, the proposed project has the potential to impact minority populations and Environmental Justice.

### **2.7.2 Impact Analysis**

**Significance Criteria.** The impact analysis for Environmental Justice in this document adopts significance criteria whereas an impact from the proposed project is significant if it is likely to cause the following:

- Result in disproportionately high adverse environmental effects that would substantially and adversely affect minority/low income populations.

**Impacting Factors.** The impacting factor associated with the C1 cable repair project that could have an effect on Environmental Justice is an increase in traffic from passenger vehicles and trucks. Such an increase could cause minority/low income populations to experience an inequitable amount of traffic.

**Traffic from Passenger Vehicles and Trucks.** The scope of activity generated by the proposed project includes a negligible increase in vehicle and vessel traffic in the City of Oxnard/Port

Hueneme. Based on the scope of the proposed project, it is estimated that there would be fewer than 10 additional passenger vehicle trips generated each day during the estimated 25 days including transit time it would take to complete the project. These trips would be made by project personnel who commute to and from the staging area (Port Hueneme). There would be an estimated 1-2 additional truck trips made to transport the failed power cable to a recycling center in Ventura County, or alternatively to a disposal facility located in Buttonwillow, California (Kern County). Considering this level of activity and increase in traffic, impacts to minority/low income populations are expected to be negligible.

**Mitigation proposed as part of the project.** No mitigations pertaining to Environmental Justice were offered by ExxonMobil.

### **2.7.3 Conclusion**

Considering the limited scope of the project, its short duration, and the negligible increase in vehicle and truck traffic that would occur, the impact on minority/low income populations and Environmental Justice is expected to be insignificant.

### **2.7.4 Cumulative Analysis**

The cumulative impacts of offshore oil and gas operations and other non-oil and gas activities on Environmental Justice in the project area have been addressed in the DEIS for Delineation Drilling Activities in Federal Waters Offshore Santa Barbara County, California (MMS, 2001) and the Final Environmental Impact Statement/Point Mugu Sea Range (US Navy, 2002). As summarized in these documents, the coastal areas (Ventura County, Santa Barbara County, Los Angeles County) surrounding the project area are characterized by ethnically diverse populations. The analyses conducted for these documents demonstrated that no significant cumulative effects on matters of Environmental Justice were expected to result from oil and gas operations, military activities, and other activities (Section 1.6). Given the limited scope and duration of the C1 cable repair project, no significant cumulative impacts are expected.

**Cumulative Conclusion.** Due to the limited scope and duration of the proposed project, no significant cumulative impacts to environmental justice are expected from the C1 cable repair project. The proposed project represents an insignificant incremental increase to the overall cumulative impact for environmental justice.

### **2.7.5 Overall Conclusions**

The potential impacts to Environmental Justice from the proposed project are considered to be insignificant based on the significance criteria utilized in this analysis. This is due to the low increase in passenger and truck traffic which may result from the proposed project. No cumulative impacts are expected. Overall, the potential impacts to Environmental Justice resulting from the proposed C1 cable repair project are considered to be insignificant.

### **3.0 Alternatives to the Proposed Project**

#### **3.1 No Project Alternative**

Under this alternative, ExxonMobil would not replace the failed power cable and would continue to rely on the remaining Cable E to service Platform Heritage. None of the impacts expected to result from cable-repair activities associated with the proposed action would occur. The purpose and need for the proposed action would not be achieved.

The use of power cables to energize offshore platforms is allowed by Federal, State, and County governments and has been the preferred alternative for several facilities on the Pacific OCS in order to minimize impacts to air quality. Further, the redundancy from both the C1 Cable and the E cable that would be in-place if Cable C1 was repaired would be restored. This is critical to continued operations at Platform Heritage. If Cable C1 is not repaired and Cable E fails, Platform Heritage would be without a source of main power and would be unable to produce oil and natural gas resources.

#### 4.0 Consultation, Coordination, and Communication

This section describes the consultation and coordination process conducted by the MMS in the development of this EA as well as key points of communication with other agencies and between ExxonMobil and other agencies. The process was designed to disseminate and share information among interested parties, promote dialogue and communication among those parties, and facilitate interagency planning and coordination.

Three types of consultation, coordination, and communication were undertaken for this EA:

1. Informal consultations with FWS and NMFS related to ESA, MMPA, and EFH.
2. Coordination and communication with other Federal and State agencies; and
3. Key points of the three-way communication among MMS, other agencies, and ExxonMobil.

**Informal consultations with FWS and NMFS.** Informal consultations on Endangered and Protected Species per ESA and MMPA, respectively, were conducted because of the short length of time needed for the project (an estimated 25 days including transit time) and because the repair vessel will remain essentially stationary near Platform Heritage, using dynamic positioning. In addition, an informal EFH assessment and review was conducted per the Magnuson-Stevens Fishery Conservation and Management Act. E-mails cited below are contained in Appendix B.

FWS. MMS made a courtesy phone call to FWS on June 12, 2008 to advise them of the proposed project. In a June 17, 2008 e-mail, MMS asked FWS for concurrence with MMS's conclusion that the proposed project would have no effect on protected species under the jurisdiction of the FWS. In a June 19, 2008 response e-mail, FWS concurred with MMS's conclusion.

NMFS. Following up on a June 10, 2008 phone call, MMS, in a June 17, 2008 e-mail, briefly described the proposed project and asked NMFS to concur with MMS's conclusion that the proposed ExxonMobil power cable repair would have no effect on marine mammals or other protected species. In a June 18, 2008 response e-mail, NMFS concurred with MMS's conclusion.

Also, in a June 24, 2008 phone call and an e-mail, MMS asked NMFS to concur with MMS's conclusion that the proposed project would have temporary and very minimal effects on EFH. In a June 25, 2008 response e-mail, NMFS concurred with MMS's conclusion stating, "NMFS believes the project would adversely affect EFH via disturbances to the benthos and increased turbidity in the immediate vicinity of the cable. However, NMFS concurs with your determination that the impacts are temporary and minimal and that no additional EFH conservation recommendations are necessary to avoid, minimize, or otherwise offset the impacts to EFH."

**Coordination and communication with Federal, State, and local agencies.** The following agencies provided permits to ExxonMobil. The permitting processes involved coordination and communication with MMS.

Army Corps of Engineers (USACE). The MMS provided the USACE with information on our informal consultations with NMFS, FWS, and SHPO so that the USACE could issue a Rivers and Harbors Act Section 10 authorization (Section 1.3). In a July 8, 2008 e-mail to the USACE, MMS acknowledged coordination with FWS and NMFS (see above) and those agencies' conclusion of no effects. In addition, in a July 30, 2008 e-mail, MMS coordinated with the USACE regarding the SHPO informal consultation (see below). This e-mail described MMS's

conclusion that the cultural resource was outside the envelope of operations, as defined by ExxonMobil, the location was known and was surrounded by an 800 foot buffer zone, and, as a result, the cultural resource would be avoided. The USACE issued the Section 10 authorization on August 11, 2008 (see Appendix B for a copy of the Authorization).

State Historic Preservation Office (SHPO). By phone on July 16, 2008 and in a July 24, 2008 e-mail, MMS notified the Project Review Unit Supervisor for SHPO, summarized the project and indicated that the potential cultural resource had been videotaped by ROV (see Appendix B). Further MMS noted that SHPO had provided a formal consultation for the original SYU construction in 1993 and informally consulted on the first cable repair project in 2002. At the time of the finalization of this EA, the SHPO has not indicated the need for additional information or any further action on the part of the applicant or MMS.

Santa Barbara County Air Pollution Control District (SBCAPCD). ExxonMobil provided information to the SBCAPCD which completed a draft permit and a draft Mitigated Negative Declaration (MND) on June 1, 2008. These documents were issued for a 30-day public comment period. The MND was finalized on July 7, 2008 and the permit issued on July 11, 2008. ExxonMobil submitted numerous documents and information to both SBCAPCD and MMS during the process of acquiring the permit. The MND transmittal memo is in Appendix B.

**Key Points of Communication.** Two other key points of communication are summarized below:

- As a preliminary step for the proposed project, ExxonMobil needed to install an acoustic (sonar) buoy near the location of the fault in the C1 cable. In a series of e-mails on March 6, 2008, ExxonMobil inquired of both MMS and JOFLO if there were any restrictions for the placement of the sonar buoy. Both MMS and JOFLO replied in the negative.
- In response to an inquiry by ExxonMobil, the California State Lands Commission (CSLC) sent a letter, dated May 2, 2008, stating that no authorization from the CSLC was needed (Appendix B).

## **5.0 List of Preparers**

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**Appendix A Descriptions of the Repair Vessel and the ROVs**

# MSV OCEAN INTERVENTION III

The *Ocean Intervention III* is a multi-service vessel built in 2005. Commencing in February 2007, the vessel will be on long-term charter to Oceaneering and available for light construction and subsea intervention, maintenance, and repair projects in the U.S. Gulf of Mexico. The *Ocean Intervention III* offers Customers an additional choice for vessel capabilities, and when combined with Oceaneering's ROV systems, project management, installation engineering, and offshore operational expertise represents a first-in-class asset for subsea projects.

## Features:

- 1300 T deck capacity
- 8,200 ft<sup>2</sup> clear deck
- Large moonpool
- Two Oceaneering Work Class ROVs
- Onboard ROV tool suite
- 154 T Crane with Active Heave Compensation
- Accommodations for 75 persons
- DNV AUR (Class 2) DP system
- Helideck

## Typical Projects:

- Subsea Intervention
- Flowline Jumper Installation
- Subsea Tree Installation
- Well Abandonment and Wireline Services
- Subsea Module Installation
- IMR (Inspection, Maintenance, and Repair)



**General Information:**

Classification: DNV DnV + 1A1 - EO - SF - DK (+) - HL (+) - LFL\* DYN POS AUTR - Clean  
 - Comf-V(3) - Helidk.  
 Built: Severnav S.A., Norway (2005)  
 Flag: Norway  
 Port: ÅLESUND

**Dimensions**

Length: 297 ft  
 Beam: 61.6 ft  
 Molded Depth: 24.9 ft  
 Draft: 19.7 ft  
 Open Deck Area: 8,200 ft<sup>2</sup>

**Weights:**

Cargo Deck Load Capacity: 1,300 T  
 Gross Tonnage: 3,996 T  
 Net Tonnage: 1,512 T

**Power and Propulsion**

Generators: 5 x 1900 kW  
 Main Azimuth Thrusters: 2 x 2500 kW  
 Side Thrusters: 2 x 833 kW and 1 x 883 kW

**Capacities**

Fuel Oil: 317,000 gal  
 Lube Oil: 74,000 gal  
 Ballast water: 680,000 gal  
 Fresh Water: 200,000 gal

**Performance**

Speed, Maximum: 17 knots  
 Speed, Cruising: 15 knots

**Accommodations**

- 75 persons

**Main Deck Crane**

- 77 ton single fall / 154 tonne double fall
- 10,000 ft of wire
- Active Heave Compensation

**Working Moonpool**

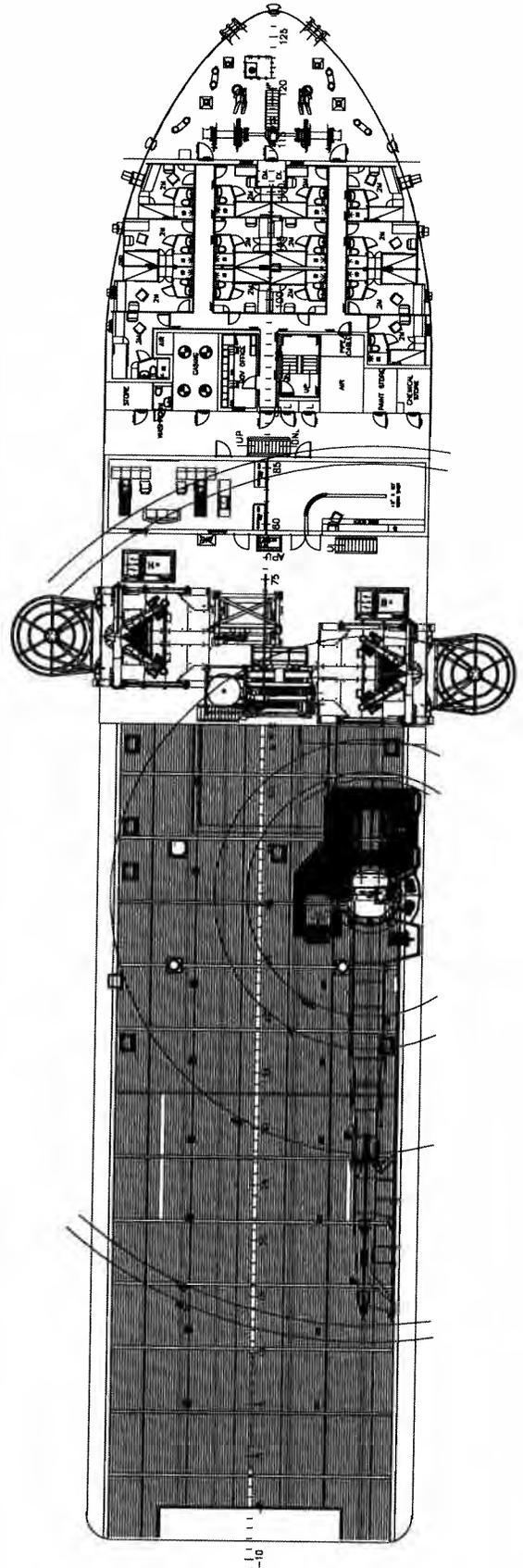
- 23 ft x 23 ft

**ROV**

- 2 x Oceaneering Work Class ROV's
- Heavy weather side launch deployment systems
- Built in ROV control
- Complete ROV tooling Suite

**Built-In Survey**

- Fugro Chance Subsea Positioning



# HYDRA® MAXXIMUM

The Hydra® Maxximum is a cage deployed, dual manipulator 300 hp work class ROV system. Enhanced thruster configuration provides center lift capacity of nearly 3,000 lbs and forward pivoted bollard lift capacity in excess of 1,800 lbs. The system employs a microprocessor-based telemetry system to minimize maintenance, decrease set up time, simplify troubleshooting, and provide more automated control functions. Tooling control is accomplished external to main telemetry in order to maintain both flight control and tooling control at maximum flexibility and efficiency.

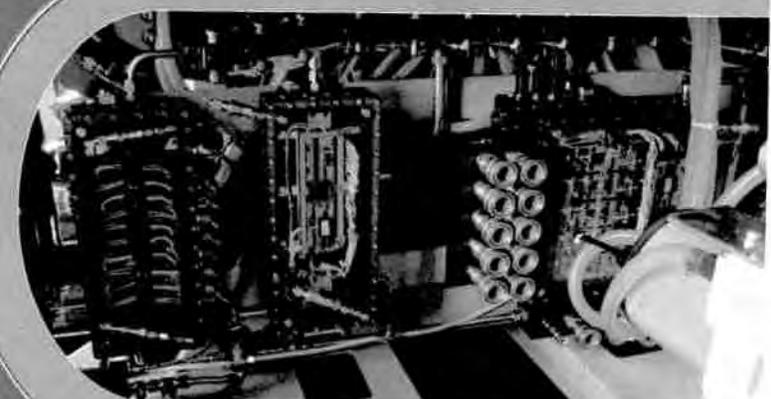
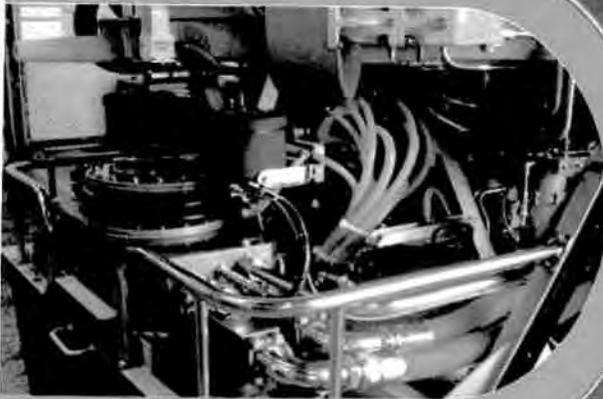
A direct fiber optic link between console and vehicle is the primary transmission path for all video and data signals. The link provides the finest quality video available in deepwater ROV technology as well as tremendous bandwidth for sensors and equipment.

The Maxximum design evolved in response to extensive discussions with Customers who were looking for enhanced performance and work capabilities to support their deepwater drilling and field development programs worldwide.



#### Features:

- Tooling Controlled & Configured from Surface
- Tooling Independent from Main Telemetry
- Proportional Flow & Pressure Control x 5
- Solenoid Control x 19
- Directional Proportional High Flow (52 GPM) x 1
- 8 Video Channels
- 9 Spare Serial Data Channels



**Vehicle**

Length:	10 ft 1 in
Width:	6 ft 1 in
Height:	6 ft 10 ½ in
Weight in air:	10,750 lbs
Frame:	6061 T6 Aluminum
Fittings:	316 Stainless Steel
Depth Rating:	10,000 ft (standard)
Payload:	1,100 lbs
Horsepower:	220 Shp (2 ea 110 Shp Hydraulic Power Units)
Hydraulic Flow Capacity:	90 GPM
Propulsion:	4 x Cornered Vector 4 x Vertical
Thrust:	Fore/Aft/Lateral: > 2,200 lbs Vertical Lift: > 2,900 lbs

**Surface Controlled Spare Tooling Valves:**

- 5 each Directional Proportional Pressure and Flow Valves (10 gpm each)
- 1 each Directional Proportional Flow Valve (up to 52 gpm @ system pressure)
- 19 each Solenoid Operated Rate Valves

Required Power: 480 VAC, 3 phase, 60 Hz  
Lighting: 12 x 250 watts (3,000 watts total)

Cameras: 1 x Digital Video & Stills  
1 x Low Light Level  
1 x Color 18:1 Zoom  
1 x Domed P&T  
1 x Aft  
3 x Additional Camera Ports

**Navigation:**

- Mesotech MS1000 color imaging sonar with 2305 High Resolution Sonar Head
- TSS Meridian Gyro
- Paroscientific Digiquartz depth transducer
- Auto Depth/auto heading/auto altitude with full-time bathymetry display

**Manipulators:**

- 1 x 7 function Schilling Orion Rate Controlled
  - 1 x Shilling Titan III Spatially Correspondent
  - Optional center-mounted Grabber for heavy lifting
- Video & Data
- 16 each RS232 / RS485 Serial Channels (9 Spare)
  - 8 Video Channels

**Standard Tooling Packages**

- 1.25 in diameter Wire rope cutter, 1 in fiber rope cutter
- Ring gasket replacement tool package
- TP03 dredge/jet pump, Rotary grinder/cutter/buffer
- 1 x 2500 psi @ 3.5 gpm Intervention Pump w/2.5 gal reservoir
- High pressure (10,000 psi) intervention package

**Control Consoles**

- Pilot & navigator stations
- Up to 42 in HD Customer Display
- DVD & SVHS Video Recorders
- Direct Accessibility to Video & Data Multiplexers

**Umbilical**

- 10,000 ft - High-strength, Armored Opto-electro-mechanical
- Heavy Weather Deployment & Cursor System
- Dynacon 5521 Traction Winch with w/ Heavy
- Weather Deployment Cursor

**Subsea Deployment Cage**

80 SHP Hydraulic Power Unit  
Tether: 2,000 ft standard  
Digital Gyro Compass  
Camera: 2 x B&W CCD  
Lighting: 2 x 250 watts  
Cage Dual Thruster Package  
Capable of Add-On Tooling Packages

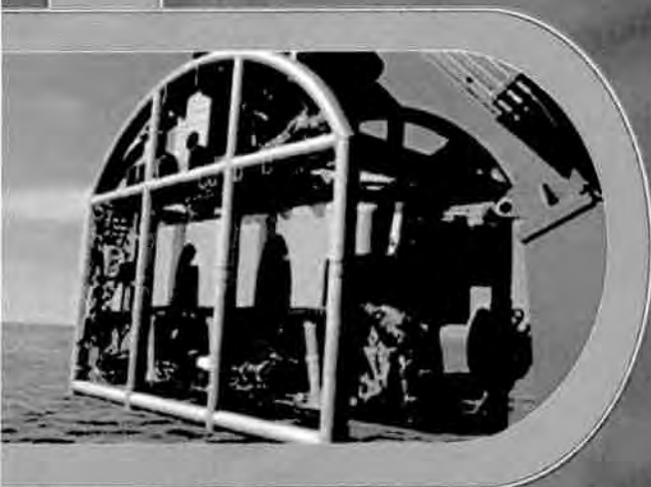
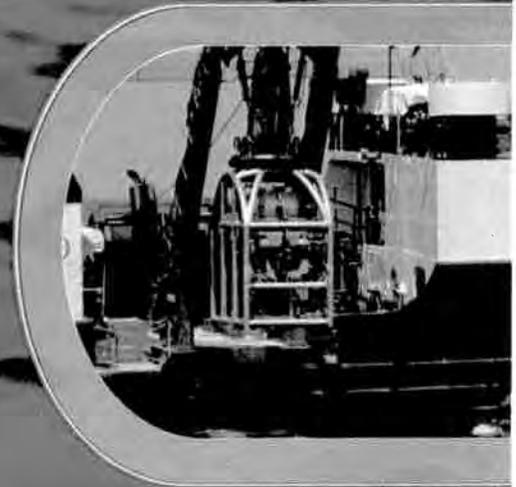
**OCEANEERING®**

# HYDRA® MILLENNIUM PLUS

The Hydra® Millennium Plus is a powerful cage deployed remotely operated vehicle (ROV) that incorporates leading edge technology for improved performance and maintainability. The ROV's design features a dual manipulator, 330 hp work class system with an enhanced thruster configuration that increases lift capacity by more than 50% when compared to the standard Hydra® Millennium ROV work system.

The Plus model maintains the integrity of the standard Hydra® Millennium ROV while offering more serviceability, tooling flexibility and simple survey integration capabilities. These characteristics facilitate the more demanding needs of heavier construction and completion work scopes. As with the original Millennium design, the Plus system employs microprocessor based telemetry to minimize maintenance, decrease set up time, simplify troubleshooting and to provide more automatic control functions.

Fiber optics are used as the primary transmission link for all video and data signals between the vehicle and the surface control console. This allows extremely high quality video technology as well as plug and play installation of sensors and equipment.



[www.oceaneering.com](http://www.oceaneering.com)

**Vehicle**

Length: 11 ft 5½ in  
 Width: 5 ft 4½ in  
 Height: 6 ft  
 Weight in air: 8,800 lbs  
 Frame: 6061 T6 Aluminum  
 Fittings: 316 Stainless Steel  
 Depth Rating: 10,000 ft (standard)  
 Payload: 900 lbs  
 Horsepower: 2 ea 110 hp Hydraulic Power Units (220 hp)  
 Propulsion: 4 x Vectored Horizontal  
 4 x Vertical  
 Thrust: Fore/Aft 1,450 lbs  
 Lateral 1,450 lbs  
 Vertical 2,000 lbs  
 Required Power: 480 VAC, 3 phase, 60 Hz  
 Lighting: 8 x 250 watts  
 Cameras: 1 x Digital Video & Stills Camera  
 1 x Low Level  
 1 x Color Zoom  
 1 x Domed P&R  
 1 x B&W CCD Aft  
 3 x Additional Camera Ports

Navigation:

- Mesotech MS1000 Color Imaging Sonar
- 2305 High Resolution Sonar Head
- TSS Meridian Gyro
- Paroscientific Digiquartz Depth Transducer
- Auto Depth/Auto Heading/Auto Altitude
- Full-Time Bathymetry Display

Manipulators:

- 2 x 7 Function Schilling Conan Rate Controlled
- Optional: Spatially Correspondent (SC) Packages

Video & Data:

- 16 each RS232/RS485 Serial Channels (11 Spare)
- 8 Video Channels

**Standard Tooling Packages**

- 1.25 in Wire Rope Cutter, 1 in Fiber Rope Cutter
- Ring Gasket Replacement Tool Package
- TP03 Dredge/Jet Pump, Rotary Grinder/Cutter/Buffer
- 1 x 2,500 psi @ 3.5 gpm Intervention Pump
- 2.5 gal Intervention Pump Reservoir
- 10,000 psi High Pressure Intervention Package
- Control Consoles
- Pilot & Navigator Stations
- DVD & SVHS Video Recorders
- Direct Accessibility to Video & Data Muxes

**Umbilical**

- 10,000 ft High Strength, Armored, Opto-Electro-Mechanical
- Heavy Weather Deployment & Cursor System
- Dynacon 521XL Winch
- 7021 Docking Head A-Frame

**Subsea Deployment Cage**

110 hp Hydraulic Power Unit  
 Cage Dual Thruster Package  
 Tether: 1,000 ft  
 Camera: 2 x B&W CCD  
 Lighting: 2 x 250 watts  
 Optional: Add-on Tooling Packages  
 Long Excursion Tether



**Appendix B E-mails and Documents Related to Consultation and Coordination**

**National Marine Fisheries Service**  
**RE: Essential Fish Habitat**

**From:** bryant.chesney [mailto:Bryant.Chesney@noaa.gov]  
**Sent:** Wednesday, June 25, 2008 11:31 AM  
**To:** Schroeder, Donna M  
**Cc:** 'Andrea Stassi'  
**Subject:** RE: ExxonMobil SYU cable repair

Hi Donna, NOAA's National Marine Fisheries Service (NMFS) has reviewed the project description and the background materials you have provided on ExxonMobil's proposed cable repair project at the Santa Ynez Unit NMFS believes the project would adversely affect essential fish habitat (EFH) via disturbances to the benthos and increased turbidity in the immediate vicinity of the cable. However, NMFS concurs with your determination that the impacts are temporary and minimal and that no additional EFH conservation recommendations are necessary to avoid, minimize, or otherwise offset the impacts to EFH. Thank you for consulting with NMFS.

Cheers, Bryant

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**From:** Schroeder, Donna M [mailto:Donna.Schroeder@mms.gov]  
**Sent:** Tuesday, June 24, 2008 3:58 PM  
**To:** bryant.chesney  
**Cc:** Bull, Ann S.; Panzer, David; Sanders, Greg  
**Subject:** ExxonMobil SYU cable repair

Hi Bryant, On June 24th, 2008, I talked with you on the telephone about ExxonMobil's proposed repair of an electrical cable that supplies power to their Santa Ynez Unit offshore oil and gas facilities (Platforms Hondo, Harmony, and Heritage). The cable was completely replaced in 2003 due to a fault in the original cable. The new cable has now developed a ground fault approximately 833 m (2,750 ft) from Platform Heritage in water depths approximately 340 m (1,125 ft) deep, and needs to be repaired. ExxonMobil proposes to repair the cable by pulling the cable up to a surface vessel, splicing a new section of cable on board the repair ship, and returning the cable to the bottom. The power cable section that needs to be replaced overlays soft sediments, so the repair process will likely temporarily disturb sediments and cause a short-term increase in local turbidity levels. This repair may take as long as 25 days (includes mobilization of the repair vessel). A more detailed description of the proposed work is attached to this email. As we discussed on the telephone, the repair ship will remain essentially stationary near Platform Heritage, using dynamic positioning (no anchors). Platform Heritage is approximately 13 km (8 mi) off the mainland coast. As a result of my analysis and our discussion, I have come to the conclusion that that the proposed ExxonMobil power cable repair will have temporary and very minimal effects on Essential Fish Habitat, and so I propose no mitigation measures. Please let me know via e-mail if you agree with this conclusion.

Donna Schroeder  
Biologist, Mineral Management Service  
(805) 389-7805

**Fish and Wildlife Service**  
**Re: Endangered Species Analysis**

From: Chris\_Dellith@fws.gov [[mailto:Chris\\_Dellith@fws.gov](mailto:Chris_Dellith@fws.gov)]  
Sent: Thursday, June 19, 2008 8:30 AM  
To: Sanders, Greg  
Cc: Bull, Ann S.; Panzer, David; Schroeder, Donna M  
Subject: Re: ExxonMobil Power Cable Repair

Hi Greg, I agree with your determination that the project described below would not affect any federally listed species for which we are responsible. If you have any questions regarding this matter, please feel free to contact me.  
Thanks, Chris

Chris Dellith  
Team Lead/Senior Fish & Wildlife Biologist U.S. Fish & Wildlife Service Ventura Fish and Wildlife Office  
2493 Portola Road, Suite B  
Ventura, CA 93003  
(805) 644-1766, ext. 227  
[chris\\_dellith@fws.gov](mailto:chris_dellith@fws.gov)

Sanders, Greg [Greg.Sanders@mms.gov](mailto:Greg.Sanders@mms.gov)  
To Dellith, Chris <[Chris\\_Dellith@fws.gov](mailto:Chris_Dellith@fws.gov)>  
06/17/2008  
cc Bull, Ann S. <[Ann.Bull@mms.gov](mailto:Ann.Bull@mms.gov)>, Panzer, David <[David.Panzer@mms.gov](mailto:David.Panzer@mms.gov)>, Schroeder, Donna M [Donna.Schroeder@mms.gov](mailto:Donna.Schroeder@mms.gov)  
Subject ExxonMobil Power Cable Repair

Hi Chris, On June 12th, I talked with you on the telephone about Exxon Mobil's proposed repair of an electrical cable that supplies power to their Santa Ynez Unit offshore oil and gas facilities (Platforms Hondo, Harmony, and Heritage). The cable was completely replaced in 2003 due to a fault in the original cable. The new cable has now developed a ground fault approximately 2,750 feet from Platform Heritage and needs to be repaired.

ExxonMobil proposes to repair the cable by pulling the cable up to a surface vessel, splicing a new section of cable on board the repair ship, and returning the cable to the bottom. This repair may take as long as 25 days (includes mobilization of the repair vessel). A more detailed description of the proposed work is attached. As we discussed on the telephone, the repair ship will remain essentially stationary near Platform Heritage, using dynamic positioning (no anchors).

Platform Heritage is approximately 8 miles off the coast. Although repair operations may continue throughout the night, lighting of the deck will not be a concern for seabird nesting colonies. It is possible, but very unlikely that sea otters would be seen in the area of operations and if they were there would be no aspect of the repair operation that would affect them. As a result of my analysis and our discussion, I have come to the conclusion that that the proposed ExxonMobil power cable repair will have no effect on protected species under the

jurisdiction of the Fish and Wildlife Service. Please let me know via e-mail if you agree with this conclusion.

Thank you. Greg

Greg Sanders  
Biologist, Mineral Management Service  
(805) 389-7863  
(See attached file: SYU C1CR Repair Description.doc)

**National Marine Fisheries Service**  
**Re; Marine Mammals and Protected Species**

**From:** Monica DeAngelis [<mailto:Monica.DeAngelis@noaa.gov>]  
**Sent:** Wednesday, June 18, 2008 2:30 PM  
**To:** Sanders, Greg  
**Subject:** Re: ExxonMobil Power Cable Repair

Hi Greg, NMFS concurs with your determination that the cable repair work for the Exxon Mobil Power Cable repair will have no effect on marine mammals. My only recommendation is to also include the following: In the unlikely event of a collision with a marine mammal, officials must immediately contact the NMFS Stranding Coordinator, Mr. Joseph Cordaro at (562) 980-4017. In addition, the ExxonMobil or MMS can also contact me should an interaction with a marine mammal occur. Let me know if you need something more.

Cheers, Monica

Monica L. DeAngelis  
Marine Mammal Biologist  
NOAA's National Marine Fisheries Service/Southwest Region  
Protected Resources Division  
501 W. Ocean Blvd., Suite 4200  
Long Beach, CA 90802  
Work: 562-980-3232  
Fax: 562-980-4027  
E-mail: [Monica.DeAngelis@noaa.gov](mailto:Monica.DeAngelis@noaa.gov)

Sanders, Greg wrote:

Hi Monica,

On June 10<sup>th</sup>, I talked with you on the telephone about Exxon Mobil's proposed repair of an electrical cable that supplies power to their Santa Ynez Unit offshore oil and gas facilities (Platforms Hondo, Harmony, and Heritage). The cable was completely replaced in 2003 due to a fault in the original cable. The new cable has now developed a ground fault approximately 2,750 feet from Platform Heritage and needs to be repaired. ExxonMobil proposes to repair the cable by pulling the cable up to a surface vessel, splicing a new section of cable on board the repair ship, and returning the cable to the bottom. This repair may take as long as 25 days (includes mobilization of the repair vessel). A more detailed description of the proposed work is attached.

As we discussed on the telephone, the repair ship will remain essentially stationary near Platform Heritage, using dynamic positioning (no anchors) thus eliminating the possibility of the ship accidentally striking a marine mammal. Noise from the operation may be detected by marine mammals but will be within the range of comparable vessels utilizing the Santa Barbara Channel and will not cause injury to marine mammals. The cable will be raised and lowered to the sea floor below the repair ship with little or no possibility that a marine mammal could become entangled in the cable. The splice/repair will result in an insignificant increase in the length of the cable which will be laid on the bottom within the approved corridor for the existing cable. During our discussion, you recommended that the repair ship operators be aware that marine mammals in the area and to avoid interactions with marine mammals should they enter the area where work is being performed. I have confirmed that ExxonMobil has submitted the following actions as part of their project proposal: 1) Train all offshore project personnel and vessel operators as to the types of marine mammals likely to be encountered in the area and the types of activities that have the most potential for affecting the animals; 2) Contact the Marine Mammal Center of Santa Barbara at (805) 687-3255 for assistance should a marine mammal be observed to be in distress; and 3) Require all offshore personnel to view the Western States Petroleum Association Fisheries and Wildlife Training Program video.

As a result of my analysis and our discussion, I have come to the conclusion that that the proposed ExxonMobil power cable repair will have no effect on marine mammals or other protected species. Please let me know via e-mail if you agree with this conclusion.

Thank you. Greg

Greg Sanders

Biologist, Mineral Management Service  
(805) 389-7863

**E-mail to the State Historic Preservation Unit Chief, Susan Stratton**

**From:** Helix, Mary Elaine

**Sent:** Thursday, July 24, 2008 11:58 AM

**To:** 'sstratton@parks.ca.gov'

**Subject:** review of a cable repair project

I am with the Department of the Interior, Minerals Management Service. We regulate the offshore oil and gas platforms. We are reviewing a draft proposal by Exxon to repair a cable, replacing a portion of it to service their Santa Ynez Unit platforms. In the course of our required seafloor survey, they identified a potential resource on the ocean floor. Further, they have videotaped the potential resource. Since we know the exact location, our procedure is to require complete avoidance and to follow up in the field while they are conducting the repair to ensure avoidance is accomplished. We also will require post-installation surveys to validate that. I am contacting you to determine how or if we need to coordinate with you directly on this matter. SHPO consulted on the original project for the platform installation and was informally consulted when the original cable was installed. Our expectation is that formal consultation is not needed since complete avoidance will be required.

*Mary Elaine Helix*



## DEPARTMENT OF THE ARMY

LOS ANGELES DISTRICT, CORPS OF ENGINEERS  
VENTURA FIELD OFFICE  
2151 ALESSANDRO STREET, SUITE 110  
VENTURA, CALIFORNIA 93001

August 11, 2008

REPLY TO  
ATTENTION OF:

Office of the Chief  
Regulatory Division

### DEPARTMENT OF THE ARMY NATIONWIDE PERMIT AUTHORIZATION

Will Porche  
Staff Regulatory Specialist  
Exxon Mobile Production Company  
P.O. Box 4358  
Houston, TX 77210-4358

Dear Mr. Porche:

This is in reply to your application (File No. SPL-2008-00568-JWM) dated April 24, 2008, for a Department of the Army Permit under Section 10 of the River and Harbors Act of March 3, 1899 (33 U.S.C. 403) over you proposal to temporarily impact 1.1 acre of waters of the U.S. for the repair of a fault in Cable C1 adjacent to Platform Heritage offshore of El Capitan State Beach, Santa Barbara County, California.

Based on the information you have provided, the Corps of Engineers has determined that your proposed activity complies with the enclosed terms and conditions of Nationwide Permit No. 12: Utility Line Activities, as described in enclosure 1. Furthermore, you must comply with the following non-discretionary Special Conditions:

1. To comply with requirements of the Endangered Species Act and Marine Mammal Protection Act, the Permittee shall implement the mitigation measures proposed in the ExxonMobil Mitigation Measure Comp-24 dated April, 2008 as well as the additional measures specified in the Minerals Management Service Environmental Report dated April 17, 2008.
2. To Comply with the requirements of the Magnusen-Stevens Fishery Conservation and Management Act the Permittee shall implement the mitigation

- measures agreed to in consultation with MMS and NMFS and referenced in the MMS Environmental Report dated April 17, 2008.
3. To comply with requirements of Section 106 of the National Historic Preservation Act, the Permittee shall implement the cultural and historic resource mitigation measures proposed in the ExxonMobil Mitigation Measures Comp-12 and Plan-3 dated April, 2008 as well as referenced in the MMS Environmental Report dated April 17, 2008.

This letter of verification is valid through **August 11, 2010**. All nationwide permits expire on March 18, 2012. It is incumbent upon you to remain informed of changes to the nationwide permits. If the Corps of Engineers modifies, reissues, or revokes any nationwide permit at an earlier date, we will issue a public notice announcing the changes.

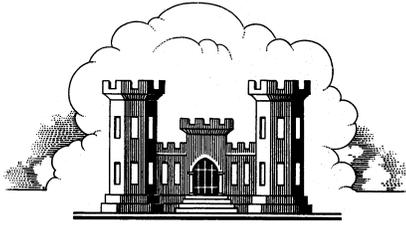
A nationwide permit does not grant any property rights or exclusive privileges. Also, it does not authorize any injury to the property or rights of others or authorize interference with any existing or proposed Federal project. Furthermore, it does not obviate the need to obtain other Federal, state, or local authorizations required by law.

A courtesy copy of this letter is being set to Mr. Bill Grady, Senior Environmental Engineer, Ashworth Leininger Group, 5623 West 25<sup>th</sup> Street, Greeley, CO 80634. Thank you for participating in our regulatory program. If you have any questions, please contact John W. Markham at (805)-585-2150 or via e-mail at [John.W.Markham@usace.army.mil](mailto:John.W.Markham@usace.army.mil). Please be advised that you can now comment on your experience with the Regulatory Division by accessing the Corps web-based customer survey form at: <http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,

Antal J. Szijj  
Senior Project Manager  
Regulatory Division

Enclosure



LOS ANGELES DISTRICT  
U.S. ARMY CORPS OF ENGINEERS

CERTIFICATION OF COMPLIANCE WITH  
DEPARTMENT OF THE ARMY NATIONWIDE PERMIT

Permit Number: *SPL-2008-00568-JWM*

Name of Permittee: *ExxonMobil Production Company, Attention Mr. Will Porche*

Date of Issuance: *August 11, 2008*

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S Army Corps of Engineers  
Regulatory Division  
ATTN: CESPL-RG-SPL-2008-00568-JWM  
2151 Alessandro Drive, Suite 110  
Ventura, CA 93001

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this nationwide permit you may be subject to permit suspension, modification, or revocation procedures as contained in 33 CFR 330.5 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit condition(s).

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Signature of Permittee

---

Date

## Memorandum

**TO:** Phil Sheehan, Air Quality Engineer, APCD Engineering & Compliance Division  
**FROM:** Bobbie Bratz, APCD Environmental Officer  
**DATE:** July 7, 2008  
**SUBJECT:** Transmittal of Final Mitigated Negative Declaration for APCD Permit to Operate Modification No. 9102-04-- ExxonMobil Santa Ynez Unit Cable C1 Repair Project (SCH Number 2008061010)  
**Copy to:** Terry Dressler, APCO  
Brian Shaftritz, Engineering Supervisor, APCD Engineering & Compliance Division

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The Technology and Environmental Assessment Division hereby transmits the Final Mitigated Negative Declaration for the ExxonMobil Santa Ynez Unit Cable C1 Repair Project prepared pursuant to the California Environmental Quality Act ("CEQA") Guidelines Section 15070 and the APCD Environmental Review Guidelines, adopted in October, 1995 and revised in November, 2000. Pursuant to the CEQA Guidelines, a Proposed Mitigated Negative Declaration was prepared and circulated for public review for a period of 30 days from June 2, 2008 to July 1, 2008. 15 copies were sent to the State Clearing House. No comments were received (see State Clearinghouse letter dated, July 02, 2008) and the document was finalized on July 07, 2008. A Notice of Determination, along with the "No Effect Determination Form" from the California Department of Fish and Game, will be filed within 5 days after the ATC permit is issued.

### CEQA Findings

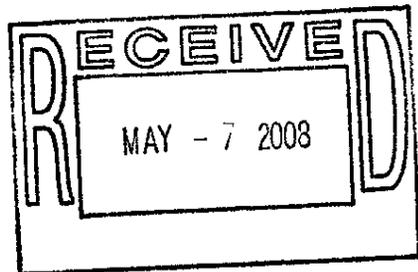
- The Santa Barbara County Air Pollution Control Officer has considered the Mitigated Negative Declaration (MND) prepared for the ExxonMobil Santa Ynez Unit Cable C1 Repair Project-- APCD Permit to Operate Modification No. 9102-04. The ND reflects the independent judgment of the Control Officer and has been completed in compliance with CEQA, and is adequate for this proposal.
- The Control Officer finds that the project as approved will not have a significant impact on the environment. The Control Officer has adopted the Final MND. The final permit may now be issued.
- The documents and other materials that constitute the record of proceedings upon which this decision is based are located at the Santa Barbara County APCD offices at 260 N. San Antonio Road, Suite A, Santa Barbara, CA 93110. The custodian of these materials is the APCD Engineering & Compliance Division.

**Encl.:** Final Negative Declaration for APCD PTO Modification No. 9102-04 (58 pp.)  
Letter from State Clearinghouse dated July 02, 2006

STATE OF CALIFORNIA

ARNOLD SCHWARZENEGGER, *Governor***CALIFORNIA STATE LANDS COMMISSION**100 Howe Avenue, Suite 100-South  
Sacramento, CA 95825-8202

**PAUL D. THAYER**, *Executive Officer*  
 (916) 574-1800 FAX (916) 574-1810  
 Relay Service From TDD Phone 1-800-735-2929  
 from Voice Phone 1-800-735-2922



**Contact Phone:** (916) 574-1892  
**Contact FAX:** (916) 574-1925

May 2, 2008

File Ref: PRC 7163.1

Frank C. Betts  
 SYU Operations Supervisor  
 ExxonMobil Production Company  
 12100 Calle Real  
 Goleta, CA 93117

Dear Mr. Betts:

**SUBJECT:** Santa Ynez Unit Cable C1 Repair

Staff of the California State Lands Commission (CSLC) has reviewed the information submitted by ExxonMobil concerning the subject project. As you are aware, ExxonMobil maintains a lease from the CSLC for its pipeline and cable facilities which cross state sovereign lands between the onshore Las Flores Canyon Facilities and the Federal OCS Platform Heritage in the Santa Ynez Unit. That lease (PRC 7163.1) was amended in February 2003, to accommodate the removal of Power Cable C and the installation of a new Power Cable C-1.

It is our understanding that a cable insulation failure has occurred in the new Power Cable C-1 and that ExxonMobil is proposing to remove the failed section of cable at the location of the fault and replace it with spare cable. According to the information submitted by you, all of the repair work will be done in federal waters. As such, it does not appear that any authorization from the CSLC is required.

Thank you for providing us with the notification of the repair project. Please provide us with copies of all permits/approvals obtained for the project as well as any post project information for our files. Please send this information to Susan Young, Public Land Management Specialist, at the above address.

Sincerely,

Jane E. Smith  
 Public Land Management Specialist

cc: Judy Brown, PLM  
 Marina Brand, DEPM  
 Chandra Basavalinganadoddi, MRM/LB