United States Department of the Interior

MINERALS MANAGEMENT SERVICE
Pacific OCS Region
770 Paseo Camarillo
Camarillo, California 93010-6064

7300

Memorandum

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

From: Regional Supervisor, Office of Leasing and Environment

Subject: Finding of No Significant Impact (FONSI)

Project: ExxonMobil Production Company's 2009 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 Minerals Management Service's (MMS) proposed action is to concur with ExxonMobil Production Company's (ExxonMobil) proposal to repair the C1 power cable which ceased operating in the spring of 2009. 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 (343 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, "Santa Ynez Unit C1CR-2 Cable Repair Activity." 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 2009 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 Policy Act §102 (2)(C) and therefore no Environmental Impact Statement is required.

Lynnette L. Vesco

11-5-09

Lynnette L. Vesco
Regional Supervisor,
Office of Leasing and Environment
Pacific OCS Region
Minerals Management Service

Date

Attachment

Environmental Assessment

ExxonMobil Production Company's

Santa Ynez Unit C1 Cable Repair

2009

November 5, 2009

Environmental Assessment (Final)
November 5, 2009

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

Operator: ExxonMobil Production Company

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

Responsible Agency: Minerals Management Service
Pacific OCS Region
Office of Leasing and Environment

Abstract: The MMS's proposed action is to concur with ExxonMobil Production Company's (ExxonMobil) proposal to repair the C1 power cable which ceased operating in April 2009. 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 Resources, Commercial Fishing, Cultural Resources, 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[1]

- ExxonMobil. 2009. Santa Ynez Unit C1CR-2 Cable Repair Activity. Contains Project Description, Mitigations, Environmental Report, and Equipment Descriptions. June 23, 2009.
- Minerals Management Service. (MMS). 2008. Environmental Assessment, ExxonMobil Production Company's Santa Ynez Unit Cable C1 Repair.
- 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, 2009), ExxonMobil submitted a set of DVDs containing a re otely operated vehicle 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.

[1] 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 (2009)
Office of Leasing and Environment
770 Paseo Camarillo
Camarillo, CA 93010-6064

By Phone: 800.672.2627

For further information contact: Donna Schroeder, EA Coordinator, Office of Leasing and Environment, 770 Paseo Camarillo, Camarillo, CA 93010-6064; Phone: 805.389.7805; e-mail: donna.schroeder@mms.gov.

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1.0 Introduction

1.1 The Proposed Action

On June 23, 2009, 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.

The proposed project would restore redundancy (with E cable; Figure 1-1) to the offshore electrical power system that supports oil and gas production operations at Platform Heritage. The redundancy was lost on April 20, 2009 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 2,800 ft (853 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 fourth quarter of 2009.

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 decide whether the project is technically and environmentally sound, including mitigations submitted by ExxonMobil and any additional or modified mitigations applied by the MMS to the project. The MMS must then must concur with the proposed project.

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 MMS provided the USACE with information on our consultations with FWS,

NMFS, and SHPO so that the USACE could issue a Rivers and Harbors Act Section 10 authorization (see Section 4, Consultation, Coordination and Communication, and Appendix B).

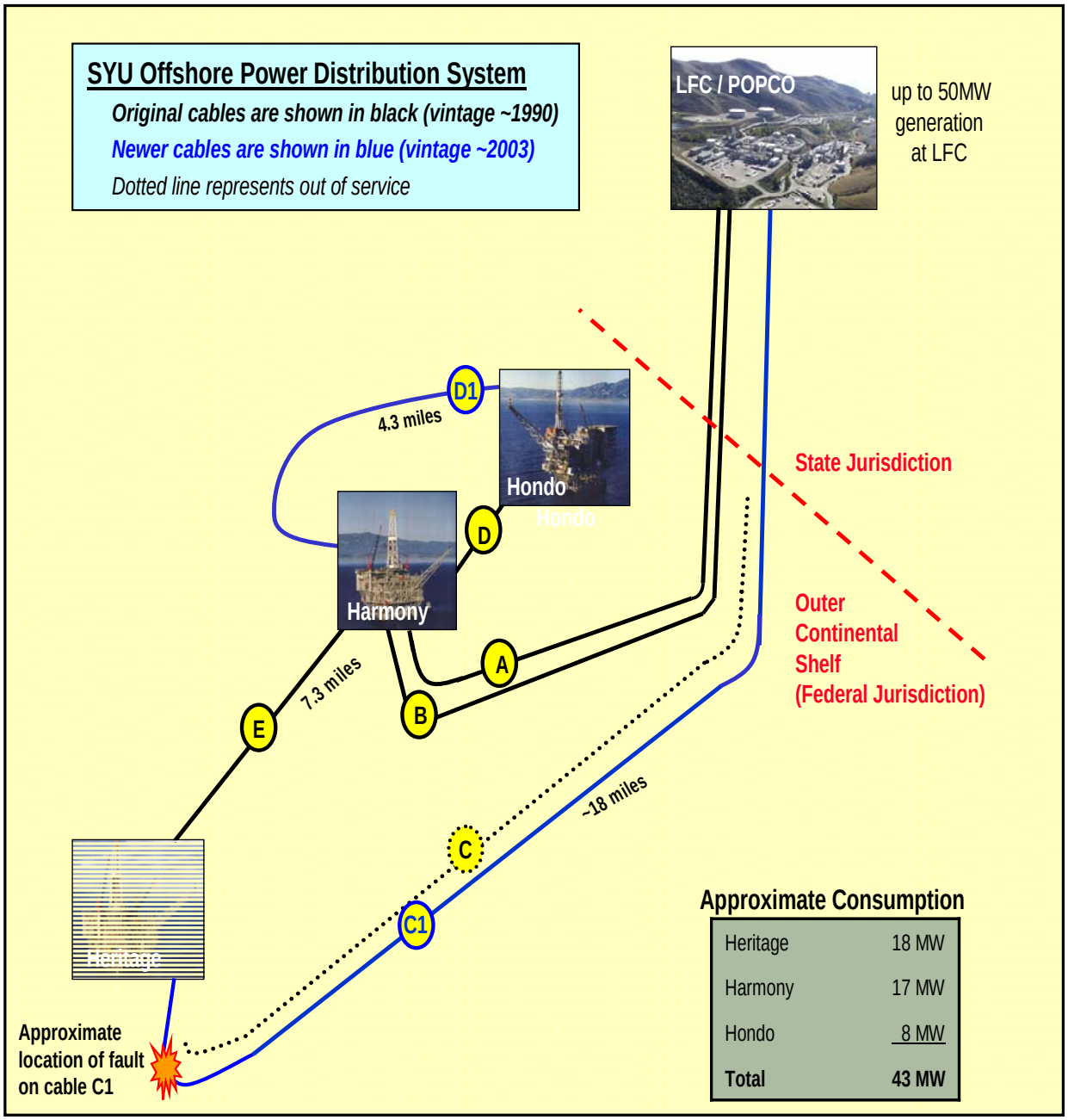

Figure 1-1. Santa Ynez Unit Offshore Power Distribution System showing the location of the offshore facilities, the power cables, and the location of the failed C1 cable.

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' determination that the cable repair project would have no effect on listed species. Via response e-mail, dated September 22, 2009, FWS concurred (see Section 4, Consultation, Coordination and Communication, 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' determination that the cable repair project would have no effect on marine mammals. Via response e-mail, dated October 13, 2009, NMFS concurred (see Section 4, Consultation, Coordination and Communication, 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 an e-mail dated October 5, 2009, for their concurrence with MMS' determination that the proposed project could have no effect on EFH. NMFS stated via response e-mail, dated October 9, 2009, 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, Coordination and Communication, and Appendix B).

State Historic Preservation Officer (SHPO): The SHPO must concur on MMS's determination of effects on potential cultural resources. In a letter dated October 21, 2009, MMS contacted the SHPO, summarized the project, and indicated that the potential cultural resource had been videotaped by a remotely operated vehicle (ROV) and that it would be avoided. In a letter dated October 26, 2009, the SHPO concurred with MMS' determination that the proposed project would not affect cultural resources (see Section 4, Consultation, Coordination and Communication, 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. At the time of this writing, the SBCAPCD is currently planning to issue an Authority to Construct/Permit to Operate 13255 and Part 70 Minor Modification 13255 (see Section 4, Consultation, Coordination and Communication, 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 cable C1 connects to Platform Heritage. Cables D and D1 provide power from Harmony to Hondo while E cable 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. In October 2008, the C1 cable was repaired by removing the faulted section and installing a new cable section with two subsea splices.

In April 2009, the C1 cable again experienced a fault in one of the three phases. 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.

ExxonMobil conducted several tests and a ROV inspection of the C1 cable following the failure. The initial tests indicated a direct ground fault had occurred in the proximity of the shore side splice approximately 5,800 ft (1,768 m) along the cable, or about 2,800 ft (853 m) in a straight line distance southeast of the Platform Heritage power cable J-tube bell mouth, in about 1,125 ft (343 m) of water depth. The tests were conducted using a Murray bridge (resistance measurement) and TDR (time domain reflectometry) techniques. In addition, a ROV inspection survey of the failed cable area was used to conduct low frequency toning technology and visual observation to determine the exact location of the fault. The ROV recorded the location of the fault by taking GPS fixes and measuring the distance from the bight apex and/or the splice locations. The location of the fault is a sufficient distance from the power cable bell mouth to conduct a sea based repair approach to splice a replacement section into the cable to repair the fault. A schematic of the cable cross-section is shown in Figure 1-2.

Circuit C1 (land cable and submarine C1 cable) begins as direct buried, land based cable (approximately 5,100 ft (1,554 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 (305 m) away in about 25 ft (8 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 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.

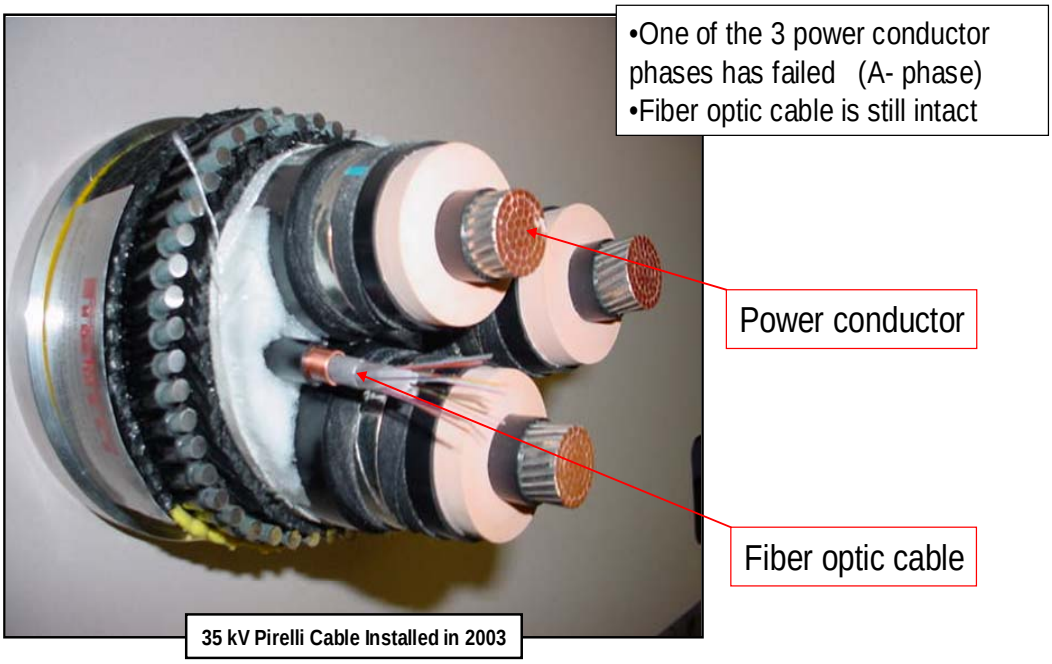

Figure 1-2. Photo of a sample of a cable identical to the failed power cable.

Proposed Project Repair Vessel. Based on the project needs, ExxonMobil and Prysmian, the cable manufacturer and original installer, selected the *Giulio Verne* owned and operated by Prysmian. The vessel has the following general features:

- SIMRAD SDP 21 DP System
- Five (5) 2,200 BHP Engine/ Generator Sets
- One Emergency/Harbor Engine/ Generator Set
- Two (2) 1,250 kw Aft Azimuth Thrusters
- Two (2) 1,250 kw Forward Azimuth Thrusters
- One (1) 710 kw Bulb Tunnel Thruster
- Radar and Communication Equipment
- 3,185 Ton Net Tonnage
- Three (3) Capstans and six (6) Winches
- Four (4) Cranes
- Two (2) Work Class ROVs and Tool Suite
- Accommodations for 90 Persons
- Helideck
- Dimensions: Length- 437 ft; Beam- 100 ft; Molded Depth- 25 ft; Draft- 28 ft
- Gross Tonnage: 10617 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 ROVs and other support equipment;
- 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 concrete mats installed at the apex of the laid cable; ROV to attach a crane line to mats to allow removal;
- Utilize ROV and navigation system to locate fault on C1 cable;
- Utilize ROV to cut cable on one side of fault and attach line to recovery section 1 (RS-1) of cable;
- Utilize vessel equipment to lift cable RS-l section onto vessel deck;
- While on deck, test cable RS-l section to verify operability, cut out any section with damage or water intrusion (and store for later inspection and testing), seal end and lay RS-l section on sea bottom with vessel equipment;
- Utilize ROV to attach line to recovery section 2 (RS-2) of cable;
- Utilize vessel equipment 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 vessel equipment to lay cable RS-2 section and spliced section on sea bottom while retaining spare cable end on vessel;
- Utilize vessel equipment to lift cable RS-1 section onto deck;
- While on deck, test cable RS-l section to verify operability, cut out any section with damage or water intrusion (and store for later inspection and testing), splice cable RS-l section to spare cable end on vessel (spare cable length will be < 600m);
- Any sections that are cut from 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 vessel equipment to lay cable RS-l section and spliced section on sea bottom in predefined location, clear of any obstructions as confirmed from previous ROV inspection bottom surveys;
- Utilize ROV to verify that the cable is not laying on any significant obstructions;
- Utilize ROV to reinstall concrete mats, if required, at apex of laid cable;
- 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 Environmental Assessment (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 and review of the proposed project, MMS determined that the following environmental resources could be potentially impacted:

- Air Quality: Potential impacts due to emissions from cable repair vessels, support vessels, and associated equipment.
- Water Quality: Potential impacts 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 seafloor habitats.
- 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 2009 ExxonMobil 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 Heritage as well as routine production operations at the SYU platforms (Hondo, Harmony, and Heritage) and accidental oil spills from these platforms. Drilling at Platform Heritage will not result in discharges of drilling muds and cuttings. ExxonMobil will be drilling an extended-reach well (SA-16, El Capitan) and will be using oil-based mud for this well. Because oil-based muds are prohibited from discharge, no drilling-related discharges will occur during the time of this cable repair project. 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 six State offshore energy projects in various stages of application. 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
- Carpinteria Field Area Development

- Chevron 4H Platform Shell Mounds Disposition

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. Fish populations in southern and central California waters support important commercial and recreational fisheries; more than 100 species appear in the landings. 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 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 (CDFG, 2008a).

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 fishes. This MPA network encompasses 318 sq mi (824 sq km) making it the largest network off of the continental United States (Federal Register Notice, 2007). 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 2009 ExxonMobil 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 currently in the planning and design phase.

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 (29 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 and Proposed by MMS as a Part of the Proposed Project

1.7.1 Mitigations Included in the Analysis

Table 1-1 lists the potential impacts, impacting agents, mitigation measures, and the residual impact levels expected after the mitigation has been applied. In all cases, the residual impact levels are none or insignificant. ExxonMobil submitted four types of mitigations, described below in Sections 1.7.1 and 1.7.2. The mitigations are:

- 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 project start which will be subject to approval or modification by MMS;
- Train (Training) – ExxonMobil will provide several specific types of training prior to project start to all personnel who are involved in the project;
- Rep (Reports) – ExxonMobil will submit reports after the project is completed.

Additionally, MMS proposed two mitigation measures (one training mitigation and one report) as part of this Environmental Assessment.

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

Description of Potential Impacts	Impacting Agents	Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
Air Quality Potential violation of ambient air quality standards due to emissions during project activities.	• NO_x emissions due to the use of propulsion and stationary combustion equipment.	**ExxonMobil-proposed mitigation measures** • Fuel Sulfur Content - Require repair vessel internal combustion (IC) engines and other associated IC engines to comply with Santa Barbara County Air Pollution Control District (SBCAPCD) issued permit by using fuel with less than 0.0015% sulfur by weight when operating within Santa Barbara County. (Comp-26) • Emissions Reporting Plan - ExxonMobil to submit to the Minerals Management Service (MMS) and copy SBCAPCD at least 30 days prior to start of offshore repair activities a plan containing the following information on emissions generating repair activity equipment: o List of internal combustion engines and other combustion devices expected to be used during repair activity; o Manufacturer's information on of each piece of equipment including size, capacity, emission factors and other pertinent information; o Method of calculating expected emissions of each piece of equipment; o Method of measurement of fuel or hours of use of each piece of equipment; o Estimate of expected actual emissions for each piece of equipment and total for repair activity; and o List of all fuel-burning equipment not required for repair activities (equipment to be locked out of service). (Plan-1) • Daily Agency Report - ExxonMobil to submit a daily report of repair activity status to the MMS, SBCAPCD, Joint Oil/Fisheries Liaison Office (JOFLO), and other interested agencies during offshore repair activities. (Rep-1) • Emissions Daily Report - ExxonMobil to provide daily report of repair activity emissions status to the MMS (copy SBCAPCD) of internal combustion engines and other combustion devices used during the preceding day's repair activities, the estimated duration of their use, the fuel consumed or hours run and the calculated emissions for the day and the cumulative to date. In addition, report to provide emissions from use of any solvents and paints. Reports to be provided during the offshore repair activities. (Rep-2) • Post Emissions Report - At the conclusion of the repair activities, prepare and submit a report to the SBCAPCD (copy MMS) summarizing the total actual repair activity emissions. (Rep-4)	Insignificant

Description of Potential Impacts	Impacting Agents	Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
Water Quality Degradation of water quality from increased turbidity and discharge of effluents from project vessels.	• Increase in sediment and organic material in water column during the repair procedures.	**ExxonMobil-proposed mitigation measures** • Dynamically Positioned (DP) Vessel for cable repair - Repair vessel to have DP capabilities to maintain position without anchors. (Comp-4)	Insignificant
	• Discharge of treated sewage.	• None.	Insignificant
Benthic Resources Degradation of benthic habitat from manipulating the cable on the seafloor.	• Potential increase in turbidity in the water column during the repair procedures.	**ExxonMobil-proposed mitigation measures** • Dynamically Positioned (DP) Vessel for cable repair - Repair vessel to have DP capabilities to maintain position without anchors. (Comp-4) • Remotely Operated Vehicle (ROV) Monitor and Video Operation - ExxonMobil to require contractors to utilize a ROV to monitor and videotape cable retrieval and cable lay operations of the offshore repair activities, as recorded by ROV during execution of operational procedures. 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. (Comp-14) **MMS-proposed mitigation measure** • 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: o As-built drawings: • The first drawing to show the final location of repaired C1 cable splice and concrete mat locations, envelope of operations, and adjacent infrastructure; • Another drawing that, in addition to the above, shows the complete track lines the ROV traveled in the final survey and ROV fixes used to define survey results, bottom scarring, any notable features seen on the video (time index all to match the video and the photographs); • Include on all maps the accuracy (or error) in +/- feet of the feature locations;	Insignificant

Description of Potential Impacts	Impacting Agents	Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
		• Submit a copy of all drawings digitally in PDF format and as shapefiles (desired format) or drawing (DWG) files for each individual layer group that are compatible with ArcGIS 9.2. Maps should also be oriented to the North American Datum of 1983 (NAD 83) coordinate system based on latitude and longitude; and • Raw data of all points should be submitted as ASCII files that are labeled, and include locations to 5 decimal places oriented to NAD 83 coordinate system based on latitude and longitude; o A post activity ROV video that continuously shows 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 sea floor 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; and • The video to include the time, latitude, and longitude, which matches the locations of features listed on the drawings and dive logs in a way that is easy to index on corresponding video. o 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 and how each mitigation measure 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	
Degradation of benthic habitat from manipulating the cable on the seafloor.	• Direct physical disturbance to seafloor habitats including both soft and hard bottom.	**ExxonMobil-proposed mitigation measures** • Dynamically Positioned (DP) Vessel for cable repair - Repair vessel to have DP capabilities to maintain position without anchors. (Comp-4) • Remotely Operated Vehicle (ROV) Monitor and Video Operation - ExxonMobil to require contractors to utilize a ROV to monitor and videotape cable retrieval and cable lay operations of the offshore repair activities, as recorded by ROV during execution of	Insignificant

Description of Potential Impacts	Impacting Agents	Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
		operational procedures. 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. (Comp-14) **MMS-proposed mitigation measure** • 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: o As-built drawings: • The first drawing to show the final location of repaired C1 cable splice and concrete mat locations, envelope of operations, and adjacent infrastructure; • Another drawing that, in addition to the above, shows the complete track lines the ROV traveled in the final survey and ROV fixes used to define survey results, bottom scarring, any notable features seen on the video (time index all to match the video and the photographs); • Include on all maps the accuracy (or error) in +/- feet of the feature locations; • Submit a copy of all drawings digitally in PDF format and as shapefiles (desired format) or drawing (DWG) files for each individual layer group that are compatible with ArcGIS 9.2. Maps should also be oriented to the North American Datum of 1983 (NAD 83) coordinate system based on latitude and longitude; and • Raw data of all points should be submitted as ASCII files that are labeled, and include locations to 5 decimal places oriented to NAD 83 coordinate system based on latitude and longitude; o A post activity ROV video that continuously shows 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 sea floor 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; and • The video to include the time, latitude, and longitude, which	

Description of Potential Impacts	Impacting Agents	Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
		matches the locations of features listed on the drawings and dive logs in a way that is easy to index on corresponding video. o 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 and how each mitigation measure 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	
<u>Commercial Fishing</u> Cable repair boat and associated traffic may preclude fishers from fishing grounds or generate space-use conflicts.	• Preclusion and/or space-use conflicts.	**ExxonMobil-proposed mitigation measures** • Dynamically Positioned (DP) Vessel for cable repair - Repair vessel to have DP capabilities to maintain position without anchors. (Comp-4) • 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 fishers at least 15 days prior to the commencement of offshore activities. (Comp-6) • Fishing Impacts and Conflicts - ExxonMobil to continue to consult with the Joint Oil/Fisheries Liaison Office (JOFLO) and commercial fishers, 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 Santa Ynez Unit area develop during this project, ExxonMobil to make all reasonable efforts to satisfactorily resolve any issues with affected fishers. 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-7) • 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-8) • Repair Notification - ExxonMobil to provide notice to Minerals Management Service (MMS), Santa Barbara County Air Pollution Control District (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. (Comp-19)	Insignificant

Description of Potential Impacts	Impacting Agents	Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
		• Daily Agency Report - ExxonMobil to submit a daily report of repair activity status to MMS, SBCAPCD, JOFLO and other interested agencies during offshore repair activities. (Rep-1) **MMS-proposed mitigation measures** • Wildlife and Fisheries Training - ExxonMobil to show Wildlife and Fisheries Training video (Pacific Operators Offshore, LLC, 2009) to all personnel participating in repair activities. This training will provide awareness training concerning the most common types of marine wildlife (birds, mammals, and sea turtles) likely to be encountered in the repair activity area, and the types of activities that have the most potential for affecting the animals, as well as the importance of fisheries and types of fishing vessels that may be encountered in area. o All personnel on repair activity to attend training and sign log indicating completion of training; o Training to be conducted prior to repair vessel arriving at repair site; and o Any personnel arriving after initial training completed to be provided training by ExxonMobil representative onboard vessel. • 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: o As-built drawings: • The first drawing to show the final location of repaired C1 cable splice and concrete mat locations, envelope of operations, and adjacent infrastructure; • Another drawing that, in addition to the above, shows the complete track lines the ROV traveled in the final survey and ROV fixes used to define survey results, bottom scarring, any notable features seen on the video (time index all to match the video and the photographs); • Include on all maps the accuracy (or error) in +/- feet of the feature locations; • Submit a copy of all drawings digitally in PDF format and as shapefiles (desired format) or drawing (DWG) files for each individual layer group that are compatible with ArcGIS 9.2. Maps should also be oriented to the North American Datum of 1983 (NAD 83) coordinate system based on latitude and longitude; and	

Description of Potential Impacts	Impacting Agents	Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
Repaired cable, lost equipment or other items ("marine debris") could cause loss or damage to commercial fishing gear.	• Damage or loss of fishing gear.	• Raw data of all points should be submitted as ASCII files that are labeled, and include locations to 5 decimal points oriented to NAD 83 coordinate system based on latitude and longitude; o A post activity ROV video that continuously shows 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 sea floor 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; and • The video to include the time, latitude, and longitude, which matches the locations of features listed on the drawings and dive logs in a way that is easy to index on corresponding video. o 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 and how each mitigation measure 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 **ExxonMobil-proposed mitigation measures** • Dynamically Positioned (DP) Vessel for cable Repair - Repair vessel to have DP capabilities to maintain position without anchors. (Comp-4) • Fishing Impacts and Conflicts - ExxonMobil to continue to consult with JOFLO and commercial fishers, 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 Santa Ynez Unit area develop during this project, ExxonMobil to make all reasonable efforts to satisfactorily resolve any issues with affected fishers. 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-7) • Fishing Design and Installation - ExxonMobil to review design concepts and	Insignificant

Description of Potential Impacts	Impacting Agents	Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
		installation procedures with JOFLO prior to start of offshore repair activities to minimize impacts to commercial fishing to the maximum extent possible. (Comp-8) • 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-9) • 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-10) • Survey and Plans to NOAA - ExxonMobil to provide final as-built survey maps of repaired C1 cable location to National Oceanic and Atmospheric Administration (NOAA), as requested, and in the appropriate format. (Comp-11) • As-Laid Maps to JOFLO - Within 90 days after completion of the repair activities, ExxonMobil to provide, free of charge, maps indicating the exact location of the laid cable to JOFLO for use by interested fishers. (Comp-29) • Daily Agency Report - ExxonMobil to submit a daily report of repair activity status to the MMS, SBC APCD, JOFLO, and other interested agencies during offshore repair activities. (Rep-1) **MMS-proposed mitigation measures** • Wildlife and Fisheries Training - ExxonMobil to show Wildlife and Fisheries Training video (Pacific Operators Offshore, LLC, 2009) to all personnel participating in repair activities. This training will provide awareness training concerning the most common types of marine wildlife (birds, mammals, and sea turtles) likely to be encountered in the repair activity area, and the types of activities that have the most potential for affecting the animals, as well as the importance of fisheries and types of fishing vessels that may be encountered in area. o All personnel on repair activity to attend training and sign log indicating completion of training; o Training to be conducted prior to repair vessel arriving at repair site; and o Any personnel arriving after initial training completed to be provided training by ExxonMobil representative onboard vessel.	

Description of Potential Impacts	Impacting Agents	Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
		• 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: o As-built drawings: • The first drawing to show the final location of repaired C1 cable splice and concrete mat locations, envelope of operations, and adjacent infrastructure; • Another drawing that, in addition to the above, shows the complete track lines the ROV traveled in the final survey and ROV fixes used to define survey results, bottom scarring, any notable features seen on the video (time index all to match the video and the photographs); • Include on all maps the accuracy (or error) in +/- feet of the feature locations; • Submit a copy of all drawings digitally in PDF format and as shapefiles (desired format) or drawing (DWG) files for each individual layer group that are compatible with ArcGIS 9.2. Maps should also be oriented to the North American Datum of 1983 (NAD 83) coordinate system based on latitude and longitude; and • Raw data of all points should be submitted as ASCII files that are labeled, and include locations to 5 decimal points oriented to NAD 83 coordinate system based on latitude and longitude; o A post activity ROV video that continuously shows 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 sea floor 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; and • The video to include the time, latitude, and longitude, which matches the locations of features listed on the drawings and dive logs in a way that is easy to index on corresponding video. o 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 and how each mitigation	

Description of Potential Impacts	Impacting Agents	Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
Marine vessel traffic to and from project area could cause loss or damage to commercial fishing gear.	• Damage or loss of fishing gear.	measure 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 **ExxonMobil-proposed mitigation measures** • Dynamically Positioned (DP) Vessel for cable repair - Repair vessel to have DP capabilities to maintain position without anchors. (Comp-4) • 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 fishers at least 15 days prior to the commencement of offshore activities. (Comp-6) • Traffic Corridors - Require repair vessel to utilize approved traffic corridors established by the JOFLO during vessel transits to and from local ports, where feasible. (Comp-27) • Daily Agency Report - ExxonMobil to submit a daily report of repair activity status to Minerals Management Service (MMS), Santa Barbara County Air Pollution Control District (SBCAPCD), Joint Oil/Fisheries Liaison Office (JOFLO) and other interested agencies during offshore repair activities. (Rep-1) **MMS-proposed mitigation measure** • Wildlife and Fisheries Training – ExxonMobil to show Wildlife and Fisheries Training video (Pacific Operators Offshore, LLC, 2009) to all personnel participating in repair activities. This training will provide awareness training concerning the most common types of marine wildlife (birds, mammals, and sea turtles) likely to be encountered in the repair activity area, and the types of activities that have the most potential for affecting the animals, as well as the importance of fisheries and types of fishing vessels that may be encountered in area. o All personnel on repair activity to attend training and sign log indicating completion of training; o Training to be conducted prior to repair vessel arriving at repair site; and o Any personnel arriving after initial training completed to be provided training by ExxonMobil representative onboard vessel.	Insignificant

Description of Potential Impacts	Impacting Agents	Mitigation Measures to Avoid or Minimize Impacts from the Project	Residual Impact Level
Cultural Resources An anomaly, identified as being of potential cultural origin on the Marine Archeological Survey, could be harmed by cable repair activities.	Anchoring in an emergency situation in the unlikely event that the dynamically positioned vessel loses power from the primary and two back-up engines.	**ExxonMobil-initiated mitigation measures** • 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. (Comp-12) • Cultural Resource Avoidance - Require contractors to avoid the previously identified potential cultural resource by a square 800 ft (244 m) on a side to the extent possible during all offshore repair activities. Any future potential cultural resources would be avoided by at least the required 300 ft radius to the extent possible during all offshore repair activities. Note: ExxonMobil has agreed to increase the exclusion zone for the previously identified anomaly (located southeast of rock outcropping #23 on C1CR As-Built Map) from the required 300 foot radius to an 800 foot square only for the C1CR-2 activity. This increased area can be accommodated in the C1CR-2 activity since there is no anticipated work in the vicinity of this potential cultural resource location. (Comp-28) • 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. (Plan-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. o All personnel on repair activity to attend training and sign log indicating completion of training; o Training to be conducted prior to repair vessel arriving at repair site; and o Any personnel arriving after initial training completed to be provided training by ExxonMobil representative onboard vessel. (Train-3)	None.
Environmental Justice Disproportionate effects on low income minority populations.	• Traffic from passenger vehicles and tasks.	• None.	Insignificant

1.7.2 Other Mitigations

The following list of mitigations was submitted by ExxonMobil (ExxonMobil, 2009) and is 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-proposed mitigations are part of the project that the MMS is analyzing in the EA and upon which the MMS will make a decision.

- Vessel Lights – Vessel operator to minimize use of lights on upper deck to minimum required for safe operation of required work activities. (Comp-1)
- Vessel Noise – Vessel operator to minimize use of engines and other noise making devices to minimum required for safe operation of required work activities. (Comp-2)
- Vessel Fuel Sulfur Content – Vessel operator to purchase low-sulfur diesel fuel (<0.0015 wt% S) and use to fill designated empty fuel storage tanks on vessel (tanks may contain heel of higher sulfur fuel). Sources of fuel for engines and other combustion devices when in Santa Barbara County waters restricted to designated low-sulfur storage tanks.
    - Low-sulfur fuel to be segregated in separate storage tanks (proof of purchase must be provided);
    - Any high-sulfur fuel tanks to be completely segregated and locked out of service;
    - Refueling of vessel to only occur at a designated onshore facilities; and
    - Refueling on onboard equipment to be conducted in accordance with vessel procedures; spill containment equipment must be located nearby. (Comp-3)
- 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-13)
- 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-15)
- Cable Removal at End of SYU Life – ExxonMobil to remove newly installed power cable splice as well as the remaining cables in their entirety at the end of the SYU project life. (Comp-16)
- Deviations from Plans and Procedures – ExxonMobil to provide notification and submit to MMS any significant changes or deviations in submitted plans and procedures as soon as possible. (Comp-17)
- As-Built Repair Activity Drawings/Documents – ExxonMobil to maintain clear, complete and up-to-date copies of all as-built drawing and documents generated during the repair activities. A copy of as-built drawings and document to be provided to MMS in Post Repair Report. (Comp-18)
- Fault Report – ExxonMobil to provide the MMS with a report of the most probable cause for the C1 cable fault based on post retrieval investigation of the faulted section by a testing company. (Comp-20)

- 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-21)
- Maps in Digital Format – ExxonMobil to submit maps of as-laid cable location in the requested format to MMS in Post Repair Report. (Comp-22)
- 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, or as soon as available, prior to start of offshore repair activities. (Comp-23)
- Whale Consultation – ExxonMobil will discuss details of the C1CR-2 Activity with the MMS and the National Marine Fisheries Service (NMFS) to determine if whales that congregate in or migrate through the work area (e.g., blue, humpback, fin, and gray) may be affected and what, if any, mitigations may be necessary. (Comp-24)
- Emission Reductions – Require construction contractors to utilize appropriate means to reduce vessel engine emissions wherever possible. (Comp-25)
- 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-2)
- 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-4)
- Critical Operations and Curtailment Plan – ExxonMobil to submit to MMS at least 30 days prior to start of offshore repair activities a plan that details 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-5)
- 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. (Plan-6)

- C1CR-2 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 conduct discussion of 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. (Train-4)

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 Plan-4, Section 1.7.2).

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, no impacts from oil spills are expected and oil spills are not further analyzed in this document.

Mitigation proposed as part of the project. Although impacts from oil spills are not expected, ExxonMobil submitted the following mitigation measure as a part of the 2009 ExxonMobil C1 cable repair project which will further reduce and minimize any potential for oil spill impacts from the proposed project:

- Oil Spill Response Plan – ExxonMobil to submit to the 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-4).

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_{10}), suspended particulate matter 2.5 microns ($PM_{2.5}$) 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) 8-hour ozone; and the PM_{10} 24-hour and annual arithmetic mean air quality standards. The attainment status is considered unclassifiable/attainment for the Federal $PM_{2.5}$ standard, and unclassifiable for the State $PM_{2.5}$ 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 Santa Barbara County Air Pollution Control District (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 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 Harmony, Heritage, and Hondo are currently permitted and within the jurisdiction of the SBCAPCD.

Greenhouse gases (GHGs) are defined as any gas that absorbs infrared radiation in the atmosphere. Greenhouse gasses include, but are not limited to, water vapor, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). 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 energy-related 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_2 being the primary GHG (EPA, 2005).

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 (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_3); and
- Be consistent with the latest adopted Federal and State air quality plans for Santa Barbara County.

The primary regulated pollutants of concern in Santa Barbara County are oxides of nitrogen (NO_x) and reactive organic compounds (ROC). Both NO_x and ROC are considered precursors to ozone formation, for which Santa Barbara County is presently in attainment. The major pollutant of concern associated with projects of this type and duration are NO_x emissions, due to the primary impact agents of propulsion and stationary combustion equipment.

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.

BACT Requirements	$\geq$ 25 lbs/day for any non-attainment pollutant (except CO) $\geq$ 150 lbs/day for CO
AQIA Requirements	$\geq$ 120 lbs/day for any non-attainment pollutant (except CO and PM_{10}) $\geq$ 550 lbs/day for CO; $\geq$ 80 lbs/day for PM_{10}
Offsets Requirements	$\geq$ 55 lbs/day or $\geq$10 tons/yr for any non-attainment pollutant (except CO and PM_{10}) $\geq$ 150 lbs/day or $\geq$25 tons/yr for CO; $\geq$ 80 lbs/day or $\geq$15 tons/yr for PM_{10}

SBCAPCD has determined the ExxonMobil C1 cable repair activity is exempted from the New Source Review provisions of Regulation VIII, and thus the project will not result in a net emission increase (NEI). The NEI calculation is used to determine whether certain requirements must be applied to a project (e.g., offsets, AQIA, PSD, BACT). As the cable vessel engines are exempt from New Source Review by obtaining a permit and limiting emissions to less than 10 tons per year, emission offsets are not required since there is no change in NEI. The project is

additionally not subject to the AQIA requirements of Regulation VIII. BACT is not required for the temporary cable repair activity.

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 most recent ExxonMobil C1 cable repair project in 2008. Various Authority to Construct (ATC) permits and Permits to Operate (PTO) have been additionally issued by the SBCAPCD regarding SYU modifications and operations and may be further referenced by contacting SBCAPCD offices.

- Original SYU Development and Production Plan (DPP) submitted by Exxon. 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 the Santa Barbara Energy Division to evaluate the environmental impacts of replacing the failed power cable C with power cable C1 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.
- Exxon Mobil Santa Ynez Unit Cable C1 Repair Project Environmental Assessment (MMS, 2008). The EA was prepared to evaluate the environmental impacts for the repair of a fault in C1 cable that runs from shore to Platform Heritage and provides electricity and communications for the platform. The repair project was successfully completed in October of 2008 and the project was limited to less than 10 tons of NO_x emissions.

Impacting Factors. The impacting factors from this project which could affect air quality are the emissions of pollutants, especially NO_x and ROC.

The SBCAPCD PTO Modification No. 13255 determined that the cable repair activity is exempt from the New Source Review provisions of Regulation VIII by the Rule 202.F.8 exemption for marine vessel engines associated with maintenance and repair activities as a stationary source. This permit is necessary to restrict the potential to emit from the cable repair vessel engines to less than ten (10) tons per year of pollutant emissions.

For this work, the repair vessel engines and emissions generating equipment will be included in a revision to the Platform Heritage PTO. The proposed cable repair vessel for the project is the *Giulio Verne*. Emission sources for the repair activities will only occur in the OCS offshore area. Offshore equipment includes internal combustion engines associated with the *Giulio Verne* for both transit to and from the field and for cable repair activities (see Sections 1.4.1 and 1.4.2). Estimated emissions from the power cable repair vessel are contained in Table 2-2.

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

Equipment Category	NO_X	ROC	CO	SO_X	PM	PM_{10}
Peak Hourly (lbs/hr)						
Vessel Transit	30.56	2.05	5.43	0.02	2.99	2.87
Cable Repair	44.98	2.85	9.67	0.03	3.68	3.53
Vessel transit and cable repair occur at different times						
Peak Daily (lbs/day)						
Vessel Transit	733.33	49.22	130.24	0.46	71.87	69.00
Cable Repair	995.08	64.76	207.64	0.60	84.73	81.34
Vessel transit and cable repair occur at different times						
Peak Quarterly (tpq)						
Vessel Transit	0.18	0.01	0.03	0.00	0.02	0.02
Cable Repair	9.50	0.59	1.84	0.01	0.84	0.80
Total Quarterly	9.68	0.61	1.87	0.01	0.85	0.82
Peak Annual (tpy)						
Vessel Transit	0.18	0.01	0.03	0.00	0.02	0.02
Cable Repair	9.50	0.59	1.84	0.01	0.84	0.80
Total Annual	9.68	0.61	1.87	0.01	0.85	0.82

* Emissions within Santa Barbara County

Mitigation Measures. Although impacts to air quality are expected to be insignificant and the project is exempted from Santa Barbara County APCD Rules and Regulations, ExxonMobil will implement the following mitigation measures to further reduce and minimize impacts to air quality:

- Fuel Sulfur Content – Require repair vessel internal combustion (IC) engines and other associated IC engines to comply with the SBCAPCD-issued permit by using fuel with less than 0.0015% sulfur by weight when operating within Santa Barbara County. (Comp-26)
- Emissions Reporting Plan – ExxonMobil to submit to the MMS and copy SBCAPCD at least 30 days prior to start of offshore repair activities a plan containing the following information on emissions generating repair activity equipment:
    - List of internal combustion engines and other combustion devices expected to be used during repair activity;
    - Manufacturer's information on of each piece of equipment including size, capacity, emission factors, and other pertinent information;
    - Method of calculating expected emissions of each piece of equipment;
    - Method of measurement of fuel or hours of use of each piece of equipment;

    - Estimate of expected actual emissions for each piece of equipment and total for repair activity; and
    - List of all fuel-burning equipment not required for repair activities (equipment to be locked out of service). (Plan-1)
- Daily Agency Report – ExxonMobil to submit a daily report of repair activity status to the MMS, SBCAPCD, Joint Oil/Fisheries Liaison Office (JOFLO), and other interested agencies during offshore repair activities. (Rep-1)
- Emissions Daily Report – ExxonMobil to provide daily report of repair activity emissions status to the MMS (copy SBCAPCD) of internal combustion engines and other combustion devices used during the preceding day's repair activities, the estimated duration of their use, the fuel consumed or hours run and the calculated emissions for the day and the cumulative to date. In addition, report to provide emissions from use of any solvents and paints. Reports to be provided during the offshore repair activities. (Rep-2)
- Post Emissions Report – At the conclusion of the repair activities, prepare and submit a report to the SBCAPCD (copy MMS) summarizing the total actual repair activity emissions. (Rep-4)

2.2.3 Conclusion

The data presented in the Table 2-2 indicate that the expected emissions for the repair activities will be less than 10 tons of NO_x 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. The same vessel, *Giulio Verne*, was previously analyzed in the ExxonMobil Offshore Power System Repair Project Environmental Assessment /Mitigated Negative Declaration (SBC and MMS, 2003), in addition to being approved and permitted by the SBCAPCD in 2003 for a similar repair project and resulted in no air quality impacts. Comparison of the previously modeled peak hour emissions to the proposed cable repair project show that there will be no increase in NEI from those previously analyzed and are 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 power 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. The repair activities will not generate any significant number of worker commute trips and supply/equipment delivery trips within Santa Barbara County.

Based on these considerations and the implementation of the reporting mitigation measures described above, the impacts of the 2009 ExxonMobil 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 2009 ExxonMobil 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.

Oil and Gas Projects. Federal and State oil and gas activities considered in this analysis include the drilling of new wells within existing leases from existing Pacific OCS platforms, exploration well abandonment, and future decommissioning. However, no proposals are anticipated for either exploration well abandonment or decommissioning of platforms during the duration of the 2009 ExxonMobil C1 cable repair project.

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_x and ROC have been well below permitted levels, and no exceedances of the NO_2 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-Oil and Gas Projects and Activities.

Marine Shipping and Tankering. The other emission sources considered in this analysis are shipping and tankering operations. 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 (CARB, 2000).

The 2002 emission inventory for Santa Barbara County estimates that NO_X emissions from OCS ships and commercial boats account for approximately 38.31 tons per day of NO_X, or about 45.9 percent of the total NO_X inventory for the county. 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 2009 ExxonMobil C1 cable repair project are exempted per Santa Barbara APCD Rules and Regulations and have no increase in NEI, cumulative air quality impacts of marine shipping and tankering will not change with the proposed project.

Cumulative Conclusion. The potential for the incremental emissions increase associated with the 2009 ExxonMobil C1 cable repair project to cumulatively impact regional air quality is considered to be insignificant. There is no net increase in emissions associated with the temporary repair activity which has been determined to be exempted by SBCAPCD. The proposed project is not expected to contribute significantly, when added to the existing contribution to regional air quality, 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 2009 ExxonMobil C1 cable repair project is considered to be insignificant based on the significance criteria utilized in this analysis. 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 permit requirements presently in place for Platform Heritage. Overall, the potential impacts to air quality resulting from the repair of 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 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.

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 (29 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 south and east 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.

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.
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.

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.[1]
- 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.

[1] 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."

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 (610 m) splice, is laid on the seafloor.

Approximately 2,000 ft (610 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 projects which entailed similar procedures, the entire process will displace between five and ten cubic yards (3.8 and 7.6 m^3) of sediment (SBC and MMS, 2003; MMS, 2008). 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 (61 to 122 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, cooling water, 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 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 2009 ExxonMobil C1 cable repair project to further reduce and minimize impacts to water quality:

- Dynamically Positioned (DP) Vessel for cable repair – Repair vessel to have DP capabilities to maintain position without anchors. (Comp-4)

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 2009 ExxonMobil 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 Heritage 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. Significant cumulative impacts to water quality are not expected from the proposed project when added to other activities in the area. Impacts from the 2009 ExxonMobil 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 2009 ExxonMobil C1 cable repair project is located offshore of the Gaviota coast in approximately 1,100 to 1,300 ft (335 to 396 m) of water between Platforms Heritage and Harmony. The project location is on the upper slope (meso-benthal) 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 bathy-benthal 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 (ROVs) in 2001, 2003, and 2008 (de Wit, 2001; 2003; ExxonMobil, 2008a); and sidescan sonar in 1992 and 2001 (ExxonMobil 1993; 2002).

Invertebrate and fish assemblages recorded in the project area are representative of outer shelf/ upper slope assemblages in the Santa Barbara Channel. Large benthic invertebrate species found in the project area are characterized by urchins, sea stars, shrimp, sea pens, and sea cucumbers (Chambers Consultants and Planners, 1983), whereas polychaete worms, clams, and amphipods characterize the infauna (SAI, 1984a). The 2008 ROV survey (ExxonMobil, 2008a) was an extensive visual survey of the project area, completed before the 2008 repair, 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. Echinoderms dominated all other phyla sighted in the 2008 ROV survey, with sea cucumbers (Holothuroidea) and sea stars (Asteroidea and Ophiuroidea) frequently observed (Figure 2-3). These survey results are largely consistent with trawl results from a 2003 regional survey (Allen et al., 2007). A notable exception is that urchins made up over 50% abundance of catch in the regional survey but were rarely observed in the 2008 ROV survey.

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 from oil and gas operations because of the slow recovery rates of some invertebrate species (Lissner et al. 1991; Battelle, 1991). Previous sidescan surveys of the area revealed several potential hard bottom features. The 2008 ROV survey of the area showed the cable pathway to be soft bottom and identified six features ranging from 150 to 2000 ft (46 to 610 m) from the cable. 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 although no obligate hard bottom species were seen. The two remaining features were hard substrate of at least 1 ft (0.3 m) high and approximately 187 and 950 ft^2 (17.4 and 88.3 m^2). Animals associated with these rock outcrops include invertebrate species common to the region but not typically found in 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., Galatheidae).

The seafloor of the project area has been exposed to human disturbance at multiple points in the past as demonstrated by the original C1 cable lay down in 2003, the first C1 cable repair in November 2008 (Section 1.4), and debris found 600 and 2000 ft (92 and 610 m) from the cable. The ROV surveys 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; Exxon 2008b). Typically, the up-current side is partially or completely buried with the down-current side more exposed. The 2008 ROV survey showed that exposed portions were sparsely fouled with anemones and bryozoans. Rockfish, flatfish, and sea cucumbers were often seen resting next to the cable. There was no observable disturbance to the sediment next to or under the cable with the exception of one area where cable movement has caused a trench about 15 ft long, 5 ft

wide, and 4 ft deep (4.6, 1.5, and 1.2 m). It appears that the seafloor here is mud, as opposed to loose sand elsewhere, and that mud enabled the trench to form with cable movement.

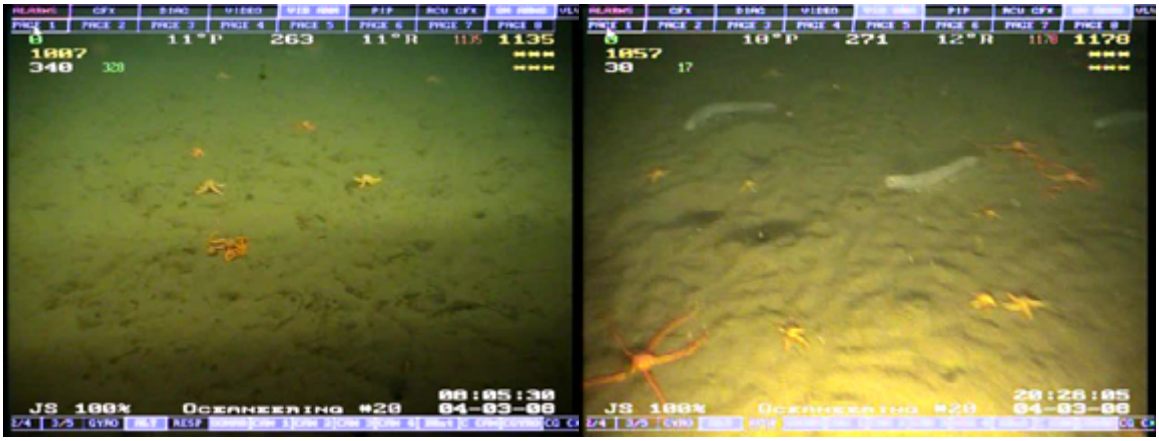

Figure 2-3. Representative snapshots of seafloor near C1 cable from Remotely Operated Vehicle (ROV) survey, April 2008.

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. Cable manipulations on the seafloor and lifting the cable to and from the surface (as described in Section 1.4) is estimated to disturb roughly 5,000 linear ft (1,524 m) of soft bottom seafloor adjacent to the cable and displace a

volume of between five and ten yd^3 (3.8 and 7.6 m^3 of sediment (Section 2.3)). Modifications to habitat include an additional 2,300 ft (701 m) of cable laid in a loop and possibly concrete mats to ensure the loop of the cable stays in position.

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. The closest hard bottom feature is also a potential cultural resource and for these reasons ExxonMobil has established an exclusion zone of 800 ft (244 m) from the feature (see Section 2.6, Cultural Resources). Animals most likely to be crushed or moved 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. The ROV video of the 2008 repair showed cable movements to be gentle and no injury was observed. Animals killed or disturbed from the 200 to 400 ft (61 to 122 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 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. The ROV video survey taken after the 2008 repair found that animals immediately settled near the cable in a similar fashion as before the repair. Anemones were still attached and appeared healthy at several points along the cable. These observations agree with a quantitative study of a cable offshore of Monterey, which concluded that biological impacts from the presence of the cable were minimal (Kogan et al., 2006). Disturbances from this project are localized and minimal and therefore the proposed project would have negligible loss of soft bottom habitat and changes to soft bottom species abundance and composition.

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) 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^3 (820 m^3)) than this project, showed that clay silt at low current velocities took 56 hrs to sink (SAIC and MEC, 1995a). Visual observations from the ROV survey during the 2008 repair showed the plume cleared in less than 10 minutes. 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 previous ROV surveys showed 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 2009 ExxonMobil C1 cable repair project to further reduce and minimize impacts to benthic resources.

- Dynamically Positioned (DP) Vessel for cable repair – Repair vessel to have DP capabilities to maintain position without anchors. (Comp-4)
- Remotely Operated Vehicle (ROV) Monitor and Video Operation – ExxonMobil to require contractors to utilize a ROV to monitor and videotape cable retrieval and cable lay operations of the offshore repair activities, as recorded by ROV during execution of operational procedures. If the ROV observes a rocky outcrop, the ROV to assist the DP vessel in adjusting the able 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. (Comp-14)

In addition, MMS proposed the following mitigation measure:

- 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:
    - The first drawing to show the final location of repaired C1 cable splice and concrete mat locations, envelope of operations, and adjacent infrastructure;
    - Another drawing that, in addition to the above, shows the complete track lines the ROV traveled in the final survey and ROV fixes used to define survey results, bottom scarring, any notable features seen on the video (time index all to match the video and the photographs);
    - Include on all maps the accuracy (or error) in +/- feet of the feature locations;
    - Submit a copy of all drawings digitally in PDF format and as shapefiles (desired format) or drawing (DWG) files for each individual layer group that are compatible with ArcGIS 9.2. Maps should also be oriented to the North American Datum of 1983 (NAD 83) coordinate system based on latitude and longitude; and
    - Raw data of all points should be submitted as ASCII files that are labeled, and include locations to 5 decimal places oriented to NAD 83 coordinate system based on latitude and longitude;
  - A post activity ROV video that continuously shows 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 sea floor 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; and
    - The video to include the time, latitude, and longitude, which matches the locations of features listed on the drawings and dive logs in a way that is easy to index on corresponding video.
  - 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 and how each mitigation measure 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

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. Impacts to hard bottom habitats will be insignificant due to the localized and temporary turbid conditions, as well as the exclusion of operations (Comp-28, Section 2.6) around the nearest hard bottom area.

2.4.4 Cumulative Analysis

Section 1.6 describes the projects considered in the cumulative analysis for the proposed 2009 ExxonMobil 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 Heritage 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 2009 ExxonMobil 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 nonpoint source discharges.

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 2009 ExxonMobil 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.

Nonpoint source discharges. During winter storms, the volume of nonpoint discharges in the form of coastal runoff to creeks and rivers increases and the resulting plumes can reach the project area. These plumes can expose soft bottom habitats in the project area to periods of increased water turbidity. 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 2009 ExxonMobil C1 cable repair project represent an insignificant incremental increase of cumulative impacts to benthic resources

Cumulative Conclusion. Activities from the proposed 2009 ExxonMobil C1 cable repair project represent an insignificant incremental increase of cumulative impacts to benthic resources. Sources of cumulative impacts to the benthos from the 2009 ExxonMobil C1 cable repair include increased turbidity and bottom disturbance from manipulating the cable. The largest sources of turbidity in the project area would come during storms which, when combined with the temporary and short-term increase in turbidity from the project, will result in an insignificant cumulative impact to benthic resources.

2.4.5 Overall Conclusions

The potential impacts to benthic organisms and their habitats 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 2009 ExxonMobil 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 2009 ExxonMobil C1 cable repair project is located in the western Santa Barbara Channel in approximately 1,100 to 1,200 ft (335 m to 366 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 rock 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, 2004; 2005a; 2006; 2007; 2008b). 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 have historically occurred, in the repair activity area when compared to the larger region. These fishing activities consist of traps (spot prawn and 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 for a number of species, such as California lobster.

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 lightly used by commercial fishers compared to historical levels.

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 available regional fishing grounds, 10 percent or more of the fishers using the project area for all or most of a fishing season.

Impacting Factors. The impacting factors on commercial fisheries 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 cable repair 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, resulting in a very small preclusion footprint 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 for the fishing fleet overall; although a small number of fishers may be disproportionately impacted.

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 the current 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, although manipulation of the cable during repair activity may generate furrows in the mud (see Section 2.4.1). 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. It is likely that two concrete mattresses will be used to ensure the cable does not move after repair activities are finished. 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 and the concrete mattresses will have a tendency to sink into the soft mud because of the cable's small size and the relatively heavy weight of the mattresses. 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 commercial fishing are not anticipated.

Mitigation proposed as part of the project. ExxonMobil submitted the following mitigation measures as a part of the 2009 ExxonMobil C1 cable repair project to further reduce and minimize impacts to commercial fishing:

- Dynamically Positioned (DP) Vessel for cable repair – Repair vessel to have DP capabilities to maintain position without anchors. (Comp-4)
- 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 fishers at least 15 days prior to the commencement of offshore activities. (Comp-6)
- Fishing Impacts and Conflicts – ExxonMobil to continue to consult with the Joint Oil/Fisheries Liaison Office (JOFLO) and commercial fishers, 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 Santa Ynez Unit area develop during this project, ExxonMobil to make all reasonable efforts to satisfactorily resolve any issues with affected fishers. 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-7)
- 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-8)
- Recovery of Fan Channel Supports and Subsea Equipment – ExxonMobil to require the repair contractor to recover any fan channel supports (if used) that escape, and repair activity equipment or support items from seafloor prior to demobilization from site. (Comp-9)
- 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-10)
- Survey and Plans to NOAA – ExxonMobil to provide final as-built survey maps of repaired C1 cable location to National Oceanic and Atmospheric Administration (NOAA), as requested, and in the appropriate format. (Comp-11)
- 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. (Comp-19)
- Traffic Corridors – Require repair vessel to utilize approved traffic corridors established by the JOFLO during vessel transits to and from local ports, where feasible. (Comp-27)
- As-Laid Maps to JOFLO – Within 90 days after completion of the repair activities, ExxonMobil to provide, free of charge, maps indicating the exact location of the laid cable to JOFLO for use by interested fishers. (Comp-29)
- Daily Agency Report – ExxonMobil to submit a daily report of repair activity status to MMS, SBCAPCD, JOFLO and other interested agencies during offshore repair activities. (Rep-1)

Mitigations proposed by MMS. As noted in Section 1.7, the MMS combined two of the mitigations originally proposed by ExxonMobil and modified them as given below.

- Wildlife and Fisheries Training – ExxonMobil to show Wildlife and Fisheries Training video (Pacific Operators Offshore, LLC, 2009) to all personnel participating in repair activities. This training will provide awareness training concerning the most common types of marine wildlife (birds, mammals, and sea turtles) likely to be encountered in the repair activity area, and the types of activities that have the most potential for affecting the animals, as well as the importance of fisheries and types of fishing vessels that may 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.
- 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:
    - The first drawing to show the final location of repaired C1 cable splice and concrete mat locations, envelope of operations, and adjacent infrastructure;
    - Another drawing that, in addition to the above, shows the complete track lines the ROV traveled in the final survey and ROV fixes used to define survey results, bottom scarring, any notable features seen on the video (time index all to match the video and the photographs);
    - Include on all maps the accuracy (or error) in +/- feet of the feature locations;
    - Submit a copy of all drawings digitally in PDF format and as shapefiles (desired format) or drawing (DWG) files for each individual layer group that are compatible with ArcGIS 9.2. Maps should also be oriented to the North American Datum of 1983 (NAD 83) coordinate system based on latitude and longitude; and
    - Raw data of all points should be submitted as ASCII files that are labeled, and include locations to 5 decimal places oriented to NAD 83 coordinate system based on latitude and longitude;
  - A post activity ROV video that continuously shows 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 sea floor 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; and
    - The video to include the time, latitude, and longitude, which matches the locations of features listed on the drawings and dive logs in a way that is easy to index on corresponding video.
  - 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 and how each mitigation measure 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

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 and seafloor hazards, 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 2009 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 2009 ExxonMobil 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, the project area is only lightly fished, and 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 domestics 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 2009 ExxonMobil C1 cable repair project will not add significant preclusion impacts to regional commercial fishing activities.

Cumulative Conclusion. The proposed 2009 ExxonMobil 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 or a very small amount of space-use conflict or fishing gear damage from sub-sea hazards is expected. No significant incremental increase to cumulative impacts is 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. In addition, 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 near Platform Heritage, but outside the envelope of operations proposed for the current cable repair project.

An additional survey was run in 2001 to examine the area proposed for the installation of cable C1 in 2003 (ExxonMobil, 2002). The scope of that survey was very narrow and only looked at the cable corridor. In 2008 a ROV survey was also done. This survey provided a visual examination of the anomaly within the cable repair area of operation (ExxonMobil, 2008b).

Consultation. The State Historic Preservation Officer (SHPO) provided a formal consultation of the original SYU 1993 construction, consulting on the four originally identified anomalies and on the Platform Heritage to Harmony gas pipeline installation in 1997. The SHPO was also informally consulted on the 2003 cable repair project and the 2008 cable repair project. MMS

initiated contact with SHPO October 1st on this project; and as a result, formal consultation with SHPO was initiated October 23, 2009. The current consultation covers the one anomaly that lies outside the envelope of operations, near Platform Heritage in approximately 1000 ft (330 m) of water, 8 miles from landfall.

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 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 Santa Ynez Unit area has been thoroughly studied through hazards and magnetometer surveys, data analysis and ROV work to identify anomalies of potential cultural origin. A potential cultural anomaly was identified near the proposed project and was exactly located and videotaped so that it could be completely avoided by the proposed project. 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.

The proposed project, as submitted, avoids impacts to the potential resource. The primary cable repair operation assumes use of a DP vessel which will not have direct impacts on the seafloor. An envelope of operations and a specific exclusion zone, 800 ft (244 m) on a side, were established to avoid impacting the anomaly. The DP vessel has two redundant engines so the likelihood of power loss, and the resulting need to resort to anchors is extremely low. Since an exact location of the anomaly is known, avoidance efforts are expected to be successful.

MMS stipulations on the lease require the operator to immediately notify MMS and stop the operation for further consultation with MMS and SHPO, as needed, should any previously unidentified potential cultural resources be encountered during the activity. MMS inspectors, present in the field during the activity, will also provide oversight.

Mitigation proposed as part of the project. ExxonMobil submitted the following mitigation measures as a part of the 2009 ExxonMobil C1 cable repair project to further reduce and minimize impacts to cultural resources:

- 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. (Comp-12)
- Cultural Resource Avoidance – Require contractors to avoid the previously identified potential cultural resource by a square 800 ft (244 m) on a side to the extent possible

during all offshore repair activities. Any future potential cultural resources would be avoided by at least the required 300 ft radius to the extent possible during all offshore repair activities. Note: ExxonMobil has agreed to increase the exclusion zone for the previously identified anomaly (located southeast of rock outcropping #23 on C1CR As-Built Map) from the required 300 foot radius to an 800 foot square only for the C1CR-2 activity. This increased area can be accommodated in the C1CR-2 activity since there is no anticipated work in the vicinity of this potential cultural resource location. (Comp-28)

- 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. (Plan-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.
  - 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. (Train-3)

2.6.3 Conclusion

Because a thorough survey of the area of operations has been completed, and the anomaly identified as a potentially cultural resource 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 Conclusion. 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 proposed project will not impact cultural resources 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 and the fact that because the exact location of the anomaly is known, avoidance efforts are expected to be successful.

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 2009 ExxonMobil 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 2009 ExxonMobil 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 2009 ExxonMobil 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 covered by the Environmental Justice criteria 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 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 2009 ExxonMobil 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 2009 ExxonMobil 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 2009 ExxonMobil 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 E cable 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 the C1 cable was repaired would be restored. This is critical to continued operations at Platform Heritage. If C1 cable is not repaired and E cable 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.

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

1. Informal consultations with FWS and NMFS related to the Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), and EFH.
2. Coordination and communication with other Federal, State, and local agencies;
3. Formal consultation with the SHPO; and
4. Other key communications.

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 left voice mail messages to FWS on September 17 and 21, 2009, and sent an e-mail on September 21, 2008, to advise them of the proposed project. In the September 21, 2009, 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 September 22, 2009, response e-mail, FWS concurred with MMS's conclusion.

NMFS. Following up on a September 21, 2009, voice mail message, MMS, in a September 21, 2009 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 an October 13, 2009, response e-mail, NMFS concurred with MMS's conclusion.

Also, following up on a voice mail message left on October 5, 2009, MMS sent an email on October 5, 2009, to NMFS describing the proposed project and asked NMFS to concur with MMS's conclusion that the proposed project would have temporary and very minimal effects on EFH. In an October 9, 2009, response e-mail, NMFS concurred with MMS's conclusion stating, "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."

Coordination and communication with other 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 consultations with NMFS, FWS, and SHPO so that the USACE could issue a Rivers and Harbors

Act Section 10 authorization (Section 1.3). MMS provided USACE evidence of project concurrence with FWS and NMFS on October 16, 2009, and with the SHPO on October 26, 2009.

SBCAPCD. ExxonMobil provided information to the SBCAPCD in support of an Authority to Construct/Permit to Operate 13255 and Part 70 Minor Modification 13255. ExxonMobil submitted numerous documents and information to both SBCAPCD and MMS during the permitting process.

Formal consultation with the State Historic Preservation Office

SHPO. By phone on October 1, 2009, and in a letter dated October 21, 2009, MMS contacted the State Historic Preservation Officer regarding the proposed 2009 ExxonMobil C1 cable repair project. These communications summarized the repair activities, provided information on the description of the potential cultural resource, and indicated that the potential cultural resource had been videotaped by a 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 2003 and again in 2008. In a letter dated October 26, 2009, the SHPO concurred with MMS's determination that the proposed project would not affect historic properties. (See Appendix B for a copy of these letters, without the confidential enclosures showing the exact location of the anomaly).

Other Key Communications. One other key point of communication is summarized below:

- The California State Lands Commission (CSLC) sent a letter to Ashworth Leininger Group and ExxonMobil, dated September 15, 2009, acknowledging that no cable repair activities will occur in State waters, and requested copies of 2009 approvals and permits obtained from MMS, USACE, and SBCAPCD (See Appendix B for a copy of the letter).

5.0 List of Preparers

Theresa Bell	Petroleum Engineer
Ann Scarborough Bull	Chief, Environmental Analysis Section
Mark Eckenrode	Air Quality Specialist
Lisa Gilbane	Biologist
Mary Elaine Helix	Biologist
David Panzer	Oceanographer
Greg Sanders	Wildlife Biologist
Donna Schroeder	Marine Biologist
John Smith	Physical Scientist

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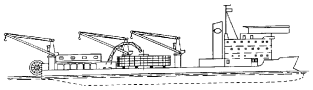
Appendix A Descriptions of the Repair Vessel and the Remotely Operated Vehicle (ROV)

GIULIO VERNE CABLE LAYING SHIP SPECIFICATION



1 SHIP GENERAL CHARACTERISTICS

1.1 IDENTIFICATION

NAME:	GIULIO VERNE
INTERNATIONAL CALL:	IBPU
FLAG:	ITALIAN
PORT OF REGISTRY	NAPLES

1.2 BUILDERS

Hyundai Mipo Dockyard Company Limited
Ulsan
Korea
Construction year 1984

1.3 CLASSIFICATION

R.I.NA.	100-A-1.1-Nav IL; Pcv
Special notations	IAQ-1; IPD-3

1.4 MAIN DIMENSIONS AND PERFORMANCES

- Length Overall 133.18 m
- Moulded Breadth 30.48 m
- Draft at max load (operating four thrusters) 8.50 m
- Moulded Depth 7.62 m
- Loaded Draft Summer Freeboard 5.197 m
- Summer Freeboard 1.79 m
- Deadweight Tonnage 8,840 tons
- Gross Tonnage 10,617 tons
- Net Tonnage 3,185 tons
- Deck Strength Uniform Loading 9.28 tons/m^2
- Max speed 10 knots
- Bollard pull 100 tons
- Light weight 8,004 tons

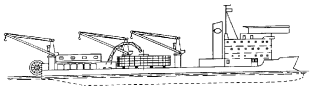
1.5 MACHINERY

The vessel is powered by five Daihatsu diesel gen sets running on gasoil.

- Diesel Engines : Daihatsu 6 DV 22A V12 2,200 BHP at 1,000 RPM
- Generators : Fuji 1500 KW 600 Volt GFV 563ZB-6Z

Emergency/Harbour Generator

- Engine type: Caterpillar 3508 DITA (Marine) 1500 RPM
- Generator: Hyundai Electrical Engineering HFC 3-454-4 500 KVA



Power Supply
600 Volt - 50 Hz for Propulsion
440 Volt - 50 Hz for General Board Network
220 Volt - 50 Hz for user supplies

1.6 PROPULSION

Aft: Two Schottel Lips Azimuth Fixed Pitch Thrusters with Propellers in Nozzles.
Type: 1500/1000 ZS driven by Fuji Electric Motors 1000 RPM, 1250 kW, 600 Volt direct current. Speed control by SCR type

Forward: Two Retractable Schottel Lips Azimuth Fixed Pitch Thrusters with Propellers in Nozzles.
Type: S 1000 LSV driven by Fuji Electric Motors 720 RPM, 1250 kW, 600 Volt direct current. Speed control by SCR type.

Bulb: Tunnel thruster
Type Kamewa TT 1650 K/BMS-CP 710 kW, 380 V, 50 Hz.

1.7 DYNAMIC POSITIONING SYSTEM

Giulio Verne is equipped with a DP system: SIMRAD SDP 21.

1.8 SPEED AND FUEL CONSUMPTION

- Transit Speed: 9 knots in good sea and wind conditions
- Maximum Speed: 10 knots
- Consumption in transit: 15 - 20 tons/day
- Consumption in DP operations: 7 - 11 tons/day
- Consumption in port: 2 tons/day

1.9 CARGO CAPACITY AND AVAILABLE DECK AREA

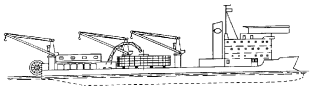
Total cargo capacity is approximately 8,000 tons.
The turntable has a maximum capacity of 7,000 tons of cable.
On the main deck, ahead from the turntable, an area of about 500 m² is available, in which a cable coil of maximum diameter 19 m can be placed: the relevant maximum capacity is approx. 2,500 tons of cable.

1.10 TANK CAPACITY

- Fresh water: 650 tons
- Gas Oil: 650 tons

1.11 REFRIGERATION STORAGE

- Freezer Room -18°C 26 m³
- Vegetable Room +4°C 17 m³
- Dry Provision 50 m³



1.12 ACCOMMODATION

- Crew 20
- Technicians and Representatives 70
  Total 90
  The ship is anyway certified for 96 people
- Hospital with two beds
- Two Clients offices
- One Officer lounge
- Two Crew/General lounges

1.13 HEATING AND VENTILATION

Accommodation and laying-testing control rooms are air-conditioned.

1.14 NAVIGATION EQUIPMENT

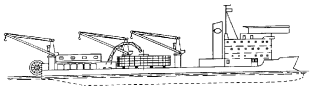
- One - Radar (also A.R.P.A.) Kelvin Hughes 3 cm (Band X) Nucleus 6000 A
- One - Radar Kelvin Hughes 10 cm (Band S) Nucleus 5000 T
- One - Hydrographic Echo Sounder SIMRAD EA500
- One - Echo Sounder JRC Type NJA 178 S
- One - Echo Sounder Kelvin Hughes Type MS 50
- One - Doppler Log JRC type JLN 203
- One - GPS Satellite Navigator Furuno GPS GP 80
- One - GPS Satellite Navigator Furuno GPS GP 30
- Two - VHF Radiotelephone Sailor Type RT 144B
- One - VHF Radiotelephone Furuno VHF FM 8500 (DSC)
- One - Weather Facsimile JRC Type Jax 9A
- One - Autopilot Incorporated into DP System
- Two - GPS Trimble 4000 DS
- Two - Gyro Compass Sperry Type SR 220
- One - Gyro Compass Brown

1.15 COMMUNICATION EQUIPMENT

- One - VHF Transceiver Furuno FM 8500 (DSC)
- One - SSB Transceiver Furuno FS 1562-15
- One - MF DSC terminal receiver Furuno MF DSC-6A
- One - Satellite tel/facsimile Canon Fax-B-150
- Two - Inmarsat C Furuno Type PIB581
- Two - Inmarsat C teleprinter Furuno PP-510
- One - Inmarsat B Furuno Felcom 81
- One - Inmarsat B teleprinter Furuno PP-510
- One - Navtex Receiver Marac Navtex Tel. 100

1.16 BRIDGE, SAFETY AND OTHER EQUIPMENTS

Three GMDSS Emergency VHF Sailor
One Sarsart Cospas (Epirb) Jotron Tron 30S MK2
One Fire Detection System Autronics



One Fire Detection System Notifier AFP 200
Two Radar Trasponder Jotron
Wind Measurement System (2 Sets incorporated into DP System)
Doppler Log
Electronic Fog Bell and Gong System

1.17 LSA EQUIPMENT

Four totally enclosed lifeboats, 50 persons each.
Maker: Watercraft (totally enclosed, equipped in accordance with Solas)

Four liferafts
Type: Viking DK (for 12 persons with emergency pack)

Four liferafts
Type: Pirelli Londra 86 (for 16 persons with emergency pack)

1.18 CAPSTANS AND MOORING WINCHES

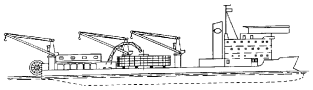
1.18.1 Three electric capstans of 6 tons capacity with line speed 15 meter per minute.
1.18.2 Mooring winches

Forward
Four single drum waterfall winches with 50 tons pull on step 1, 25 tons pull on step 2.
Up to 1200 meter of 52 mm wire. One winch each side classed as a windlass.

- Winch type: Norwinch 1S-50-1T
- Static load Max: 150 ton
- Total Brake Torque: 52,650 kgm
- Winch pull, step 1: 50 tons 1st wrap - 16.25 ton·m
- Winch pull, step 2: 25 tons 1st wrap - 8.125 ton·m
- Winch barrel dimensions: Drum diameter 650 mm
  Drum width 1250 mm
  Flange diameter 2000 mm
  Flange depth 675 mm
- Nominal capacity: 1200 meter of 52 mm wire

Aft
Two double drum waterfall winches with 80 tons pull using both motors onto one drum, 40 tons pull using one motor on each drum. 1200 meter of 52 mm wire.

- Winch type: Norwinch 2S-80-2T
- Static load maximum: 150 ton - 1st wrap
- Total Brake torque
  Winch pull (2 into 1): 80 ton 1st wrap - 28.4 ton·m
  Winch pull (1 into 1): 40 ton 1st wrap - 14.2 ton·m
- Winch Barrel dimensions: Drum diameter 710 mm
  Drum width 1500 mm
  Flange diameter 1850 mm
  Flange depth 570 mm
- Nominal capacity: 1200 meter of 52 mm wire



1.19 CRANAGE

Four Asea cranes:
Hook capacity 25 tons at 22 metres; revolving capacity on 360°
One Electric 2 tons Store Davit next to accommodation starboard side
One Sormec crane 13 tons at 6 m

1.20 ANCHORS

Eight Flipper Delta Anchors of 7 tons each.

2 CABLE LAYING EQUIPMENT

2.1 STARBOARD LAYING LINE

Pick-up arm
- Fitted with motorised wheels
- 3 m bending radius

DOHB machine
- Caterpillar type
- Maximum pulling tension 5 tons at 2 knots in laying mode

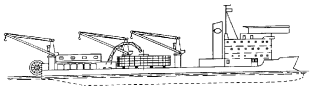
Capstan
- 6 m diameter
- Laying performance:
  50 tons at 2 knots
  20 tons at 5 knots
- Recovering performance
  50 tons at 0.5 knots
  20 tons at 1 knot

Auxiliary machine
- Caterpillar type
- Maximum pulling tension 2 tons (seaward)

Stern sheave
- 6 m diameter
- Fitted with dynamometer for max 50 tons

2.2 PORTSIDE LAYING LINE

Pick-up arm
- Fitted with motorised wheels
- 3 m bending radius



Linear machine
- Maximum pulling tension 10 tons in laying/recovering

Stern sheave
- 6 m diameter
- Fitted with dynamometer for max 20 tons

2.3 7000 tons TURNTABLE

- Carousel outer diameter 25 m
- Carousel inner diameter 6 m
- Carousel height 4 m (extendible to 4.5 m)
- Maximum linear speed at inner diameter: 2 knots

2.4 FIXED CABLE STORAGE AREA

Ahead from the turntable an area is available where a fixed platform for coilable cables can be located.

The maximum diameter is 19 m; the maximum capacity is approx. 2500 tons of cable**.**

2.5 CABLE BURIAL EQUIPMENT

One of the Pirelli ploughs is usually on board, positioned on a suitable structure in the aft area of the ship.

2.6 MISCELLANEOUS

- Rubber boats for cable pulling and landing
- Stoppers - ropes, wires, etc.
- Cable jointing equipment
- Electrical test equipment
- Measuring system for optical cable (power meter, back scattering, etc.)

3 HELIDECK

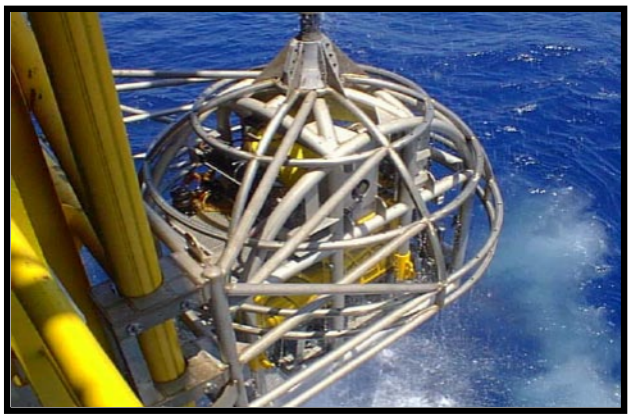
The Helideck is mounted forward on top of the bridge and has been approved suitable for a helicopter having a maximum take-off weight equal to 5080 kg.

MAGNUM® 100 HORSEPOWER ROV SPECIFICATIONS

The Hydra® Magnum® remotely operated vehicle (ROV) represents the backbone of Oceaneering's fleet of high-powered ROV work systems with deepwater capabilities. Reliable and easily maintained, the ROV provides a 100 hp, high-thrust, cage-deployed system that is designed to accommodate underwater intervention tasks in support of oil and gas drilling, construction, and production activities. The Hydra Magnum ROV evolved from years of experience in deepwater work class ROV operations. The ROV delivers performance in water depths to 10,000 fsw and also in severe weather conditions.

Oceaneering maintains a world leadership position in providing deepwater work class ROVs to the oil and gas industry. The Hydra Magnum ROV and other types of ROVs in the company's extensive fleet are designed and built at Oceaneering's Morgan City, Louisiana facility.

- Field Proven
- Ultra Reliable
- High-Powered
- Easily Maintained



The side-entry cage, with a capacity of 600 ft of neutrally buoyant flying tether, provides protection during launch and recovery, makes deployment and recovery more efficient in marginal weather and high currents, provides additional tooling capabilities and storage, and provides additional payload for the deployment and recovery of sub sea equipment.

The ROV manufacturing assembly area at Oceaneering's Morgan City, LA facility.

VEHICLE

Dimensions:	8'L x 4.6'W x 5'H
Weight:	5,000 lbs.
Depth Rating:	10,000 FSW
Additional Ballast:	300 lbs
Power Requirements:	480Vac, 3 phase, 60Hz
Electric Horsepower:	100HP (2 x 50HP Units)
Hydraulic Power:	38GPM @ 3,000PSI
Propulsion System:	2 x Axial 2 x Lateral 2 x Vertical
Thrust Performance	1,100 lbs- Fore/Aft 875 lbs- Lateral 875 lbs- Vertical
Video Suite:	1 x Wide angle low light 1 x Color 12:1 zoom 1 x B&W CCD 1 x B&W CCD
Sensors:	1 x Color imaging sonar 1 x Digital gyrocompass 1 x Dinsmore heading sensor 1 x Paroscientific digiquartz sensor 1 x Omega pressure transducer 1 x Altimeter 1 x Pitch & Roll
Lighting:	4 x 250 watts
Manipulators:	2 x 7- function
Auto Controls:	Depth / Heading / Altitude
Spare Tooling Valves:	3 x rate valves 1 x proportional valves
Data Transmission:	Copper / Fiber Optic
Spare Sensor Channels:	3 x RS232 or RS485
Hydraulic Filtration:	HP, LP, oil & water separator

TETHER MANAGEMENT SYSTEM

Dimensions:	10'L x 6.'W x 11'H
Weight:	6,400 lbs
Horsepower:	1 x 50 HP Hydraulic Unit
Tether Capacity:	600 ft
Propulsion System:	2 x Axial
Cameras:	2 x Black & White
Lighting:	2 x 250 Watts
Tooling Options:	Add on Baskets / Skid Packages

ROV CONTROL CONTAINER

Dimensions:	20'L x 8'W x 8'H (max.)
Weight:	17,000 lbs
Video Recorders:	2 x VHS Recorders 2 x DVD Recorders (optional)
Monitors:	2 x VGA 2 x NTSC
Complements:	10 x 10 Video Switcher System Digital Video Display Picture in Picture Capability Pilot & copilot stations Digital Image Capture Capability Offshore streaming video (optional) Environmental control unit Enclosed Power Distribution Unit

MAINTENANCE CONTAINER

Dimensions:	20'L x 8'W x 8'H (max.)
Weight:	20,000 lbs
Complements:	System spares inventory Mechanical/power tools Electrical testing gear Work space Consumables

DEPLOYMENT WINCH / UMBILICAL

Dimensions:	11'L x 7'W x 12'H
Weight:	55,000 lbs (w/umbilical)
Horsepower :	1 x 125 HP unit (standard) 2 x 125HP units (optional)
Line Speed:	100 feet/minute (standard) 200 feet/minute (optional)
Umbilical Capacity:	11,500 ft.
Umbilical Type :	Dual armor/ fiber/ copper

LAUNCH & RECOVERY SYSTEM

Dimensions:	25'L x 11.5'W x 29'H
Weight:	49,500 lbs
Complements:	Articulating Frame Latching docking head 4 x hydraulic cylinders

AUXILIARY POWER UNIT

Dimensions:	5'L x 3'W x 5'H
Weight:	2,000 lbs
Horsepower:	1 x 25HP unit
Complements:	Pressure/flow control Directional control Filtration system

ROV SUB-SEA TOOLING

1.25"Ø Wire Rope Cutter
1.5" Ø Soft Rope Cutter
AX/VX Ring Gasket Tool
TP03 Dredge Pump
GR29 Grinder / cutter

MOTOR GENERATOR

Dimensions:	8'L x 8'W x 8'H
Weight:	7,000 lbs
Input Power:	300amps @ 480Vac
Power Output:	225amps @480Vac

**If required

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

Fish and Wildlife Service
Re: Endangered Species Analysis

From: Chris_Dellith@fws.gov [mailto:Chris_Dellith@fws.gov]
Sent: Tuesday, September 22, 2009 9:24 AM
To: Sanders, Greg
Subject: Re: FW: ExxonMobil Cable Repair, Platform Heritage (again)

Hi Greg,

Great speaking with you this morning. As we discussed and based on the information below, the Service agrees with your conclusion that this project will not affect federally listed species for which the Service is responsible.

Sincerely,
Chris

==========

Chris Dellith
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

From: Sanders, Greg
Sent: Monday, September 21, 2009 4:00 PM
To: 'Dellith, Chris'
Cc: Bull, Ann S.; Bell, Theresa; Schroeder, Donna M
Subject: FW: ExxonMobil Cable Repair, Platform Heritage (again)

Hi Chris,

I left voice mail messages for you on September 17th and today, September 21st. I called again today and confirmed that you had left for the day. Please give me a call if you have any questions with respect the information below.

ExxonMobil is proposing to repair an electrical cable that supplies power to their Santa Ynez Unit offshore oil and gas facilities (Platforms Hondo, Harmony, and Heritage). This is the same cable that developed a ground fault and was repaired in 2008 (see e-mail from you to me dated June 19th, 2008, attached). The repaired cable has now failed approximately 2,800 feet southeast of Platform Heritage, in the proximity of the shore side splice of the previous repair. ExxonMobil proposes to again 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 up to 25 days to complete (including mobilization of the repair vessel) and is expected to start as early as November 2009. A more detailed description of the proposed work is attached.

As with the previous repair, the repair ship will remain essentially stationary near Platform Heritage, using dynamic positioning (no anchors). Lighting on deck will be minimized and the project area is not near any seabird colonies. It is possible, but very unlikely, that sea otters would enter the project area. If they were to enter the area there is no aspect of the repair operation that would affect them. The 2008 cable repair operation used the same techniques and was performed in the same area. During this repair, no adverse effect on seabirds were observed and no sea otters were reported in the area.

ExxonMobil has submitted several actions as part of their project proposal. We are requiring them to 1) Train all offshore project personnel and vessel operators as to the types of wildlife likely to be encountered in the area and the types of activities that have the most potential for affecting the animals. A new Wildlife and Fisheries Training video developed by Pacific Offshore Operators may be used for this purpose (see http://www.pacops.com/news/fisheries-video/); and, 2) Minimize use of lights on the upper deck of the repair vessel.

As a result of my analysis and our discussion of the previous repair in 2008, 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

<<FWS Review.pdf>> <<XOM C1CR-2 cable repair activities initial submission 23 Jun 09.pdf>>

Gregory S. Sanders
Wildlife Biologist
Minerals Management Service
Pacific Region
770 Paseo Camarillo
Camarillo, CA 93010
(805) 389-7863
(805) 389-7863

National Marine Fisheries Service
Re: Marine Mammals and Protected Species

From: Monica DeAngelis [mailto:Monica.DeAngelis@noaa.gov]
Sent: Tuesday, October 13, 2009 7:29 AM

To: Sanders, Greg
Subject: Re: ExxonMobil Power Cable Repair, Platform Heritage (again)

Hi Greg,

NMFS concurs with your determination that the cable repair work for the Exxon Mobil Power Cable repair at Platform Heritage with have no effect on ESA-listed marine mammals. However, non ESA-listed marine mammals may interact with project activities, but it is not expected that these interactions would be takes (i.e. at Level B or A harassment levels). 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, Exxon Mobil or MMS can also contact me should any interaction with a marine mammal occur as a result of project activities.

Let me know if anything more is needed.

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

Sanders, Greg wrote:
Hi Monica,

On September 21st, 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). This is the same cable that developed a ground fault and was repaired in 2008 (see e-mail from you to me dated June 18th, 2008, attached). The repaired cable has now failed approximately 2,800 feet southeast of Platform Heritage, in the proximity of the shore side splice of the previous repair. ExxonMobil proposes to again 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 up to 25 days to complete (including mobilization of the repair vessel) and is expected to start as early as November 2009. 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.

The 2008 (October) cable repair operation used the same techniques and was performed in the same area. During this repair, humpback whales were observed near repair vessel but did not interact with the operation. Sea lions occasionally interacted with the remote operated vehicles (ROV) as they worked on the bottom. No adverse interactions with marine mammals were observed. The new repair is proposed to begin in November and may coincide with gray whale migration. As with other whale species, no adverse interactions with gray whales are expected to occur as a result of this project.

ExxonMobil has submitted several actions as part of their project proposal. We are requiring them to 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. A new Wildlife and Fisheries Training video developed by Pacific Offshore Operators may be used for this purpose (see http://www.pacops.com/news/fisheries-video/); 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) Notify you (NMFS) if any marine mammal incident occurs

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

<<NMFS Review.pdf>> <<XOM C1CR-2 cable repair activities initial submission 23 Jun 09.pdf>>

Gregory S. Sanders
Wildlife Biologist
Minerals Management Service
Pacific Region
770 Paseo Camarillo
Camarillo, CA 93010
(805) 389-7863
(805) 389-7863

National Marine Fisheries Service
Re: Essential Fish Habitat

From: bryant.chesney [mailto:Bryant.Chesney@noaa.gov]
Sent: Friday, October 09, 2009 5:31 PM
To: Schroeder, Donna M
Cc: Bull, Ann S.
Subject: RE: ExxonMobil Cable Repair, Platform Heritage (again)

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

From: Schroeder, Donna M [mailto:Donna.Schroeder@mms.gov]
Sent: Monday, October 05, 2009 4:16 PM
To: Bryant Chesney
Cc: Bull, Ann S.
Subject: ExxonMobil Cable Repair, Platform Heritage (again)

Hi Bryant,

Last June, 2008, I talked with you on the telephone and emailed you about ExxonMobil's repair of an electrical cable that supplies power to their Santa Ynez Unit offshore oil and gas facilities (Platforms Hondo, Harmony, and Heritage), and the repair activities' effect on Essential Fish Habitat (EFH). This cable had developed a ground fault approximately 833 m (2,750 ft) from Platform Heritage in water depths approximately 340 m (1,125 ft) deep, and was repaired 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 cable has developed another ground fault at the 2008 splice location (approximately 2,800 ft from Platform Heritage) and will need to be repaired again.

The proposed repair activities for this 2009 repair are very similar to the 2008 repair. A detailed description of the proposed work is attached to this email. As confirmed by a visual survey from a remotely operated vehicle, 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.

As in 2008, it is estimated that this repair may take as long as 25 days (which includes mobilization of the repair vessel). The repair ship will remain essentially stationary near Platform Heritage, using dynamic positioning (no anchors).

My analysis of this 2009 cable repair repeats the conclusion of the 2008 repair: the proposed ExxonMobil power cable repair will have temporary and very minimal adverse effects on Essential Fish Habitat (EFH), and so I propose no additional mitigation measures to avoid, minimize, or otherwise offset the impacts to EFH.

Please let me know via e-mail if you agree with this conclusion.

Thank you.
Donna

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

Donna M. Schroeder
Pacific OCS Region
Minerals Management Service
770 Paseo Camarillo
Camarillo, CA 93010-6095
voice 805.389.7805
FAX 805.389.7874
donna.schroeder@mms.gov

United States Department of the Interior

MINERALS MANAGEMENT SERVICE
Pacific OCS Region
770 Paseo Camarillo
Camarillo, California 93010-6064

October 21, 2009

Milford Wayne Donaldson
State Historic Preservation Officer
California Department of Parks and Recreation
1416 9th Street, Room 1442-7
Sacramento, CA 95814

Attention: Ed Carroll

Re: Consultation on ExxonMobil Power Cable Repair Project in the Santa Barbara Channel, 2009

Dear Mr. Donaldson:

The purpose of this letter is to consult with you under Section 106 of the National Historic Preservation Act on an offshore power cable repair project being reviewed by our office. ExxonMobil proposes to repair a failed electric cable on the seafloor in over 1000 ft (330 m) water in Federal waters near Platform Heritage approximately 8 miles (13 km) from land (see Map 1). Under the current schedule, this activity could occur in November 2009. The repair will ensure there are redundant sources of power to the platform.

The Minerals Management Service (MMS) is also completing a separate Environmental Assessment in accordance with the National Environmental Policy Act. Our review of this project finds that impacts to anomalies on the seafloor, which may be resources of cultural significance, will be completely avoided. This is based on the following reasons:

1) The seafloor has been thoroughly studied in the project area, and the exact location of the one anomaly in the cable repair area is known.

The original project, which is located offshore in Federal waters in the western Santa Barbara Channel, included a total of four platforms, associated pipelines connecting the platforms to shore, offshore cables, and an onshore facility. The required cultural resource survey (including shallow hazards and magnetometer) was completed and, in accordance with MMS regulations, independently reviewed and analyzed by a certified marine archeologist (Dames and Moore, 1982). These data were also reviewed as part of the formal State Historic Preservation Officer (SHPO) consultation on the original construction project in 1984. The SHPO was also consulted in 1997 for the Platform Heritage to Platform Harmony pipeline installation and in 2003 for the ExxonMobil cable

repair project for the corridor in the same general area. In all cases, the survey area required by MMS is scaled to water depth to include the full potential extent of bottom disturbance activities, plus a buffer to account for any operational or navigational error. This ensures that the entire area that could potentially be affected is thoroughly studied. The current ExxonMobil 2009 cable repair project area is a subset of the originally approved project area near Platform Heritage. Several additional surveys and inspections have been conducted in the last few years in the area around Platform Heritage. One survey was run in 2001 to examine the area proposed for the first cable repair project (ExxonMobil, 2002). The scope of that survey was narrow and only looked at the cable corridor. In 2008, a remotely operated vehicle (ROV) survey was also done. This survey provided a visual examination of an unidentifiable anomaly within the cable repair area of operation (see Map 2).

In the original project, four anomalies of potential cultural significance were identified by a certified marine archeologist. Three anomalies were identified in Federal waters and one in State waters. No new anomalies or other potential cultural resources have been identified during the additional surveys. One of the four identified anomalies is located in the general vicinity of the currently proposed project, but is outside the envelope of operations. A video of the anomaly was collected by a ROV and so an exact location of the anomaly is known. This anomaly is in deep water, over 1,000 ft (330 m), and is located about 8 miles (13 km) from shore (see Map 2).

2) The MMS requires complete avoidance of anomalies of potential cultural significance.

The anomaly identified as a potential cultural resource is not located in the direct proximity of the cable corridor. ExxonMobil has committed to an exclusion zone measuring 800 m x 800 m as an extra buffer to ensure that repair activities completely avoid the area near the anomaly (see Map 1).

Since the exact location of the anomaly is known, efforts to completely avoid the resource are expected to be successful. The MMS offshore inspectors present during repair activities will also provide oversight.

3) ExxonMobil proposes to use a dynamically positioned vessel to conduct the repair; hence, there will be no bottom disturbance from anchors.

Other than lifting and placement of the power cable, there are no other bottom disturbance activities associated with the project. The only scenario in which anchors might be deployed is if the vessel lost power. The vessel has two redundant engines so the likelihood of power loss, and the resulting need to deploy anchors, is extremely low.

4) ExxonMobil proposes the below mitigation measures to further reduce the possibility of disturbance by ensuring their employees and contractors are aware of the anomaly.

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. The vessel operator will insert cultural site coordinates into the vessel navigation system.

Cultural Site Avoidance Plan – ExxonMobil will submit to MMS, prior to the start of offshore repair activities, a plan that details the procedures to be followed to avoid cultural resources in the repair activity area. The MMS has received this plan; it is attached to this letter and, as you know, it needs to be protected as confidential materials since it contains the anomaly location.

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 will attend training and sign log indicating completion of training;
2) Training will be conducted prior to repair vessel arriving at repair site;
3) Any personnel arriving after initial training completed will be provided training by ExxonMobil representative onboard vessel.

5) The MMS regulations require, if previously unidentified cultural resources are encountered, that operations cease and the MMS/SHPO be consulted before proceeding with repair activities.

It is unlikely that previously unidentified cultural resources would be encountered during operations; however, the possibility exists. If cultural resources are encountered during the operation, a stipulation on the lease and the mitigations proposed as part of the project require that ExxonMobil would immediately notify MMS and avoid the site, or halt the operation and perform an investigation according to MMS instructions, in consultation with the SHPO, to assess whether the site is significant. If the site is significant, ExxonMobil would protect the resource according to MMS instructions. All identified potential resources will be avoided; unidentified potential cultural resources, should they be identified, will be protected.

We appreciate the opportunity to work with your office to ensure that resources of potential cultural importance are protected. If you have any additional comments or questions, please contact Mary Elaine Helix at (510) 817-1479. We hope to hear from you in the near future.

Sincerely,

Lynnette L. Vesco

Lynnette L. Vesco
Regional Supervisor
Office of Leasing and Environment

cc: Ed Carroll, Office of Historic Preservation (with confidential enclosures)

Enclosures:

(1) Map 1: ExxonMobil Santa Ynez Unit As-Built Cable C-1 Repair

(2) Map 2: Confidential Material, ExxonMobil Santa Ynez Unit Cable C-1 Survey

(3) Document 1: Confidential Material, Santa Ynez Unit C1CR-2 Cable Repair Activity, Site Avoidance Plan - Offshore

References:

Dames and Moore. 1982. Marine Cultural Resource Assessment. Santa Ynez Unit offshore Santa Barbara County, for Exxon USA.

ExxonMobil. 2002. ExxonMobil Santa Ynez Unit Offshore Power System Repair Project, Pre-Lay Cable Route Survey: Platform Heritage to shore including alternate route and Platform Harmony to Platform Hondo. Offshore Santa Barbara, California. Final Report. Performed by Fugro West Inc. Side-scan sonar, sub-bottom profiler, magnetometer, and bathymetric recordings. 33 pp., 6 Appendices, and Survey Charts.

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
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(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

October 26, 2009

Reply in Reference To: MMS091023A

Lynette L. Vesco
Regional Supervisor
Minerals Management Office
Pacific OCS Region
770 Paseo Camarillo
Camarillo, CA 93010-6064

Re: Cable Repair near Platform Heritage, Santa Barbara Channel

Dear Ms. Vesco:

Thank you for initiating consultation regarding the Minerals Management Service's (MMS) efforts to comply with Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f), as amended, and its implementing regulation found at 36 CFR Part 800. You are seeking my concurrence that the above referenced project will not affect historic properties.

The Minerals Management Service has identified the undertaking as the removal and replacement of a failed seafloor electrical cable near Platform Heritage in the Santa Barbara Channel. This repair will return the offshore power system to its original capabilities. Surveys of the project area by a certified marine archeologist identified a complex feature measuring 50-100 feet wide approximately 3000 feet from the project area. Although repair activities are not anticipated to affect this resource, its coordinates will be provided to the repair vessel's captain in advance of project initiation and the resource will be centered within an 800 foot radius protective buffer zone. The repair vessel will not require anchoring and minimal ground disturbance will be associated with cable removal and replacement.

In addition to your letter, you have submitted maps, photographs, project plans and the following document in support of this undertaking:

- *Santa Ynez Unit C1CR-2 Cable Repair Activity Cultural Site Avoidance Plan-Offshore* (Exxon: October 2009)

After reviewing the submitted documentation, I have the following comments:

1) I concur that the Area of Potential Effect (APE) has been properly determined and documented pursuant to 36 CFR Parts 800.4 (a)(1) and 800.16(d).

2) I concur that a finding of No Historic Properties Affected is appropriate pursuant to 36 CFR Part 800.4 (d)(1) and that the documentation supporting this finding had been provided pursuant to 36 CFR Part 800.11(d).

3) Please be advised that under certain circumstances, such as an unanticipated discovery or a change in project description, you may have future responsibilities for this undertaking under 36 CFR Part 800.

Thank you for seeking my comments and considering historic properties as part of your project planning. If you have any questions or concerns, please contact Ed Carroll of my staff at (916) 653-9010 or at email at ecarroll@ca.parks.gov.

Sincerely,

Susan K Stratton for

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

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
California Relay Service From TDD Phone **1-800-735-2922**
from Voice Phone **1-800-735-2929**

Contact Phone: **(916) 574-1879**
Contact FAX: **(916) 574-1925**

September 15, 2009

File No. PRC 7163.1

Bill Grady
Ashworth Leininger Group
5623 West 25th Street
Greeley, CO 80634-4507

Dear Mr. Grady:

SUBJECT: C1CR-2 Cable Repair, Santa Ynez Unit, Near OCS Platform Heritage in the Pacific Ocean Offshore of El Capitan State Beach, Los Flores Canyon, Santa Barbara County

Staff of the California State Lands Commission (Commission) appreciates your recently providing advanced notice, on behalf of your client, ExxonMobil Corp., of the proposed C1CR-2 cable repair project. As you are aware, a portion of this cable is located within the Lease Premises of General Lease – Right of Way Use, No. PRC 7163.1, issued to ExxonMobil Corp.

Commission staff understands a failure in a 2008 repair of the same cable has occurred at one of the splices installed last fall. The failed cable splice is located ½ mile southeast of Platform Heritage in federal waters of the Outer Continental Shelf (OCS). No repairs are scheduled to take place in the cable located in state waters. You indicated that Exxon Mobil is proposing to repair the failed splice starting in late November 2009 using the same approach as was used in the October 2008 repair.

In connection with the planned cable repair, please provide to the Commission, copies of 2009 approvals and/or permits obtained from the Mineral Management Service, the U.S. Army Corps of Engineers and the Santa Barbara County Air Pollution Control District. Additionally for Commission staff review, please provide a copy of the final post-repair report.

If you have any questions, please feel free to call me, at (916) 574-1879.

Sincerely,

Susan M. Young
Public Land Management Specialist

cc: Beth Neil
ExxonMobil Production
P.O.Box 4358
Houston, TX 77210-4358