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STAFF REPORT
COASTAL DEVELOPMENT PERMIT APPLICATION

CDP Application No.:	**E-04-010**
Applicant:	**Atlantic Richfield Company (ARCO)**
Project Location:	State of California Tidelands Lease No. 421 (PRC-421), offshore of City of Goleta, two miles west of Coal Oil Point, Santa Barbara Channel.
Project Description:	Removal of remnant oil and gas pier structures; installation of four bird roost platforms and support piles; and construction and kelp seeding of artificial reef.
Substantive File Documents:	See Appendix A

SYNOPSIS

The proposed project consists of three principal components: (1) removing remnants of a 1930's oil and gas pier; (2) installing four piles and 800 square feet of bird roosting/nesting platforms; and (3) constructing an artificial reef on State Lease PRC-421, located about two miles west of Coal Oil Point, offshore of the City of Goleta, Santa Barbara County (see Exhibit 1).

Although the applicant for this coastal development permit is Atlantic Richfield Company (ARCO), the project is a joint ARCO/California Department of Fish and Game (DFG) endeavor. In 2000, ARCO originally applied to the California States Lands Commission (CSLC) to remove all of the remnant pier structures and return the site to its pre-development condition. In reviewing that project, DFG expressed serious concerns about removing the derelict structure because it currently serves as a prime roosting site for the California brown pelican, a federal- and state-listed endangered species, and a roosting/nesting site for the Brandt's cormorant, a state fully protected species. Since the pier is in a severe state of deterioration and likely to suffer a catastrophic collapse in the near future, DFG strongly recommended that the project include the construction of new bird platforms at the site to replace the remnant pier structure. DFG also recommended that the project include an on-site artificial reef to enhance offshore hard substrate and kelp habitat.

In response to DFG's concerns and recommendations, ARCO developed an alternative project that includes (1) removal of the remnant pier except for eight concrete caissons that are to be toppled in place, (2) installation of four bird platforms, and (3) placement of 3,000 cubic feet of quarry rock to augment the toppled caissons (see Exhibits 4 and 5) and form an artificial reef. DFG has approved the bird platform and reef designs, and CSLC approved the overall project in June 2004.

ARCO will undertake all pier removal work and construct the bird platforms and artificial reef. Once construction activities are complete, the CSLC will issue to DFG a new lease for the seafloor area of Lease PRC-421 occupied by the reef and bird platforms. This CDP will be transferred from ARCO to DFG at that time. DFG will then assume all liability and maintenance responsibilities for the reef and bird platforms. The reef has been designed specifically as kelp habitat. (After construction, the Santa Barbara Channelkeeper proposes to "seed" the reef with kelp and then monitor the success of kelp restoration efforts). The reef materials – the concrete caissons and quarry rock – meet DFG's artificial reef material requirements.

Proposed decommissioning and construction activities have the potential to adversely affect marine resources such as fish and marine mammals (due to explosives use during decommissioning) and kelp and natural hard substrate (due to vessel anchoring). To eliminate or significantly reduce any adverse marine resource impacts, the applicant proposes to implement an Anchor Mitigation and Hardbottom Avoidance Plan, an Explosives Operations Plan, a Wildlife Protection Plan and a Marine Mammal Contingency Plan. (Details of these plans are included in section 4.4.2 of this report.) Also, the CSLC is requiring implementation of a Mitigation Monitoring Plan that requires, among other measures, detailed marine mammal

monitoring and pre-and post-construction kelp surveys. Coastal Commission staff is recommending special conditions to address potential kelp loss and impacts to abalone. If project-related activities cause unavoidable kelp loss, as demonstrated by pre-and-post construction surveys, **Special Condition 4** requires the applicant to perform an additional post-construction survey one year after completion of the project. If the survey results demonstrate that the lost kelp has not fully reestablished, the applicant will be required to submit an amendment to this permit for kelp restoration and monitoring. **Special Condition 5** requires the applicant, within 30 days before project commencement, to survey the project area for abalone. If abalone is found, the applicant is required to follow the recommendations of NOAA Fisheries and DFG abalone experts and not commence work until the Executive Director of the Coastal Commission is satisfied that the recommendations have been followed.

The purpose of the bird platforms is to provide long-term, secure roosting and nesting habitat for special-status seabirds consistent with the resource protection goals of the Coastal Act. If, however, the birds do not use the new structures for roosting and nesting, Coastal Commission staff is recommending they be removed. **Special Condition 7** requires the bird platforms to be monitored annually for a period of five years. If after five years the monitoring results demonstrate that seabirds are not using the platforms for roosting and/or nesting, the applicant must submit an amendment to this permit to remove the platforms.

Commission staff believes the proposed project, as conditioned herein, will be carried out in a manner consistent with the resource protection and use policies of the Coastal Act. Commission staff therefore recommends **approval** of the project, as conditioned.

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1.0 STAFF RECOMMENDATION

Approval with Conditions
The staff recommends conditional approval of the permit application.

Motion:

I move that the Commission approve Coastal Development Permit E-04-010 subject to conditions set forth in the staff recommendation specified below.

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of Commissioners present.

Resolution:

The Commission hereby approves the Coastal Development Permit for the proposed project and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

2.0 STANDARD CONDITIONS

1. **Notice of Receipt and Acknowledgment**. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration**. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation**. Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment**. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

3.0 SPECIAL CONDITIONS

This permit is subject to the following special conditions:

1. **Scope of Project Approval.** This permit authorizes those project activities specifically described in section 4.2 of this staff report, except as modified by the conditions of this permit. Any modifications to the project shall require an amendment to this permit.

2. **Indemnification.** In addition to any immunities provided for by law, in exercising this permit, the applicant agrees to hold harmless and indemnify the Coastal Commission, its officers, employees, agents, successors and assigns from any claims, demands, costs, expenses and liabilities for any damage to public or private properties or personal injury that may result directly or indirectly from the project.

3. **Anchor Placements.** The locations of the nearshore anchor placements and temporary moorings shall be ground-truthed and surveyed by a diver no more than 30 days prior to project commencement, to determine if anchor site revisions could reduce impacts to kelp and hardbottom habitat.

4. **Kelp Monitoring.** The applicant shall perform pre- and post-construction kelp surveys as described in the *Work Statement for Pre- and Post-Demolition Assessment of Kelp Resources Associated with Removal of Remnant Pier Structure in State of California Tidelands Lease PRC-421, Santa Barbara County, California* (dated August 9, 2004 and revised December 13, 2004) ("Kelp Survey Plan"). In addition to surveying the anchor placements and anchor corridors, as specified in the Kelp Survey Plan, the applicant shall survey all areas in which project activities could potentially impact kelp. The pre-construction survey shall take place within the minimum feasible amount of time between the survey and the beginning of construction activities, and in any case within 30 days prior to the beginning of construction. The post-construction survey shall take place within the minimum feasible amount of time between the survey and the completion of construction activities, and in any case within 30 days after the completion of construction.

   A report shall be submitted to the Executive Director of the Coastal Commission (hereinafter, "Executive Director") within 60 days of completion of the post-construction survey, describing the results of the surveys and evaluating whether the loss of kelp is due to construction activities. If the report demonstrates there is loss of kelp due to construction activities, the applicant shall perform an additional post-construction survey one year after the completion of construction activities. A second report shall be submitted to the Executive Director within 60 days of completion of this third survey. If after one year any kelp lost due to project-related construction activities has not fully reestablished, the applicant shall within 60 days from submitting the final post-construction survey report

submit to the Coastal Commission an application for an amendment to this permit for kelp restoration and monitoring.

5. **Abalone.** Within 30 days prior to project commencement, the applicant shall perform a pre-construction abalone survey as described in the *Work Statement for Pre-Demolition Assessment of Abalone Resources in Areas Associated with Demolition of Remnant Pier Structure in State of California Tidelands Lease PRC-421, Santa Barbara County, California* (dated September 1, 2004) ("Abalone Survey Plan"). If abalone is located in the project area, the applicant shall immediately notify NOAA Fisheries, DFG and the Executive Director, as described in the Abalone Survey Plan. The applicant shall follow the recommendations of NOAA Fisheries and DFG abalone experts with regard to the disposition of any abalone identified in the project area. No construction activities shall occur until the Executive Director is satisfied that the recommendations of NOAA Fisheries and DFG have been followed.

6. **Clean Seas Contract.** Prior to commencement of the project, the applicant shall submit to the Executive Director a written copy of an executed Clean Seas Associate Member contract for on-water and shoreline oil-spill response, recovery and clean-up services, for the time frame that will cover all the project-related decommissioning and construction activities.

7. **Bird Roost Platforms.** For five years after construction of the bird platforms, the applicant shall monitor the use of the platforms by seabirds (i.e., California brown pelican and Brandt cormorant). Monitoring shall occur at least annually and include identification and abundance of seabirds and roosting and nesting behavior. The applicant shall submit to the Executive Director by the end of each calendar year an annual seabird monitoring report, with a final report due at the end of the five-year monitoring program. If after reviewing the final report the Executive Director determines that the platforms are not being used by seabirds as a nesting/roosting structure, the applicant shall, within 90 days of the Executive Director's determination, submit an amendment to this permit to remove the bird platforms.

8. **Air Board Permit.** Prior to the issuance of this permit, the applicant shall submit to the Executive Director evidence that the Santa Barbara County Air Pollution Control District (APCD) has issued an Authority to Construct permit for the project.

4.0 FINDINGS AND DECLARATIONS

The Commission finds and declares as follows:

4.1 Project Setting and Background

In August of 1929, the State of California issued a lease for PRC-421, located about two miles west of Coal Oil Point in the Santa Barbara Channel, off the coast of the City of Goleta in the County of Santa Barbara (see Exhibit 1). Between 1930 and 1933, Bankline Oil Company drilled two wells (Wells No. 7 and No. 10) and constructed an oil development pier on the lease site. The original structure consisted of a wooden causeway running from the beach to Well No. 7, located approximately 550 feet from shore, then further seaward to Well No. 10, located at the

offshore end of the pier, about 850 feet from the shoreline. The pier was wide enough to allow vehicles to drive to each of the wells, while at each well location the pier was wider to allow for the placement of drilling and production equipment. Both wells were permanently plugged and abandoned by the late 1950's, and by 1958, most of the above-surface pier structures extending out to the offshore well had been removed. After abandonment, however, undersea pilings from the original causeway and an above-surface section of pier located at the offshore well (Well No. 10) remained in place.

There currently exists a visibly deteriorating remnant pier structure at Well No. 10, located approximately 850 feet offshore in about 32 feet of water (see Exhibit 2). Seafloor remains of the pier extend northeastward from the visible structure toward the shoreline. The pier remnants terminate within approximately 400 feet of the shoreline. The visible structure is composed of eight steel-reinforced concrete caissons with riveted steel trusses connecting them at the top. The steel trusses support the remains of a wooden deck. Each caisson is nominally eight feet in diameter, extends approximately 18 feet above the water, and is composed of four steel 'H' piles surrounded by a composite of concrete and reinforcing rods. The caissons are arranged in three parallel rows with a northwest to southeast orientation. Together, the eight caissons form a thick "L" shape measuring about 60 feet by 60 feet. A portion of the northwestern-most caisson has collapsed in previous storm events, and is currently resting on the seafloor. A conductor pipe from a previously abandoned well (Well No. 10), estimated to be 24 inches in diameter, is located within the northwest section of the structural footprint.

Metal I-beam piling remnants of the original (now absent) causeway are aligned toward the shoreline, terminating before reaching the shoreline. These pilings extend up to 4 feet above the ocean bottom. Many of the piles are bent over (towards shore) or covered with sand; however, none of the piles extend above the water surface. In addition, a second well conductor pipe (from Well No. 7) measuring 18 inches in diameter extends to 8 feet above the ocean bottom, and is located within the original pier alignment approximately 550 feet from shore at a depth of -18 feet. This well conductor is surrounded by a 4-foot tall rock and sheet pile, a 36-inch diameter casing at its base, and several piling remnants projecting up to four feet out of the rock pile. Several more rows of pilings are present between the rock pile and shore, terminating at an approximate depth of -10 feet, and an approximate distance of 400 feet from shore (see Exhibit 3).

The remnant structure is in a severe state of deterioration and is likely to suffer a catastrophic collapse in the near future. If storm or earthquake forces do not induce a catastrophic collapse, the progressive weakening of the remnant structure through continued corrosion and erosion will cause the same result. The caissons have experienced significant concrete loss, exposing the steel piles and the steel reinforcing rods to highly corrosive salt water. The remnant top deck is partially missing or collapsed, and is in the process of further collapse. Pieces of rotted steel and wood are hanging from the above-water portions of the remnant structure.

ARCO is obligated to remove the remnant pier structures at PRC-421 as per requirements of the 1993 Transfer Agreement between ARCO and Mobil. (In 1997, the lease was again transferred to from Mobil to VENOCO, who remains the current leaseholder.) In May 2000, ARCO applied

to the California State Lands Commission (CSLC) to remove the remnant structure and associated seafloor debris. As lead agency under the California Environmental Quality Act, the CSLC prepared a draft environmental impact report (EIR) for public review and comment. In its comments on the draft EIR, the staff of the California Department of Fish and Game (DFG) expressed serious concern about removing the derelict structure because it currently serves as a prime roosting habitat for the California brown pelican, a federal- and state-listed endangered species, and roosting/nesting habitat for the Brandt's cormorant, a state fully protected species.[1]

DFG stated that the remnant structure ranks 12th out of 60 mainland diurnal roost sites for brown pelicans from Point Conception to the Mexican border, and is the only nocturnal roost site along 75 miles of the southern California coastline. The site is also the only known nesting site for Brandt's cormorant on the mainland coast south of Point Conception. According to DFG, the structure has been surveyed 13 times in aerial surveys, and was occupied 100% of the time, with the number of brown pelicans ranging from 12 to 160 and averaging 53. In its letter, DFG strongly recommended the construction of a new roosting platform at or close to the site to replace the remnant pier structure. In addition, DFG recommended that the project include an on-site artificial reef to provide increased hardbottom substrate for vegetation, fish, and invertebrates.

In response to DFG's concerns, ARCO worked with CSLC and DFG staff to design a modified project that includes removal of the remnant structure (except for the eight concrete caissons that will be used as part of an artificial reef), the placement of 3,000 cubic yards of quarry rock for the reef, and the construction of four bird roosting/nesting platforms. The modified project is proposed by ARCO in this coastal development permit application. ARCO will remove and/or otherwise reposition the visible remains of the remnant structures, incorporate specific components and add new quarry rock to create an artificial reef, and install four piles that will support new platforms to serve as roosting and nesting habitat for the brown pelican, cormorants, and other seabirds. Once construction activities are completed, the CSLC will issue a new lease to DFG for the seafloor area of PRC-421 that will be occupied by the reef and bird platforms. This CDP will be transferred to DFG at that time, and DFG will assume all maintenance, monitoring and liability responsibilities for the artificial reef and bird platforms. VENOCO, the current leaseholder, will have ongoing responsibility for the abandoned well conductors, the seafloor area of PRC-421 not included in the DFG lease, and all sub-seafloor areas under PRC-421.

4.2 Project Description

The proposed project consists of three principal components:

1) Removal of the wooden and steel deck structure, toppling of the eight remnant caissons, abandoning the well conductors and removing other pier-associated seafloor debris;
2) Installation of four piles and 800 square feet of bird roosting/nesting platforms; and
3) Construction of an artificial reef, by placing 3,000 cubic yards of quarry rock around the eight toppled caissons.

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[1] May 28, 2002. Letter from California Department of Fish and Game to California State Lands Commission.

4.2.1 Removal of Remnant Structures

Pre-Construction Survey and Kelp Harvesting

Pre-construction surveys will be conducted for kelp, hardbottom, abalone, and nesting birds on the remnant pier structures. A final bottom survey will also be performed to confirm the location of seafloor features and select final anchor points.

Wooden and Steel Deck Structure Removal

The existing structure will be removed using typical offshore methodology and equipment. The project will require the use of a Load Line Barge. Four anchors for the barge will be "flown in" (transported through the water as opposed to dragged along the seafloor) via tugboat to pre-determined locations. A construction or biological monitor will confirm that the areas to which the anchors are flown are located at the pre-determined anchor placement locations. The anchor locations will be ground-truthed and surveyed by a diver prior to placement in order to determine whether anchor site revisions could reduce kelp and hardbottom habitat impacts. Removal of the existing structures will be conducted with the use of a 230-ton conventional crane located onboard the barge. All salvaged material will be loaded onto the barge into bins or sea-fastened on deck for transport to shore for recycling/disposal.

Toppling of Existing Caisson Structures

After removing the topside structure and debris, divers will remove underwater debris in and around the caissons to facilitate toppling of the eight caissons. Using divers and barge equipment, sediment surrounding the well conductor pipe will be jetted, and the conductor pipe for Well No. 10 will be cut by a diver using a cutting torch and removed to one foot below the mudline. Divers will expose the four H-Beams at the base of each caisson to a point approximately four feet below the mudline.

Halliburton Explosive Services will perform blasting operations to topple the eight concrete caissons. Explosives will consist of four 1.8-lb. charges placed at the base of each caisson. Each explosive will be buried one foot below mudline, to help absorb the shock of the blast and protect marine life. At lease eleven marine mammal monitors will be on site during critical phases of the project, i.e., detonations, pile driving, and the installation of quarry rock. A safety zone of 1000-yards around the project site will be monitored to protect marine mammals, and a bubble curtain will be installed to minimize impacts to fish. Charges will be detonated in rapid succession to reduce the chance of predatory marine mammals entering the safety zone between detonations.

Preparation, attachment, and detonation of explosives will take approximately 10 to 12 hours. Once the charges have been detonated and the caissons have been toppled, divers will determine the seabed position of the toppled caissons. An onboard review of the divers survey will identify any caissons that may need to be repositioned to provide access to the well conductor for Well

No. 10. Once the position of the toppled caissons has been determined, final pile locations will be confirmed.

The barge will be moved shoreward on its anchors and the divers will remove any visible remnant pier pilings and debris, and cut off the well conductor for Well No. 7 to one foot below the mudline. The rock pile surrounding Well No. 7 will be left as hardbottom substrate.

Remnant Causeway Piling Removal

After removing the island structure debris, the barge will be relocated as necessary to begin removal of the causeway piling remnants, working towards the shoreline using divers and oxy-acetylene cutting equipment. All pilings will be cut at or below the mudline. The well conductor for Well No. 7 will be removed to approximately one foot below the mudline, and all exposed sheet piling will be cut and removed. Work will continue shoreward (to approximately 400 feet from shore) until all remaining pile remnants are cut, removed, and fastened for transportation to shore for recycling/disposal.

4.2.2 Construction of the Artificial Reef

The applicant proposes to topple the concrete caissons in place to form the core of a new hard substrate area, and place quarry rock around the caissons. The seabed footprint of the toppled caissons will be, by nature of the operation, random. To provide access to the well conductor, some repositioning of the caissons may be performed. This will involve placing a sling around one end of the column, raising the caisson slightly with a deck-mounted winch, and swinging it around to lie against, or near, an adjacent caisson, by moving the barge. The entire caisson will not be physically lifted during repositioning.

Approximately 3,000 cubic yards of clean, modified A-500 quarry rock will be brought to the site on barges, probably from the Connolly-Pacific site on Catalina Island. Quarry rock will be deposited in a checkerboard pattern on the seafloor, to a maximum of four to five feet above the seafloor adjacent to the columns, and less away from the columns. The area covered by the quarry rock will be approximately 25,782 square feet, or 0.59 acres. The reef will be seeded with kelp, and the success of the constructed hardbottom habitat will be monitored by the applicant in accordance with the Artificial Reef Monitoring Plan. The reef has been designed in consultation with DFG artificial reef experts, and is specifically designed to function as a kelp reef. ARCO will construct the reef, and after the completion of construction activities DFG will assume all maintenance, monitoring and liability responsibilities for the artificial reef.

To allow for future access to the interior well conductor, a 30-inch pipe will be jetted into the seabed around the well conductor to prevent rock from covering the conductor. Following deposition of rock, the 30-inch pipe will be trimmed to the elevation of the rock and secured.

4.2.3 Installation of the Bird Roosting/Nesting Platforms

Four piles will be driven into the seafloor to support the roosting/nesting platforms. The precise position of the four piles can only be determined after the concrete caissons are toppled. However, the intended locations will be to the nearshore side of the toppled caissons, in-line or

in a slight arc, allowing rock barge access from the offshore side. Once the final positions for the four piles have been established, the barge will be winched to a position suitable for pile driving. Once the four piles have been driven, the barge will be positioned to install the roosting/nesting platform structures atop the piles. Heavy lifting and rigging techniques will be used for installation of the roosting/nesting platforms.

4.2.4 Final Survey

A final underwater survey using divers, dive cameras, and a video- and sonar-equipped ROV will be conducted throughout the entire demolition area to ensure the removal of all debris items.

4.2.5 Implementation Plans

In addition to the elements of the project described in sections 4.2.1 through 4.2.4 of this staff report, as part of the project the applicant will implement those aspects of the project described in the following documents:

- Project Description, dated 4/28/04, including all attachments, revised by letter on December 9, 2004, and by e-mail in 2004 on December 3, November 20, and August 19
- Anchor Mitigation and Hardbottom Avoidance Plan, contained in Appendix C of the EIR
- Heavy Lift Rigging Plan, contained in Appendix D of the EIR and revised 4/28/04
- Explosive Transportation and Operations Plan, contained in Appendix E of the EIR
- Wildlife Protection Plan, contained in Appendix J of the EIR
- Marine Mammal Contingency Plan, contained in Appendix L of the EIR
- Oil Spill Contingency Plan, contained in Appendix M of the EIR and revised 8/17/04
- Mitigation Monitoring Program, contained in Appendix P of the EIR
- Execution Plan, dated 4/22/04
- Work Statement for Pre- and Post-Demolition Assessment of Kelp Resources Associated with Removal of Remnant Pier Structures in State of California Tidelands Lease PRC-421, Santa Barbara, California, received August 9, 2004 and revised December 13, 2004
- Work Statement for Pre-Demolition Assessment of Abalone Resources in Areas Associated with Demolition of Remnant Pier Structure in State of California Tidelands Lease PRC-421, Santa Barbara County, California, received September 1, 2004
- Draft Proposal Submitted to the State Lands Commission, In Response to the Need for Monitoring at Bird Island Mitigation Reef, received August 4, 2004 and revised October 18, 2004
- PRC-421 Draft Seabird Monitoring Proposal, dated May 31, 2004 and revised October 12, 2004

Relevant details of these documents are discussed in this staff report in section 4.4: Coastal Act Issues. Full citations for each of these documents, including letters and e-mail correspondence, are included in Appendix A. The full text of all EIR appendices is included in the Draft EIR, subject to revisions contained in the Final EIR.

4.2.6 Partial Transfer of Lease to DFG

As described above, ARCO will remove and/or otherwise reposition the remnant structures, incorporate specific components and add new quarry rock to create an artificial reef, and install four piles that will support new platforms to serve as roosting and nesting habitat for the brown pelican, cormorants, and other seabirds. Once construction activities are completed, the CSLC will issue a new lease to DFG for the seafloor area of PRC-421 that will be occupied by the reef and bird platforms. This CDP will be transferred to DFG at that time, and DFG will assume all maintenance, monitoring and liability responsibilities for the artificial reef and bird platforms.

4.2.7 Equipment and Personnel

Dive support, material handling (crane) and pile driving operations will be conducted from a single work platform: a 240' x 60' Load Line Barge with its attendant tug. The barge will be anchored on site by a four-point mooring. Anchors will be "flown" to their location to minimize seabed impacts. On a single placement of four anchor points the barge will be able to maneuver to all locations necessary to support the operation. Additional watercraft will be available for the initial barge anchor positioning and subsequent retrieval, transit of quarry rock, crew transport and marine mammal observers.

The equipment needed to conduct the proposed project will be shipped from the Port of Long Beach. Most of the vessels will travel once to the location and remain on site. The crew boat will make daily trips to and from Ellwood Pier to transport personnel and supplies. A total of approximately 28 personnel will conduct the fieldwork activities for the proposed project. Personnel, including an Operations Superintendent or Company Representative, will be present at the site throughout the duration of the project.

4.3 Other Permits, Approvals, and Authorizations

Project implementation will require ARCO to obtain permits and/or other forms of approval from federal, State, and local agencies. These agencies include:

- **Federal Agencies**
  - Army Corps of Engineers: Clean Water Act Section 404 individual permit.
  - U.S. Fish and Wildlife Service: Section 7 Consultation under the Endangered Species Act.
  - National Marine Fisheries Service: Section 7 Consultation and Marine Mammal Protection Act.
- **State Agencies**
  - Department of Fish and Game: Explosives Permit.
  - Regional Water Quality Control Board: 401 Water Quality Certification.
  - California Department of Transportation: Explosives Transportation Permit.
- **Local Agencies**
  - Santa Barbara County Air Pollution Control District: Authority to Construct.

4.4 Coastal Act Issues

4.4.1 Fill in Coastal Waters

Coastal Act § 30233(a) states:

> *The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
>
> *(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
>
> *(2) Maintaining existing, or restoring previously dredged depths on existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
>
> *(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.*
>
> *(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*
>
> *(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*
>
> *(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*
>
> *(7) Restoration purposes.*
>
> *(8) Nature study, aquaculture, or similar resource dependent activities.*

The applicant proposes to topple eight concrete caissons, place approximately 3,000 cubic yards of quarry rock, and install four pilings on the ocean floor. The concrete caissons, quarry rock, and pilings constitute "fill" as defined by the Coastal Act. Section 30108.2 of the Coastal Act states:

> *"Fill" means earth or any other substance or material, including pilings placed for the purpose of erecting structures thereon, placed in a submerged area.*

Coastal Act Section 30233(a) permits fill in coastal waters if three tests are met: 1) the fill constitutes an allowable use under 30233(a); 2) there is no feasible less environmentally damaging alternative; and 3) feasible mitigation measures have been provided to minimize any adverse effects.

Allowable use

The purpose of placing the fill is to create an artificial reef and bird roosting/nesting platforms. The artificial reef is intended to provide habitat for kelp and other marine species, and to enhance both the production of living marine resources and recreational fishing potential at the project site. The bird platforms are intended to provide offshore structures for roosting and nesting marine birds, especially for the California brown pelican and Brandt's cormorant. Therefore, the Commission finds that the proposed fill is allowed under use number (8), "nature study, aquaculture, or similar resource dependent activities."

No feasible less environmentally damaging alternative

Bird Platforms
The proposed bird platforms include a minimal amount of ocean fill, i.e, four pilings. The platforms have been designed to provide approximately equal roosting area to that currently available on the remnant structure. DFG biologists and marine bird specialists reviewed the platform design and spatial arrangement, and the proposed design incorporates their recommendations.

The applicant and DFG examined two location alternatives. The first alternative involved complete removal of the remnant structures, without the installation of replacement roosting and nesting habitat. As discussed in more detail above, and in section 4.4.2 of this staff report, existing pier structures currently provide important roosting and nesting habitat for California brown pelicans and Brandt's cormorants. The pier is considered by the California Department of Fish and Game as the only secure roost site for brown pelicans in Santa Barbara County south of Point Conception, and the only nesting site for Brandt's cormorants on the mainland coast south of Point Conception. This site ranks 12th out of 60 mainland diurnal roost sites for brown pelicans from Point Conception to the Mexican border, and was occupied 100% of the time during thirteen aerial surveys. Replacing the remnant structures with alternate roosting and nesting habitat is an environmentally superior alternative to not replacing the existing structures.

The second location alternative the applicant and DFG considered was an onshore site for new bird roosts, which would eliminate the need for offshore pilings. Research conducted by DFG and others[2] indicates that the primary roost sites for brown pelicans in the western US are

[2] Jaques, D. and C. Strong. "Disturbance to brown pelicans at communal roosts in southern and central California." *Report to the American Trader Trustee Council.* 2002.

offshore rocks and islands on the outer coast, and sand islands within large estuaries. Roost site selection is based on several factors, including isolation from potential predators and human disturbance, distance to prey resources, and microclimate features that aid in thermoregulation. Brown pelicans prefer to roost communally on dry substrate surrounded by water. Night roosts are usually always surrounded by water. For these reasons, DFG has determined that installing new platforms in the same location as the existing platforms is the strategy most likely to succeed in attracting marine birds to the new structures, and is therefore the least environmentally damaging location.

Not applying protective coatings to the piles supporting the platforms was a further alternative considered by the applicant and DFG. The piles for the bird platforms will be subject to aggressive corrosion effects from seawater, primarily in the splash zone but also below the surface of the water. The portion of the piles and platforms above the water will also be subject to some corrosive forces. Applying preservative products to the piles and platforms will prevent the structures from deteriorating and ultimately collapsing in the marine environment. DENSO protective wrap is proposed for the splash zone, with sacrificial aluminum alloy anodes below the water surface and a high-performance siloxane paint above the +10-foot SWL elevation. DENSO has a long history of corrosion prevention with the proposed product, which is a chemically stable compound that can only be released into the marine environment if exposed to an organic solvent such as kerosene. Marine environments are a typical use for the proposed paint. The Commission therefore finds that the there are no feasible less environmentally damaging alternatives to the materials proposed for the bird platforms.

Artificial Reef
ARCO is proposing to construct an artificial reef covering approximately 25,782 square feet, or 0.59 acres, at the site of the remnant structures. The reef will be constructed of the eight toppled caissons, and approximately 3,000 cubic yards of clean, modified A-500 quarry rock. The quarry rock will be brought to the site and deposited in a checkerboard pattern on the seafloor adjacent to and in the vicinity of the toppled caissons. Exhibit 5 depicts a conceptual model for the reef design.

The materials proposed for the artificial reef meet DFG criteria described in the its publication "Materials Specification Guidelines for Augmentation of Artificial Reefs with Surplus Materials." Specifically, the quarry rock and concrete caissons 1) are persistent, in that they will remain largely intact after years of submersion in sea water; 2) have a specific gravity of at least twice that of sea water, and will remain in position during strong winter storms; and 3) do not contain toxic substances that will leach into the marine environment. The Materials Guidelines further state: "Commonly used materials include quarried rock and high density concrete rubble... Reinforced concrete is allowable..." The quarry rock and the concrete caissons are the materials most suitable for constructing an artificial reef and therefore are the environmentally superior alternative.

Briggs, K. T., W. B. Tyler, D. B. Lewis, and D. R. Carlson. "Bird communities at sea off California: 1975 1983." *Studies in Avian Biology*, No. 11. 74 pp. 1987.
Jaques, D. L. *Range expansion and roosting ecology of non breeding California Brown Pelicans*. Unpublished M.S. thesis. University of California, Davis, CA. 73 pp. 1994.

Feasible mitigation measures

The final test of Coastal Act Section 30233(a) requires that feasible mitigation measures have been provided to minimize any adverse effects. In other sections of this report, the Commission has identified feasible mitigation measures that will minimize the project's adverse environmental impacts. With the imposition of the conditions of this permit, in combination with applicant-proposed measures to avoid or lessen any adverse environmental effects, the Commission finds that the third and final test of Coastal Act §30233(a) has been met.

Conclusion

Because the three tests have been met, the Commission finds the proposed project consistent with Coastal Act §30233(a).

4.4.2 Marine Resources

Coastal Act § 30230 states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

The proposed project has the potential to impact the following marine resources: (a) Marine mammals, birds, fish and the benthic environment through impacts associated with percussive forces and noise levels caused by explosives use, pile driving, and placement of quarry rock; (b) Hardbottom habitat and kelp, through impacts caused by vessel anchoring; (c) Abalone, through project activities occurring in the vicinity of the remnant pier structures; (d) Marine mammals, through potential collisions with project vessels; and (e) Roosting and nesting seabirds, through project activities occurring in the vicinity of the remnant pier structures.

Underwater Noise

The project site supports a variety of invertebrates, fish, birds, and marine mammals. Marine mammals potentially present at the project site include grey whales, cuvier's beaked whales, and seven species of dolphin. Three species of special-status fish, four special-status sea turtles, and white abalone, a species listed as endangered with the federal government, have the potential to be present at or in the vicinity of the project site.

The second phase of the project involves sequential detonation of explosives attached to pier caissons to topple the caissons. Noise associated with the second phase will include airplane and vessels conducting pre-detonation wildlife surveys, detonation of the explosives (four, 1.8-lb. charges per column), and noise associated with winches to move the barge from the explosion area. Use of explosives will be governed by an Explosive Transportation and Operations Plan

and the Wildlife Protection Plan. The Explosive Transportation and Operations Plan includes detailed safety procedures to protect human health and safety during the transportation, installation, detonation and clean-up of explosives. The Wildlife Protection Plan includes measures to protect the marine environment during the use of explosives. The contents of the Wildlife Protection Plan are discussed in more detail below.

Animals such as marine mammals may be affected by sound in different ways depending upon the intensity of the sound. There may be behavioral changes ranging from a simple startle response to more complex behavioral changes such as a change in breathing rate or a change in direction of travel. Stronger sound intensities can result in temporary or permanent hearing loss, tissue and organ damage, or death. Gas-containing organs, e.g., lungs, gastrointestinal tracts, and gas bladders, are especially susceptible.

One simplified safe-range model depends on the body mass of the receiver, and predicts safe ranges based on the worst combination of blast depth and mammal depth. This model therefore produces conservative estimates of safe ranges. The resulting safe ranges calculated for different sizes of marine mammals exposed to a 7.2 lb (3.3 kg) charge, the size to be used in the proposed project, is presented in Table 1.

Table 1. Safe Ranges for Different Sizes of Marine Mammals.

Marine Mammal	Body mass constant	Charge M	Safe Range R	
	c	(kg)	(m)	(ft)
Dolphin calf	220	3.3	307	1007
Dolphin adult	165	3.3	231	758
Small whale, 6 m	124	3.3	173	568

Before detonation of any of the caissons at PRC-421, the applicant will survey by boat a one thousand yard hazard zone, and by aircraft a buffer zone of four by eight miles, to ensure that no marine mammals are present in the hazard zone. One thousand yards is over three times the range considered to be safe even for a dolphin calf. In the regulations implementing the Marine Mammal Protection Act of 1972, two levels of harassment are defined: Level A in which an injury may occur, and Level B in which a disruption of behavioral patterns may occur. Based on modeling results, if there are no marine mammals in the 1,000-yard hazard zone at the time of detonation, no injuries are expected to occur to any marine mammal, although some Level B harassment may occur to marine mammals outside, but near the hazard zone.

In the event that a low ceiling prevents the use of aerial monitoring, monitors will be relocated to the Ellwood pier, locations onshore and/or to an additional small boat. Because the project site is very close to shore, and the edge of the hazard zone is not far from the site (1,000 yards), relocating the monitors will still allow for adequate monitoring of both the site and the hazard zone. At lease eleven marine mammal monitors will be on site during critical phases of the project, i.e., detonations, pile driving, and the installation of quarry rock.

The 7.2 pounds of explosive used at each caisson is expected to produce an overpressure of 80.8 pounds per square inch (psi) within 30 feet of the detonation point. Studies[3] have found that similar pressures produced by detonating a 2-kg charge of T-100, a high explosive, in open water, killed 12 to 36 percent of bluegill, a freshwater fish, caged at various distances from the explosion in 6.6 feet of water. The results of those experiments indicated the distance at which 50 percent of the bluegill would be killed from the open-water detonation of a 2 kg high explosive ranged between 125 and 131 feet. The proposed project will use slightly larger charges, but the charges will be placed below the mudline rather than in open water, resulting in lower pressures within the water column, as some of the effects of the detonation will be absorbed by the seafloor material. Other studies[4] found it is likely that small fish and those species with swim bladders that are within approximately 130 feet of the detonation will be most susceptible to the effects of the underwater explosions.

Although there is some disagreement, some studies[5] indicate that bubble curtains reduce the effects of explosives on fish. Studies on the effectiveness of an air bubble curtain in reducing explosive pressures and associated kill radius on bluegill, indicate peak pressures, impulse, and energy flux density were reduced from 81 to over 99 percent with the bubble curtain. Other studies have shown a statistically significant reduction in the number of fish killed and/or a decrease in the diameter of the area where 50 percent of the fish were killed when bubble curtains are used.

Prior to detonation of the charges, a bubble curtain will be placed around the caisson area. The bubble curtain will create a continuous stream of bubbles around the perimeter of the caissons reducing the effects of the explosion on fish. The bubble curtain will also produce enough underwater noise and visual activity to reduce the number of fish within the area surrounding the caissons prior to detonation, which will deter fish from swimming too close to the caissons during the detonation procedure.

Observations by Marine Mammal Consulting Group during the Seacliff Pier demolition in 1998 revealed that fish kills attracted birds and marine mammals to the project area. These animals were seen scavenging on injured or dead fish in between each blast, thereby increasing their risk of injury and delaying the established detonation schedule. It was for these reasons that a change in the caisson demolition process was made at Seacliff Pier. By demolishing the caissons in sets instead of individually, wildlife entering the project area afterward to feed on any fish injured or

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[3] Keevin, T. M. and G. L. Hempen. *The Environmental Effects of Underwater Explosions with Methods to Mitigate Impacts*. US Army Corps of Engineers, St. Louis, MO. Aug. 1997.

[4] Ogawa, T. , I. Fukuyama, S. Sakaguchi and T. Narahira. Injuries to Fish Due to Underwater Pressure Waves (III). *Journal of the Industrial Explosives Society*. Japan. 39:196-204. 1978. (English Translation: Blast and Blasting 39: 84-96.)

Teleki, G. C. and A. J. Chamberlain. Acute Effects of Underwater Construction Blasting on Fishes in Long Point Bay, Lake Erie. *Journal of the Fisheries Research Board of Canada*. 35:1191-1198. 1978.

Yelverton, J. T., D. R. Richmond, E. R. Fletcher and R. K. Jones. *Safe Distances from Underwater Explosions for Mammals and Birds*. DNA 3114T. Rep. From Lovelace Foundation of Medical Education and Research, Albuquerque, NM, for Defense Nuclear Agency, Washington, D.C. 67 p. NTIS AD-766952. 1973.

[5] Sources cited in Keevin and Hempen (1997), *ibid.*

killed by a detonation was not subject to further risk. This change also significantly reduced the total time span of the detonation procedure by minimizing the delay time in between each detonation. The proposed project will detonate all charges in rapid succession to avoid risks associated with separate detonation events.

Before the start of project activities, a biological monitor will determine if nesting or immature birds still occupy the structure, and if they do, project activities will be postponed until all nesting or immature birds have left. Before detonation, birds will be flushed from the PRC-421 structure by firing a starter pistol or sounding an air horn, to prevent mortality or injury to roosting birds, especially cormorants and brown pelicans. Diving seabirds are at risk from the explosion if they are nearby, underwater, at the time of detonation. The experience at the Seacliff Pier demolition suggests that mortality to diving birds will be quite low. Two birds that had escaped detection (a scoter and a cormorant) were killed during that operation. The survey and flushing activities described in the Wildlife Protection Plan should also clear the area of most diving birds.

The noise produced by pile driving in water depends on several factors. Data provided in one report[6] indicates that while in some fish a startle response could occur during the pile driving, the impacts to fish generated by the noise from those activities is short term and insignificant. Fish are expected to return to the waters around the pilings shortly after the completion of pile driving activities and no long-term effects of the noise are expected.

The placement of quarry rock will produce low frequency sounds that could result in extremely localized Level B harassment of marine mammals. The sounds will be transmitted through the water as the rocks slide across the deck of the barge, splash into the water and land on the sea floor. Quarry rock will be placed over the course of three days, and sounds associated with placement will be localized and temporary.

The applicant has developed a Wildlife Protection Plan to reduce or eliminate impacts to marine wildlife that might be caused by the use of explosives, pile driving, and placement of quarry rock. Key elements of the plan include:

- The project will be timed to avoid California gray whale migration (November 30th to June 1st).
- Eleven marine mammal monitors will be onsite to monitor activity of mammals through the project area during critical phases of the project, i.e., detonations, pile driving, and the installation of quarry rock. Except in the case of a low ceiling, the aerial monitor will fly aerial line transects over the project area to survey for marine mammals that may be impacted by the explosions. These transects will involve an area from the beach to 4 miles offshore and 4 miles to either side of the project site. The aircraft will fly approximately east to west, paralleling the shoreline, along a line plotted in advance. The aerial line transects will be spaced approximately ¼ mile apart. In the case of a low ceiling, airplane-

[6] Battelle/Marine Research Laboratory. *Effects of Sounds from a Geophysical Survey Device on Fishing Success.* Prepared for the US Minerals Management Service, Pacific Outer Continental Shelf Region. Contract No. 14-12-0001-30273. June, 1987.

based monitors will be re-located to the Ellwood pier, locations onshore and/or to an additional small boat. Shipboard line transect surveys will be conducted consisting of lines a quarter of a mile apart, staggered between the aerial lines. Shipboard lines will extend to one mile on either side of the project and one mile offshore. Two vessels will be used, each starting at opposite ends of the transect grid and one starting inshore while the other starts offshore. Each boat will carry an observer/recorder and one observer on each side of the vessel. Total survey coverage of the project area will consist of ⅛ mile transect spacing within one mile surrounding the project, and ¼ mile transect spacing between one and four miles from the project. Once the area is surveyed the principal marine mammal monitor will give approval prior to the detonation of explosives. The aircraft will continue circling the project site during each detonation.

- Once both the aerial and shipboard line transect surveys have been completed, the boats will patrol a hazard zone with a radius of 1,000 yards, and the aircraft will patrol an additional buffer zone to ensure that no protected wildlife is likely to enter the hazard zone.
- Two observers will be stationed onshore to ensure adequate coverage of the surf zone, which is inaccessible to monitoring vessels. One observer will select a vantage point close to the project site but slightly eastward, while the other will be stationed on Ellwood Pier. As an alternative to the Ellwood Pier location, an observer may be stationed on the coastal bluff just west of the site.
- If any birds remain roosting on the structure and do not respond to warning signals, a starter pistol will be fired or an air horn used to frighten them away for their own safety.
- As much as practicable, a berm made of jetted material will be built up on the seaward side of the columns. This will help reflect and absorb some of the energy of the detonation.
- All charges will be set below the mudline of the seafloor and be detonated in rapid succession to avoid risks associated with separate detonation events.
- The seaward sets of charges will be detonated first so the bubbles and mass of columns will help reduce sound pressure levels from subsequent detonations.
- Detonations of charges will be staggered to avoid a build-up of sound pressure levels.
- The aircraft and one boat will continue surveying the hazard and buffer zones for one-half hour after detonation of the charges to ensure that no protected species escaped detection and were injured. In the unlikely event that an animal is injured, it will be captured by approved Marine Mammal Consulting Group (MMCG) personnel and taken to the nearest approved wildlife care facility.
- Power to the pile driver will be ramped up prior to driving each pile. This will warn marine wildlife by gradually increasing the underwater noise level.
- The same monitoring methods and hazard zone as described for the explosive detonations will be employed during pile driving operations, except that these operations will occur immediately prior to the start of any pile driving activities, and may continue until sunset.
- A concrete-decked barge will be used for the quarry rock. This will reduce the noise associated with moving quarry rock across steel barges.

- Prior to beginning the placement of quarry rock each day or each time a new load of quarry rock is ready, a land-based monitor will make certain that no marine mammals are present within 500 feet of the project site.

As described above, the Wildlife Protection Plan calls for monitoring of the project site during explosives use and pile driving. The WPP requires that monitoring take place according to the following requirements:

- Biological monitors will have training and experience in identifying marine wildlife of the region. They will also have hands-on experience in the rescue and handling of marine wildlife as well as in marine wildlife mitigation monitoring and data recording. All monitors have already been approved by NOAA Fisheries in consultation with DFG.
- Monitoring personnel in the aircraft will consist of an observer/recorder in the co-pilot's seat, one monitor on each side behind the front seats, and a monitor lying in the belly of the aircraft to see straight down. In the case of a low ceiling which precludes aerial monitoring, aerial monitoring personnel will be relocated to the Ellwood pier, locations onshore and/or to an additional small boat.
- Shipboard monitors will consist of one observer/recorder and one monitor for each of the two vessels, plus the chief monitor on one of the vessels. Vessel crews will be provided separately.
- Two land-based monitors will be provided: one on the near-by bluff or on Ellwood pier, and the other on the beach.
- A qualified biologist will be provided to identify and count fish after the detonations.

In addition to the monitors provided by the applicant, as described above, the State Lands Commission will have independent monitors at the project site during all critical project activities. SLC monitors will include SLC staff with appropriate expertise, outside consultants retained by SLC, or a combination of the two.

Hardbottom and Kelp

Exhibit 6 maps existing hardbottom and kelp at the project site in relation to the proposed anchor corridors and anchor placement sites.[7] Two types of hardbottom are located in the project area: natural hardbottom, and imported boulders and rubble. A major natural hardbottom structure extends from south to east of the pier. In addition, other smaller areas of hardbottom are located just west and north of the pier amid and adjacent to the rows of old steel pilings that supported the pier. The imported boulders and rubble are located in a rock pile approximately 300 feet inshore of the remnant pier structure's columns, near Well No. 7. This pile is approximately 5 feet in diameter and 4 feet high, covering an area of approximately 0.05 acres. These hardbottom areas support subtidal macrophytes such as giant kelp and other biota, and serve as safe sites for numerous subtidal fish and invertebrate species.

[7] Hardbottom habitat information is derived from a side-scan sonar survey conducted by Fugro West, Inc. for the original project in March, 1999. Surficial kelp was surveyed by L.A. de Wit, a marine and coastal environmental sciences consultant on March 20, April 17, and August 2, 2001.

Giant kelp (*Macrocystis pyrifera*) is a keystone species that transforms rocky reefs into underwater forests. The kelp forest provides food and shelter for a diverse assemblage of plants and animals. Surficial kelp was mapped during a March 2001 biology survey; the thickest kelp was found in water depths of approximately 30 feet or less. In the vicinity of the remnant pier there is thick kelp bed extending from water depths of approximately 30 feet toward shore.

The two offshore (southwest and southeast) anchor placements will be located in sediment. The northwest and northeast (nearshore) anchor placements for the barge will likely be located in hardbottom areas, and anchor lines for all four anchors will be suspended over hardbottom areas. A spot check of the northwest anchor indicates it is located on rock, while the habitat at the northeast anchor is mixed sediment and rock. As depicted in Exhibit 6, kelp is thick throughout the eastern portion of the anchoring areas, and is likely to be impacted there no matter where the eastern anchors are located. The location of the temporary moorings has not yet been determined, but that placement could also impact hardbottom habitat and/or kelp. In addition, hardbottom areas are located in close proximity to the pier structure, and may be in the fall zone of the columns when they are toppled.

Table 2. Diver Observations at Anchor Sites[1]

Anchor Corridor	Habitat and Dominant Epibiota
Southeast Anchor	Sediment to 42 ft. (*Diopatra, Kelletia*, and sea pens common; rock ridges with red and purple urchins (*Strongylocentrotus fransicanus* and *S. purpuratus*), *Kelletia*, *Parapholas*, and *Corynactis* common. One kelp bass (*Paralabrax clathratus*); sediment patch at 35 ft.
Southwest Anchor	Low relief rock ridges with isolated sediment patches to 35 ft. Common rock epibiota: kelp, *Cystoseira*, *Pterygophora*, both species of urchins, and *Aglaophenia*. *Diopatra* common in sediment patches.
Northwest Anchor	Low relief, sand-covered rock ridges grading into sand. Coralline algae present, *Cystoseira* and *Egregia* present to common; kelp abundance estimated at 1 plant per 25 ft^2.
Northeast Anchor	Sand and scattered 3 ft-high boulders grading into 3 ft-high rock ridges. Kelp common (1 plant per 10 ft^2) with *Egregia*, *Desmarestia*, and *Cystoseira* present to common. Algal cover 30 to 50% of rock ridges. *Pisaster brevispinus* present on sand-covered lower-relief rock ridges at offshore end of transect.

[1]Information taken from Draft EIR.

To minimize the impacts of the proposed project on hardbottom areas and kelp, the applicant has developed an Anchor Mitigation and Hardbottom Avoidance Plan, which incorporates the following measures into the proposed project:

- Pre-designated anchor placements have been chosen to be located, where feasible, in sedimentary-bottom habitat. These anchor placements are based on 1999 survey information and will be adjusted following the pre-project survey.

- Anchors will be "flown" through the water via one of the support vessels before being dropped at its pre-determined location. Precise pre-determined anchor placements are located using DGPS positioning system. This eliminates the dragging of anchors and their towlines across the ocean floor over hardbottom areas.
- A construction or biological monitor will confirm that the areas to which the anchors are flown are located at the pre-determined anchor placement locations.
- The anchor locations will be ground-truthed by a diver prior to project operations in order to determine whether anchor site revisions could reduce kelp and hardbottom habitat impacts.
- Anchor lines will be suspended from crown buoys to the vessel. Two weeks prior to anchoring vessels, surficial kelp will be cut to a maximum depth of 4 feet below the surface along the inshore anchor corridors, to decrease the loss of kelp from anchoring lines.
- The nearshore anchors will be pre-positioned and secured to the vessels via "soft line" from a pennant buoy attached to the anchor.
- Any kelp habitat lost due to offshore activities will be reported to the NMFS pursuant to Section 305(b) of the Marine Fishery Conservation and Management Act (MFCMA).
- The imported rock fill around Well No. 7, which supports dense kelp growth, will not be removed.

A diver survey of the area around the concrete caissons found that several areas of hardbottom exist in the vicinity of the proposed artificial reef[8] (see Exhibit 7). Much of the bedrock in the area is a low-lying siltstone "pavement" partially covered with a light veneer of sandy silt and epibiota. The largest areas of the pavement type of bedrock habitat were observed on the northwest and southeast sides of the platform. It appears that outcrops rising appreciably above the seafloor occur in only a few areas around the remnant structures, primarily in the southwest (offshore) site of the platform and off the western corner of the platform. Maximum vertical relief on these outcrops was about one foot.

The species composition of the epibiota on the "pavement" form of bedrock generally does not represent species characteristic of true hardbottom habitat. The presence of a thin veneer of sandy silt suggests that the areas of pavement are subject to periodic seasonal scouring or burial by sand. It is likely that strong winter storms transport sand into these areas and prevent the epibiota normal to areas with higher relief from becoming established and persisting.

Toppling the caissons and placement of the quarry rock may bury some areas of "pavement" hardbottom. Areas of existing higher-relief hardbottom outcrops (on the southwest side and off the western corner of the platform) are located so that it will be possible to avoid burying these

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[8] *Description of Pre-Demolition Conditions for Natural Hardbottom Substrate near the Remnant Pier Structure in State of California Tidelands Lease PRC-421, Santa Barbara County, California.* Prepared for Fairweather Pacific, LLC. Prepared by Littoral Ecological & Environmental Services (LEES). December 10, 2004.

areas when placing quarry rock for the artificial reef. No quarry rock will be placed on existing higher-relief hardbottom outcrops when the artificial reef is constructed.

With these measures in place, the applicant will minimize impacts to hardbottom. However, even with these measures in place there is the potential for unavoidable impacts to hardbottom at the anchor placements and in the anchor corridors. Any impacts to hardbottom at these locations will be mitigated by the applicant adding additional hard substrate at the project site as part of creating the 0.6-acre artificial reef.

To ensure that impacts to kelp are avoided, minimized, and/or mitigated, the applicant proposes to ground-truth the nearshore anchor locations and temporary moorings, to determine whether anchor site revisions could reduce impacts to kelp and hardbottom areas. **Special Condition No. 3** requires that the locations of the nearshore anchor placements and temporary moorings be ground-truthed by a diver no more than 30-days prior to project commencement.

Furthermore, **Special Condition No. 4** requires that a pre- and post-construction kelp survey be conducted, according to the Work Statement for Pre- and Post-Demolition Assessment of Kelp Resources Associated with Removal of Remnant Pier Structure in State of California Tidelands Lease PRC-421, Santa Barbara County, California (Kelp Survey Plan). The purpose of the survey will be to provide pre- and post-construction data on abundance and distribution of giant kelp and other kelp resources within the project impact zones and reference areas.

As required by **Special Condition No. 4**, the pre-construction kelp survey shall take place within the minimum feasible amount of time between the survey and the beginning of construction activities, and in any case within 30 days prior to the beginning of construction. The post-construction survey shall take place within the minimum feasible amount of time between the survey and the completion of construction activities, and in any case within 30 days after the completion of construction. A report shall be submitted to the Executive Director within 60 days of completion of the post-construction survey, describing the results of the surveys and containing conclusions regarding loss of kelp due to construction activities. If the report finds a loss of kelp due to construction activities, an additional post-construction survey shall be performed one year after the completion of construction activities. A second report shall be submitted to the Executive Director within 60 days of completion of this third survey. If after one year any kelp lost due to project-related construction activities has not fully reestablished, the applicant shall within 45 days from submitting the final post-construction survey report submit to the Commission an application for an amendment to this permit for kelp restoration and monitoring.

White, Pink and Green Abalone

White abalone (*Haliotis sorenseni*), a federally endangered species, has traditionally been treated as a deep water species, occurring in waters from 60 to 200 feet deep. However, a technical memorandum from NOAA Fisheries[9] notes that the depth distribution for white abalone is

[9] Hobday, A. J. and M. Tegner. *Status Review Of White Abalone (Haliotis sorenseni) Throughout Its Range In California And Mexico*. NOAA Technical Memorandum. NMFS SWR-035, May 2000.

poorly known, and white abalone occasionally are found at depths of 30 to 50 feet. According to DFG, within the past few years, two white abalone were found in water less than 30 feet deep off El Capitan Beach, just west of Coal Oil Point. Additionally, DFG biologists have noted various reports of white abalone in shallow water on Naples Reef, an area known for shallow-water white abalone. NOAA Fisheries indicates that a white abalone was identified in 24 feet of water off the Santa Barbara coast on April 2002. NOAA Fisheries and DFG have suggested certain mitigation measures to protect this coastal resource, including an underwater survey for white abalone within the project area.

Pink and green abalone (*Haliotis corrugata* and *H. fulgens*) were added to the federal Species of Concern List in 2004. Species of Concern are those species for which there is concern or great uncertainty about biological status and threats, but are not species being formally considered for listing or subject to a regulation. There are no mandatory federal protections required under the federal ESA for Species of Concern, however, NOAA Fisheries has identified measures that the applicant could voluntarily take to protect these Species of Concern, including an underwater survey for pink and green abalone within the project area.

The applicant has developed a Work Statement for Pre-Demolition Assessment of Abalone Resources in Areas Associated with Demolition of Remnant Pier Structure in State of California Tidelands Lease PRC-421, Santa Barbara County, California (Abalone Survey Plan). The Abalone Survey Plan incorporates all the measures for protecting white, pink and green abalone recommended by NOAA Fisheries and DFG, and will assess the presence of white, pink, green, red and black abalone species in the project area.

In addition, **Special Condition No. 5** requires that a survey be conducted for abalone within 30-days before the start of project activities. If abalone are located in the project area during the survey, the applicant shall immediately notify the NOAA Fisheries, the California Department of Fish and Game and the Executive Director of the Commission, as described in the Abalone Survey Plan. The applicant shall follow the recommendations of NOAA Fisheries and DFG abalone experts with regard to the disposition of any abalone identified in the project area. No construction activities shall occur until the Executive Director is satisfied that the recommendations of NOAA Fisheries and DFG have been followed.

Vessels Colliding with Whales

Vessel traffic will occur throughout all phases of the project as vessels will navigate to and from the project site before, during, and after the removal operations, and during the pre-detonation boat surveys. The applicant has developed a Marine Mammal Contingency Plan (MMCP) to assist personnel in avoiding the harassment or injury of marine mammals while operating any of the vessels. The MMCP has been reviewed and revised by NOAA Fisheries and DFG staff biologists. Personnel involved in the structure removal operations will be familiar with the procedures outlined in the MMCP. Although the project will be timed to avoid whale migration seasons, gray whales and other cetaceans could be present during the work period. Avoidance of marine mammals will be achieved by observing the following rules:

- Support vessels will not cross directly in front of migrating whales;

- When paralleling whales, support vessels will not operate at a speed faster than the whales; all vessels will operate at a constant speed;
- Female whales will not be separated from their calves;
- Support vessels will not herd or drive whales;
- If a whale engages in evasive or defensive action, support vessels will drop back until the animal calms or moves out of the area;
- If dolphins ride the bow or stern waves or frolic near support vessels, support vessels will slow down and keep a steady course;
- Vessels will remain at least 100 yards away from gray whales to minimize the chance of collision or disturbance; and
- A marine mammal watch will be maintained at all times while vessels are underway.

Procedures have been developed in case of a collision with a marine mammal, including reporting and notification procedures. All crew members will be required to read and understand the MMCP, which includes a guide to identifying cetaceans, pinnipeds and fissipeds.

Roosting and Nesting Seabirds

California brown pelicans (*Pelecanus occidentalis californicus*), listed as "Federal Endangered," "California Endangered," and "California Fully Protected," use the PRC-421 remnant structures as a day and a night roost. The remnant structures are also used for roosting and nesting by Brandt's cormorants and other marine birds. The pier is considered by the California Department of Fish and Game as the only secure roost site for brown pelicans in Santa Barbara County south of Point Conception, and the only nesting site for Brandt's cormorants on the mainland coast south of Point Conception. This site ranks 12th out of 60 mainland diurnal roost sites for brown pelicans from Point Conception to the Mexican border, and was occupied 100% of the time during thirteen aerial surveys.

Communal roost sites are essential habitat for brown pelicans throughout their range. Brown pelicans (as well as cormorants) are unlike many other seabirds because they have wettable plumage, which requires them to come ashore regularly to dry out and restore their plumage. Brown pelicans occupy a larger number of roost sites by day and then congregate into a smaller number of higher-quality roosts at night. The PRC-421 site is both a day and night roost, which indicates that the site is a favored location for brown pelicans. In addition, the PRC-421 remnant structures are used by breeding brown pelicans from Anacapa Island, the primary West Coast nesting site for the brown pelican. The distance from the Anacapa Island colony to the existing site permits birds to make energy-efficient foraging trips to the mainland, rest and dry their plumage before the return flight to Anacapa.

The nesting period for California brown pelican and Brandt's cormorants is from mid-April through late August. The removal of the existing structure will be conducted during September and October to avoid disturbing nesting and rearing activities of protected birds. This timeframe should ensure that fledgling bird species have matured and left their nests by the time project

activities commence. A biological monitor shall determine if nesting birds remain on the structure at the end of August. If birds still occupy nests on the structure when work is scheduled to begin, the project activities will be postponed until all the fledging birds have left.

Roosting species will experience a short-term displacement during the period between demolition of the existing structure and the installation of the replacement habitat - approximately one month. Resident birds are expected to occupy alternative onshore and/or offshore roosts near PRC-421, such as Ellwood Pier or open beach, until the proposed new roosting/nesting platforms have been installed. The installation of the new roosting/nesting platforms will help ensure that healthy populations of special-status seabirds will be maintained and protected.

Conclusion

The applicant has designed the proposed project, including applicable mitigation and monitoring plans, in such a way that, with the addition of **Special Conditions No. 3 through 5**, the proposed project will protect marine resources. The Commission therefore finds the project consistent with Coastal Act Section 30230.

4.4.3 Water Quality

Coastal Act § 30231 states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

The project has the potential to impact water quality by: (a) increasing turbidity, and increasing concentrations of organic matter within the water column; (b) releasing toxic substances into the marine environment by retaining concrete caissons on the sea floor; and (c) releasing toxic substances into the marine environment by installing a protective coating on the bird roosting/nesting platforms.

Turbidity

Project activities that will increase turbidity in the area include: underwater jetting procedures, the placement of anchors, the detonation of explosives and toppling of the caissons, and the installation of quarry rock. These activities will disturb the fine sands and silts of the ocean floor and will suspend the particles, increasing turbidity in the project area. Project activities are expected to displace approximately 24 to 40 cubic yards of sediment.

Increased turbidity is a water quality concern because suspended sediments will reduce light transmission through the water, possibly impacting biological productivity of the primary producers in the area. Reduced biological productivity in primary producers, such as kelp, could impact other marine resources that depend on primary producers. In addition, the settling of suspended sediments has the potential to smother benthic organisms. Infauna (organisms living within the sediments) are likely to be removed with the sediment, exposing them to possible physical damage and/or predation.

Project activities that will suspend sediment on the ocean floor also have the potential to introduce organic matter contained within the sediments into the water column. Large-scale increases of organic matter within the water column can increase dissolved nutrient concentrations, causing algal blooms that deplete the local water column of dissolved oxygen. Lack of dissolved oxygen can smother fish and benthic organisms in the vicinity.

According to the two underwater surveys already conducted, as well as discussions with local urchin divers, this site has notoriously poor underwater visibility through much of the year. The offshore and nearshore portions of the project site lie within an area that is influenced by winter storms, and the increased sedimentation associated with storm events. The increase in turbidity caused by project activities is expected to be less severe than that caused by winter storm events. In addition, increases in turbidity caused by project activities will be temporary, and the affected areas are expected to return to pre-project conditions within a very short period of time.

White, pink and green abalone are the species of concern potentially present at the project site that would be most impacted by temporary increases in turbidity. **Special Condition No. 5** requires that the applicant survey for abalone before the commencement of project activities. If abalone is found at the project site, the applicant will follow the recommendations of NOAA Fisheries and DFG with regard to the disposition of the abalone. No construction activities shall commence until the Executive Director has approved a report demonstrating that the recommendations of NOAA Fisheries and DFG have been followed.

In addition, the applicant will "fly" the anchors through the water to their pre-determined locations, ensuring that they will not be dragged across the ocean floor. The applicant has also agreed to minimize jetting of ocean floor sediments to the maximum extent feasible.

Material Leaching

The applicant proposes to topple the eight concrete caissons and retain them on the seafloor to serve as material for the artificial reef. Toxic contaminants in the caissons could leach into the marine environment. The contaminant of primary concern is asbestos – because the caissons have been in the water for over sixty years, any other contaminate leaching will have already occurred. The applicant took representative samples from the caissons and had them analyzed for asbestos-containing material. The analysis determined that the caissons contain 100 percent non-fibrous, non-asbestos material. The caissons will therefore not impact water quality by leaching toxic material into the marine environment.

Protective Coatings

To reduce future maintenance requirements on the piles and roosting/nesting platforms, and eliminate the aggressive corrosion effects of the seawater in the splash zone, a system of preservative products (DENSO brand protective products) will be applied by divers (the submerged portion) and riggers (above water portion) to the pile(s) from -20' SWL to +10' SWL. The DENSO product is a 2-part wrap product consisting of paste-impregnated cloth tape that is covered with a bolt-on polyethylene UV-resistant cover. DENSO has a long history of corrosion prevention with this product. The portion of the pile above the +10' SWL elevation and the roosting/nesting platform structure(s) will be coated with high-build epoxy paint (Amerlok 400) for resistance to seawater and marine environments. For that portion of the pile below the DENSO protective wrap and above the seabed, sacrificial aluminum alloy anodes will be used to protect the submerged portion of the bare steel from corrosion.

A limited amount of repair to the epoxy paint is expected following installation. The epoxy paint and brackets for the anodes will be installed during fabrication on land. According to the MSDS Product Information for the DENSO coating, DENSO is a chemically stable compound, which can only be softened (released to the ambient environment) if exposed to organic solvents such as Kerosene. Since contact with organic solvents will not occur, protective products will remain stable and will not leach into the marine environment.

Conclusion

The applicant has designed the proposed project, including applicable mitigation and monitoring plans, in such a way that, with the addition of **Special Condition No. 5**, the proposed project will protect the biological productivity and the quality of coastal waters. The Commission therefore finds the project consistent with Coastal Act Section 30231.

4.4.4 Oil Spills

Coastal Act § 30232 states:

> *Protection against the spillage of crude oil, gas, petroleum products or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and clean-up facilities and procedures shall be provided for accidental spills that do occur.*

The proposed project involves the removal of conductor (casing) pipes from former oil Well Nos. 7 and 10 and the use of vessels and equipment that use petroleum products. While the project poses no risk of an oil or petroleum hydrocarbon spill from the oil wells themselves, there is a slight risk of oil spill from the work vessels and construction equipment. There is also a long-term risk of a petroleum hydrocarbon release due to possible vessel collisions with the proposed artificial reef and bird roost platforms.

Construction hazard

The first test of Coastal Act Section 30232 requires the applicant to undertake protective measures to prevent an oil or petroleum hydrocarbon spill from occurring. The potential for oil spill risk and the protective measures the applicant has taken to prevent or minimize the risk of a spill are discussed below.

Well Nos. 7 and 10 were plugged and abandoned in 1953 and 1954, respectively, in accordance with the Division of Oil, Gas, and Geothermal Resources (then named Division of Oil and Gas) regulations and procedures in effect at that time. A review of the methods used for the wells' abandonment in 1953 and 1954 confirms that the plugged wells are consistent with the current Division of Oil, Gas, and Geothermal Resources (DOGGR) 2004 regulations and procedures for abandonment.

While DOGGR abandonment requirements are more stringent today that they were in 1953 and 1954, the basic method for abandonment remain the same today as it did in the 1950's. Namely, isolate the hydrocarbon zones from the surface with a series of mud and cement layers in the well zone. The difference between the State's abandonment requirements in 1953 and 1954 and those in effect today is that DOGGR's 2004 abandonment regulations require greater volumes of cement to be used in the layers. However, while implementation of today's regulations theoretically results in a safer abandonment and plugging of the wells, there are no known studies that show conclusively that the volumes and quality of the cement and mud used in the subject wells will fail[10]. Since there have been no reports of oil releases in the vicinity of Well Nos. 7 and 10, the project EIR concludes that the abandonment procedures eliminate the possibility of an oil spill from the wells.

A small risk exists for a release of production fluids and/or muds from the abandoned Well Nos. 7 and 10. Due to the manner in which the wells were abandoned in 1953 and 1954, it is very unlikely that that any production fluid remains in the conductor pipes. There may be some mud or water contained in the conductor pipes, most likely sediments and seawater that may have entered the pipes from the environment. The applicant proposes to inspect the contents inside the conductor pipes, vacuum out any remaining mud or seawater down to the surface plug, and dispose of any fluids/material in a sealed tank.

To minimize the risk of an oil or petroleum hydrocarbon spill, or other hazardous substance spill, the applicant will cut and remove the conductor pipes in accordance with procedures and conditions approved by the DOGGR and SLC.

The remaining pier structure and pilings served as a support platform for the well operations and, as such, have no facilities that could contribute to an oil or petroleum hydrocarbon spill. Therefore, the only remaining potential source of an oil or petroleum hydrocarbon spill, or release, are limited to the project vessels and on-board equipment that will be used during the pier removal activities, e.g. spills arising from leakage of fuel, motor oil, or hydraulic fluid

[10] April 16, 2004. E-mail from Bryant Morris, Project Petroleum Engineer. Response to Santa Barbara County Comments.

during operation and/or equipment maintenance, or vessel collisions with remnant structures or other vessels. The vessel and construction crews will be trained to safely operate the vessels and equipment, and will monitor all operations to ensure that no release of hydrocarbons into the marine environment will occur.

Notwithstanding the implementation of the above preventive measures, a small risk remains that an accidental spill could occur during construction activities. The second test of Coastal Act Section 30232 requires the applicant to provide effective containment and cleanup equipment and procedures in the event that an accidental spill does occur.

The applicant has prepared a project-specific Oil Spill Contingency Plan (OSRP). In the event of a spill, the OSRP provides an emergency notification list and the following oil spill response equipment, personnel and procedures to avoid or minimize the potential for adverse impact to coastal and marine resources in the event of a spill:

- Three bales of Sorbent pads, 600 feet of sorbent boom, 1000 feet of oil spill containment boom and two boom tender skiffs will be onboard the work barge at the project site at all times.

- The vessel crew on the work barge will be trained in oil spill response to handle immediate response and clean up for small spills (less than five barrels) and to provide initial response for large spills (greater than five barrels) at the project site. In the event of a large spill, the crew will immediately notify Clean Seas to provide the primary response.

- Clean Seas — the Santa Barbara region's oil spill response organization — will provide the primary oil spill response in the event of a large spill (greater than 5 barrels). Clean Seas maintains two large oil spill response vessels (OSRVs) — Mr. Clean and Mr. Clean III — and several small response vessels that are equipped with on-board oil spill boom and skimmer operations. Additional oil spill response and containment equipment is also stored at the Clean Seas' storage yard in Carpinteria. Clean Seas' OSRV, Mr. Clean, can arrive at the project site in less than 2 hours, which is consistent with the OSPR's and the Commission's response time standard of 2 hours for primary oil spill response. The applicant has arranged with Clean Seas to be a "contract associate member" for the duration of the proposed project. **Special Condition No. 6** requires the applicant, prior to commencement of project activities, to submit to the Executive Director evidence of the contractual arrangement with Clean Seas.

Long-term hazard

The proposed project involves the risk of a petroleum hydrocarbon spill or release in the long-term due to possible vessel collisions with the artificial reef and bird roost platforms. Such a collision could potentially cause a spill or release of diesel fuel from the vessel, however there is no chance that such a collision would cause an oil spill from either Well No. 7 or No. 10, because the wells have been capped and will be cut off below mudline.

The proposed project is located relatively close to shore, therefore vessel traffic in the area is limited to recreational boats, fishing vessels, and other small crafts. The four roosting/nesting platforms and associated piles will be erected shoreward of the existing remnant pier structures, in an area that is currently avoided by vessel traffic due to the existing remnant pier structures. Existing water depth at the site of the remnant pier structures is currently 30 to 34 feet. The proposed artificial reef is low-profile, and after toppling the caissons and constructing the artificial reef, water depth at the site will be approximately 22 to 26 feet. The US Coast Guard has determined that aids to navigation, such as lights, buoys, and beacons, will not be required for the artificial reef or the bird platforms.

Information regarding the proposed project will be posted in the US Coast Guard Local Notice to Mariners. The applicant will notify NOAA Nautical Date Branch of the new artificial reef and bird platforms so that nautical charts can be updated to reflect the new structures. While a long-term risk of vessel collision with the new structures exists, the risk is small and is not increased from its present level by the proposed project.

Conclusion

The Commission finds that protection against the spillage of crude oil, gas, petroleum products or hazardous substances has been provided to respond to the type of spill that could occur due to project-related construction activities. Furthermore, while a long-term risk of vessel collision with the new structures exists, the risk is small and is not increased from its present level by the proposed project. For the reasons discussed above, the Commission therefore finds the project, as conditioned, is consistent with the Coastal Act's Section 30232 oil spill prevention and response policy.

4.4.5 Commercial Fishing

Coastal Act § 30234.5 states:

> *The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.*

The proposed project will temporarily preclude urchin diving, crab and lobster trapping on the area during construction activities, and permanently preclude commercial fishing at the project site due to the construction of the new artificial reef and bird roost/nesting platforms.

In general, commercial fishing is limited near the project site by the depth of the water. Commercial fishing for California halibut is conducted greater than one nautical mile offshore, for Dover sole in at least 1,800 feet of water, for rockfish in greater than 180 feet of water, and miscellaneous market fish in at least 600 feet of water. Fishing for commercial invertebrates such as ridgeback shrimp and spot prawns occurs in depths greater than 180 feet, and for crabs in 60 to 240 feet of water. Commercial urchin diving can occur from the surf zone to 100 feet. Purse seining for squid could occur along the coast near the project site, however most squid fishing occurs at the Channel Islands.

Project activities will be conducted nearshore and in water depths shallower than those identified above as active commercial fishing depths, other than for urchin diving and crab and lobster trapping. Similar seafloor habitat as that found within the anchor preclusion area is expected within the approximately 2.7 square mile area of Fish Block 654 that encompasses water depths of from 18 to 40 feet. Because the area of preclusion will be small (about 0.07 square miles for one month), the impacts will short-term, and similar seafloor habitat is expected to be near-by, the project will have only a minor and temporary impact on the commercial fishing industry.

Conclusion

For the reasons discussed above, the Commission finds the proposed project recognizes and protects the economic, commercial and recreational importance of fishing in the project area, and is consistent with Section 30234.5 of the Coastal Act.

4.4.6 Public Access and Recreation

Coastal Act § 30210 states:

> *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Coastal Act § 30211 states:

> *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

Coastal Act § 30220 states:

> *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

The proposed project has the potential to impact public access and recreation in the following ways: (a) Impact onshore recreational activities due to temporary construction activities; (b) Preclude nearshore and offshore recreation due to temporary construction activities; (c) Impact recreational boaters due to the long-term presence of the artificial reef and bird platforms.

Onshore Recreational Activities

A wide range of public and private facilities is available for recreation in the vicinity of the PRC-421 pier remnant, including beaches and bluff-top parks. Most of the recreational activities along the shore are water-related or coastal-dependant, and include walking, jogging, sunbathing, and beachcombing. The barge used to dismantle the pier remnants and install the proposed roosting/nesting platforms will be stationed at the end of the structure, 850 feet from shore. The proposed project will have no physical presence on the beach. People on the beach and from some view points on the bluffs, including the Ellwood Shores area and the Sandpiper Golf

Course, will be able to see the vessels, and may be able to hear various pier removal and roosting/nesting platform construction activities. This will not prevent people from continuing any of their beach and other onshore activities. Members of the public engaged in onshore recreational activities will not be at risk during the planned operational use of explosives due to the distance of these operations.

Nearshore and Offshore Recreational Activities

During the pier removal and roosting/nesting platform construction work, the public will have to be excluded from the area for safety reasons. Fishing, diving, recreational boating, swimming and surfing are the nearshore or offshore recreational activities that will be precluded during construction activities.

Due to the known presence of oil seeps, the area is not considered a prime destination for commercial sport fishing. Most sport fishing and diving in the area is conducted at Naples Reef, located approximately 2.5 miles west of Pier PRC-421. Recreational boating activity in the immediate project area is also minimal because the project site is a considerable distance from the Santa Barbara Harbor. Beach access is limited in the vicinity of the Sandpiper Golf course, so the number of people that use the beach closest to PRC-421 is low. Swimming is a beach activity that tends to occur in or near organized parks in the area, especially at Goleta Beach County Park and adjacent beaches near UCSB. Surfing is popular off Coal Oil Point and Goleta Point near UCSB, however it is very uncommon along the relatively straight shoreline in the vicinity of the project site.

For those who do visit the beach and recreate in the nearshore waters at the project site, preclusion of these activities will be temporary – lasting only the 26 days anticipated for demolition and installation.

The US Coast Guard will be contacted so that project information can be included in the Local Notice to Mariners to advise any fishermen, divers and/or boaters planning to use the area during construction activities.

Long-term Impacts

The pier remnant structures currently present a nearshore obstacle that boaters traveling along the coast have to avoid. After the completion of construction activities, the bird platforms will constitute a new obstacle to be avoided. However, the bird platforms will be in almost the same place as the existing structures, and will have a smaller footprint than the current structures. The proposed project will therefore slightly reduce impacts to boaters who must avoid the new structures, relative to the current situation in which boaters must avoid the existing remnant structures. The applicant will notify NOAA Nautical Date Branch of the new artificial reef and bird platforms so that nautical charts can be updated to reflect the new structures.

Conclusion

The Commission finds that there will be no impacts to public access and only minor impacts to recreational activities caused by the proposed project. The proposed project provides for maximum public access, does not interfere with the public's right of access to the sea, and protects coastal areas suited for water-oriented recreational activities. For this reason, the Commission finds that the proposed project is consistent with the public access and recreation sections of the Coastal Act, specifically, Sections 30210, 30211 and 30220.

4.4.7 Cultural Resources

Coastal Act § 30244 states:

> *Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

The proposed project has the potential to impact archeological, paleontological and/or historical resources at the project site by disturbing or destroying prehistoric remains, fossils, and/or shipwrecks located at the project site. Project activities that might impact cultural resources include excavating the sea floor by jetting sediments, driving the four platform piles into bedrock, and other activities associated with cutting and removing the remnant pier structures.

A literature search was conducted to identify documented offshore cultural resources.[11] A large aboriginal population lived in the Goleta area during late prehistoric times, and the area offshore of Goleta was the scene of frequent aboriginal maritime activity. The Barbareno, one of the Chumashan-speaking Native American tribes of California, historically inhabited land onshore from the project area. Ocean fishing and nearshore collection of shellfish were important for survival of aboriginal peoples, as was hunting and trapping of large and small game.

There are no known archaeological resources in the project area, although prehistoric remains may occur in the area surrounding the project site. Prehistoric remains may be located on landforms that were previously above water, and are presently submerged and now covered with marine sediments. Preservation of intact prehistoric resources along the California coast is considered rare due to the high-energy nature of the shoreline environment. Prehistoric artifacts in the nearshore environment may be destroyed, altered, or displaced by wave action and sediment transport processes.

The proposed project involves only minor excavation of the seafloor, to four feet below the mudline around each of the eight columns and two well conductor pipes, and driving of the four piles. The likelihood that proposed project activities will disturb or destroy archaeological resources is small.

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[11] See Draft EIR p. 4.8-5.

Potential impacts to paleontological resources involve the possibility that pile driving for the bird platforms could crush fossils. There is little information on the existence of fossil evidence in the project area, and sampling to determine if fossils are present would result in approximately the same impact as the proposed project itself. The proposed project will only impact bedrock in the area of the four 30-inch diameter piles. Dr. Larry Agenbroad, Professor Emeritus of Paleontology and Quaternary Geology at Northern Arizona University, was consulted for his professional opinion regarding the potential for the proposed project to impact paleontological resources.[12] In his professional opinion, the probability of project activities damaging vertebrate resources of the Monterey Formation is low.

Historical resources potentially present at the project site include shipwrecks and artifacts from shipwrecks. Five historic shipwrecks occurred near the Goleta Slough, and are the closest known shipwrecks to the project area, approximately four miles away. All five are more than 50 years old. The likelihood of unrecorded wrecks within the project area is relatively low, because the project site is in shallow waters and is not located on an approach to a major harbor or port. In addition, extensive dive investigations of the project site and remote bathymetry studies have identified no remains of shipwrecks. With the high-energy wave movement on the southern California coast it is possible that wreck remains could be obscured by sand; however, this is unlikely due to the limited shallow sand deposits in the project area. It is unlikely that the proposed project will disturb or destroy historical resources.

The Commission therefore finds that the likelihood that the proposed project will adversely affect archaeological, paleontological or historical resources is small, and therefore the project is consistent with Section 30244 of the Coastal Act.

4.4.8 Visual Resources

Section 30251 of the Coast Act states:

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas...*

Visual Setting

The project area lies off the Santa Barbara County coast in an area characterized by coastal bluffs and sandy beaches. In addition to extensive open space areas along the coast, residential and recreational areas occupy nearby portions of the coast. Generally visible marine habitats in the project area include sandy, rocky, and cobble beaches, and kelp forests. The Santa Barbara Channel dominates the region's coastal viewshed.

A flat, sandy beach lines the coast between the project site and upland areas. A steep coastal bluff separates the beach from these upland areas, abruptly rising 80 to 100 feet above the beach

[12] See Draft EIR p. 4.8-7.

in some areas. Portions of these upland areas are developed, although the majority of the area is considered open space according to the County of Santa Barbara Comprehensive Plan Open Space Element. Numerous public coastal accesses, parks and beaches are located in the area, and the public Sandpiper Golf Course occupies the coastal terrace immediately north of the project site. The Santa Barbara Shores County Park occupies a substantial portion of the remaining coastal terrace. This park is largely undeveloped and contributes open space to the area. The coastline both northeast and northwest of the project site retains a largely rural atmosphere with some residential and commercial developments within the city of Goleta, and commercial onshore oil facilities, such as the Ellwood Onshore Facility.

Views of the project site consist of a largely unbroken expanse of ocean, with the exception of several offshore oil platforms to the southeast and southwest, and the existing PRC-421 Pier remnant. The view is demarcated by the Channel Islands to the south. Ships, fishing boats, and recreational boats occasionally pass through the viewshed.

Visual impacts from the proposed project will potentially affect recreational users of beaches, trails, and public parks in the vicinity, recreational boaters, and members of the public using scenic highways in the area.

Recreational Users

Immediately shoreward of the project site is a flat, sandy beach ending in a coastal bluff and terrace occupied by the public Sandpiper Gold Course. An undeveloped area, located southeast of the project site, contains a number of undeveloped trails, which are used for walking and jogging. Much of the area has full ocean view, including the project site. The Santa Barbara County Shores Park is located northeast of the project area and consists of open space available for recreation use. The park is set back from the bluffs and is surrounded by Eucalyptus groves; consequently, the project site is not visible from any location within the park. Several beach access trails and roads are located along the coastline in the vicinity of the project area, including one from the Santa Barbara Shores County Park.

Recreational Boaters

Santa Barbara Harbor includes approximately 1,160 boat slips and several excursion boat businesses for sport fishing and whale watching in the area. The Santa Barbara Channel has become a major center for whale watching, which typically occurs from February to April and from July to September. While pier removal activities have been scheduled to avoid whale migration season (November 30 through June 1), some whale watching activity, involving viewing of blue whales feeding near the Channel Islands, extends into September. Additionally, recreational boaters may traverse the area.

Scenic Routes

The Santa Barbara County General Plan of Scenic Highways has not designated any official scenic roadway corridors in the immediate project vicinity. However, the portion of State Highway 101, throughout its entire length within Santa Barbara County, is eligible for

designation as a "Scenic Highway". In addition, Caltrans has also identified this portion of Highway 101 as eligible for designation as a State scenic highway, according to its *Guidelines for the Official Designation of Scenic Highways*. Due to the far-reaching nature of the coastal vistas, the view corridors (area visible from the road) of this highway may include the site of the proposed project within their background views.

Key Observation Points

Two Key Observation Points (KOPs) were selected to reflect representative viewing conditions of the project site. The location of each KOP is depicted in Exhibit 8. The view of the project site from each KOP is depicted in Exhibit 9.

- **KOP No. 3**[13] presents the view southwesterly toward the project site from Haskell's Beach. This KOP is located directly onshore from PRC-421 and directly below the Sandpiper Golf Course.

- **KOP No. 5** presents the view northwesterly toward the project site from a trail on the cliff edge above Ellwood Beach. This is one of many trails used by joggers in an undeveloped area southeast of the Santa Barbara Shores County Park. This KOP is also the location furthest north on the Cliffside trail from which the site is fully visible. The site is no longer visible from a location approximately 150 feet further north of KOP No. 5. This KOP represents all Cliffside views of the project area from this point south to Coal Oil Point. Any areas beyond Coal Oil Point do not have visibility of the project area due to visual screening by Coal Oil Point.

Visual Impacts of the Proposed Project

Potential impacts of the proposed project to visual resources in the area fall into two categories: temporary impacts due to construction activities, and long-term impacts due to the installation of the bird platforms.

Short-term construction activities will create a moderate to high degree of visual intrusion into the viewshed of recreational users of the project area coastline and travelers on Highway 101. The vessels used in construction activities will be located approximately 400 to 900 feet offshore, and will result in a short-term adverse impact on visual resources during the estimated 26-day construction period, due to the perceived incompatibility of construction activities with a natural beach setting. Additionally, navigational and hazard lighting aboard moored barges and vessels will be required during the removal operations, which will increase night lighting at the site and increase the contrast between the natural ocean setting and the construction activities. These impacts will be temporary, and will cease after construction activities are concluded.

Long-term visual impacts of the proposed project are associated with the installation of the bird roost platforms. Exhibit 10 is a visual simulation of how the proposed bird platforms will look

[13] KOP numbers are taken from the Draft EIR (page 4.7-4), which presents a total of five KOP's. Commission staff has included only those KOP's relevant to an analysis under the Coastal Act.

after they have been installed. The proposed bird platforms will be taller but less massive than the existing pier remnants. No night lighting or highly reflective materials are proposed. Due to the increased height of the proposed platforms, it is possible that distant views of the structures may be available from locations that presently have no view of the pier.

The pier remnants are 850 feet from the shore; therefore, the distance along with downward views tend to reduce the perceived scale of the existing remnant pier structures and the future bird platforms. The area's existing mixture of man-made and natural visual attributes accommodates some degree of change. There are currently many types of boats and equipment traveling offshore, and there are several offshore and onshore oil production facilities that occupy the viewshed in the project area. The new structures will neither block views nor be inconsistent with the existing character of the area. They will furthermore preserve the ability of some recreational users to observe California brown pelicans and Brandt's cormorants.

The Commission is requiring the applicant in **Special Condition No. 7** to monitor the use of the bird platforms for five years after construction to verify that seabirds are actually using the new platforms. Monitoring shall occur at least annually and include identification and abundance of seabirds and roosting and nesting behavior. The applicant shall submit to the Executive Director by the end of each calendar year an annual seabird monitoring report, with a final report due at the end of the five-year monitoring program. If after reviewing the final report the Executive Director determines that the platforms are not being used by seabirds as a nesting/roosting structure, **Special Condition No. 7** requires the applicant, within 90 days of the Executive Director's determination, to submit an amendment to this permit to remove the bird platforms. This ensures that if the platforms do not serve their intended purpose, they will be removed and the site will be returned to its pre-development state.

Conclusion

The Commission finds that, with the inclusion of **Special Condition No. 7,** the scenic and visual qualities of coastal areas at the project site will be protected by the proposed project. The Commission therefore finds that the proposed project is consistent with Section 30251 of the Coastal Act.

4.4.9 Geology

Coastal Act Section 30253 states, in relevant part:

New development shall:

(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

The proposed project has the potential to cause geologic hazards through the following actions: (a) Toppling of bird platforms due to seismic activity; and (b) Creating or contributing to erosion through alteration of nearshore sediment transport.

Seismic Hazards

Historically, the Santa Barbara Channel has experienced a low to moderate level of seismic activity. Studies of the instrumental seismic record for the Santa Barbara Channel area show that earthquake epicenters can generally be correlated with east-west trending reverse faults and with concentrations of activity in the central and northeastern portions of the Channel. Recorded seismicity is relatively sparse in the western portion of the Channel. Only five earthquakes have exceeded magnitude 5.0 since 1900, the maximum magnitude of 6.2 occurred in 1925. PRC-421 exists upon beach sand deposits at the base of a coastal terrace. The Moore Ranch fault is the closest fault to the site. The Moore Ranch fault is a west-east fault of the late Quarternary age and is located approximately one-half mile north of the site.

The piles supporting the bird platforms have been designed so that the lowest platform will overtop by five feet a 100-year maximum breaker height. The installation of the piles for the roosting/nesting platforms will occur in weathered to competent Monterey formation that exists beneath surficial sand sediments in the area. In the project area, there may exist zero to four feet of sand sediment. Based upon the subsurface profile at the site, governing codes and regulations, loading (dead load, live load, wave forces, wind and seismic conditions) and function of the proposed roosting/nesting platform structures, Bengal Engineering prepared an analysis of pile drivability and requirements for stable roost pile design[14]. The analysis determined that piles should be driven to a minimum depth of 20 feet into bedrock. The report further states that pile driving conditions are expected to be very hard at the project site and provided recommendations for pile driving that should be able to drive the 30-inch diameter piles. The recommendations of the Bengal analysis have been incorporated into the proposed project. Recent pile driving successfully occurred at the adjacent PRC-421 beachside piers where the Monterey formation was also encountered.

Bluff Erosion

The shoreline adjacent to the project area is similar to much of the mainland shore of the Santa Barbara Channel, i.e., sandy (fine to medium-grained) beach backed by high bluffs. Long-shore sediment transport at the project site is nearly unidirectional from west to east. The estimated littoral transportation rate is approximately 275,000 cubic yards per year. The principal components of the area's sediment budget include sediment delivery from the tributary creeks and streams of the Santa Ynez Mountain watershed (approximately three-quarters of the sand transported to the east by the long-shore drift described above) and the smaller contributions of bluff erosion between Point Conception and the project site.

The relatively limited sand supply within the shoreline reach and the characteristics of the local geology and bluff morphology explain why the beaches have eroded into the relatively narrow

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[14] Bengal Engineering. *PRC-421 Pelican Roost Pile Design for Atlantic Richfield Company.* November, 2003.

and sediment-limited features that exist today. Over the past 70 years, the beaches have remained relatively stable. Studies by Diener[15] have estimated that the bluffs in the area have receded about 60 feet over the past 50 years. This translates to an average annual retreat rate of 1.25 feet per year.

Temporal variation in berm width occurs regularly due to seasonal changes and short-term storm events. During winter, large, short-period waves generated by local storms will erode the beach, carrying sediment seaward. During summer, smaller, long-period waves carry sediment shoreward, regenerating the beach. Seasonal changes have been measured to be about 50 feet, but short-term storm erosion and recovery sequences can be greater.

From an examination of aerial photographs, there is no indication that the existing PRC-421 pier remnants influence the nearshore drift of sediment in the region. The proposed project will result in the removal of the pier remnants, as well as the installation of an artificial reef and piles on which the four bird platforms will be installed. This proposed reef will increase the bottom relief and has the potential to modify local wave energy.

Late last year, the applicant contracted with Noble Consultants to study the effect of the artificial reef, as it was then designed, on nearshore sediment drift and beaches[16]. The artificial reef at that time was envisioned as a solid circular mound comprised of 4,000 cubic yards of quarry rock and the eight concrete caissons. The mound would completely cover the seafloor, and would rise approximately nine feet off the substrate. Since the Noble report was prepared, the reef has been redesigned to be lower – only the caissons will be nine feet off the seafloor, and the quarry rock will be stacked to only four or five feet. Additionally, instead of forming a circular mound completely covering the seafloor, the reef will use only 3,000 cubic yards of quarry rock, and will form more of a checkerboard pattern, allowing wave energy to pass through the multiple patches of introduced hard substrate. Exhibit 5 depicts a conceptual model for the reef design.

The proposed reef has the potential to modify local wave energy, by creating a sheltering effect that will decrease wave energy within the reef shadow and increase wave energy where there is refraction around the reef. The report prepared by Noble Consultants found that the reef as originally proposed would 1) not result in significant entrapment of sand; 2) possibly cause cross-shore sediment patterns to decrease by about 11 percent or less within the zone of wave shelter and to increase by no more than 30 percent in the upcoast and downcoast zones of sheltering; and 3) possibly cause long-shore transport potential to decrease by about 16 percent within the sheltered area, and increase by as much as 33 percent just outside the sheltered area.

The Noble report anticipated that the net effect of these changes will result in times of slightly increased beach width inshore of the proposed PRC-421 artificial reef and occasions when more narrow beach width will occur for short distances immediately upcoast and downcoast of the site. The changes were estimated to be less than the magnitude of the normal seasonal beach

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[15] Diener, B. G. "Sand Contribution from Bluff Recession between Point Conception and Santa Barbara." *California Shore and Beach.* Volume 68, No. 2. April 2000.

[16] "Coastal Engineering Assessment." Appendix T of Draft EIR. Prepared for Padre Associates, Inc. by Noble Consultants Inc. January 14, 2004.

width changes that presently occur along this shoreline. The changes were expected to be temporary and to be most prominent as the beach shifted from a "winter" to a "summer" profile – so that the area in the lee of the reef will be the first to exhibit widening as sand is carried onshore. The Noble report found that the artificial reef, as originally designed, would not alter or exacerbate erosional processes, and that it would not have a significant impact on sediment transport and beaches.

The redesigned artificial reef will have less of an impact on erosional processes, sediment transport and beaches than the original design analyzed by the Noble report. The new design is less massive, lower relief and allows wave energy to pass through the patches of introduced hard substrate.

Conclusion

For the above reasons, the Commission finds that the proposed project will not present a hazard to life or property and therefore is consistent with Section 30253(1) and (2) of the Coastal Act.

4.4.10 Air Quality

Section 30253(3) of the Coastal Act states, in relevant part:

New development shall:...

(3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.

The Santa Barbara County Air Pollution Control District (APCD) requires permits for new, or modifications to existing, air pollution-emitting facilities. Facility operators are required to obtain an Authority to Construct permit before construction begins. APCD has established quantitative thresholds by which to assess the significance of long-term air emissions from proposed projects. According to APCD's *Scope and Content of Air Quality Sections in Environmental Documents*, a project will have a significant impact on air quality if the project would:

- Emit (from all project sources, both stationary and mobile) 240 pounds per day (ppd) or greater of ROC (reactive organic compounds) or NOx (oxides of nitrogen), or 80 ppd or greater PM_{10} (particulate matter, diameter less than or equal to 10 μm);
- Emit 25 ppd or greater of NOx or ROC from motor vehicle trips only;
- Cause or contribute to a violation of any California or National Air Quality Standard (except ozone);
- Exceed the APCD health risk public notification thresholds adopted by the APCD Board, or;
- Be inconsistent with the adopted federal or State air quality plans for Santa Barbara County.

In addition, APCD Rule 202F.3 requires emission offsets for emissions of construction equipment exceeding 25 tons of any pollutant during a 12-month period. The demolition component of the proposed project is subject to these standards. Tables 3 and 4[17] below describe total project emissions, and maximum daily emissions for the proposed project, respectively.

Table 3: Total Project Emissions

Estimated Maximum Total Project Emissions (tons)					
NOx	ROC	CO	Sox	PM	PM_{10}
4.32	0.28	1.10	0.38	0.44	0.42

Table 4: Maximum Daily Emissions

Source	Estimated Maximum Daily Emissions (pounds per day)					
	NOx	ROC	CO	SOx	PM	PM_{10}
Motor Vehicles Only	231.0	13.7	n/a	n/a	n/a	n/a
All Emissions	231.0	20.6	63.8	23.0	26.9	25.8

Total emissions for the proposed project falls under the threshold of 25 tons of any pollutant during a 12-month period. In addition, maximum daily emissions will be less than 240 ppd of ROC and NOx, and less than 80 ppd of PM_{10}. Emissions from motor vehicle trips (including sea vessels) associated with the proposed project will fall under the 25 ppd maximum daily emissions threshold for NOx and ROC. The proposed project therefore falls below APCD's significance thresholds for air quality impacts, and will have no significant impact on air quality.

In addition to the significance thresholds described above, the APCD requires modeling to be performed if maximum NOx emissions exceed 120 pounds per day. The calculation that determines whether modeling has been triggered is different from that performed under the significance thresholds described above. (For example, this calculation only requires that emissions produced in Santa Barbara County be considered, as opposed to all produced emissions as in the significance threshold calculation.) According the calculation that triggers modeling, the proposed project will produce a maximum of 110.5 ppd of NOx. Because the proposed project falls below the threshold of 120 ppd, no air quality modeling is required for the proposed project.

The applicant has applied for, but has not yet received, an Authority to Construct permit from APCD. **Special Condition No. 8** requires the applicant, prior to the issuance of this permit, to

[17] December 2, 2004. Letter from John Lorentz to Brian Shafritz. Enclosure:*ARCO PRC-421 Revised Project Air Emissions Calculations/Tables.*

submit to the Executive Director for approval evidence that the Santa Barbara County Air Pollution Control District has issued an Authority to Construct permit for the proposed project.

Conclusion

The Commission finds that as conditioned, the proposed project will be carried out consistent with the rules of the APCD and is therefore consistent with Section 30253(3) of the Coastal Act.

5.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT

On June 7, 2004, the State Lands Commission certified an EIR for this project. In addition, Section 13096 of the Commission's administrative regulations requires Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits approval of a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant impacts that the activity may have on the environment. The project as conditioned herein incorporates measures necessary to avoid any significant environmental effects under the Coastal Act, and there are no less environmentally damaging feasible alternatives or mitigation measures. Therefore, the proposed project is consistent with CEQA.

Appendix A

Substantive File Documents

Documents

Draft Environmental Impact Report for the Revised PRC-421 Pier Removal Project. State Clearinghouse House No. 2001021119. Prepared for the California State Lands Commission. Prepared by Padre Associates, Inc. January, 2004. Including all Appendices.

Final Environmental Impact Report for the Revised PRC-421 Pier Removal Project. State Clearinghouse House No. 2001021119. Prepared for the California State Lands Commission. Prepared by Padre Associates, Inc. January, 2004.

Work Statement for Pre-Demolition Assessment of Abalone Resources in Areas Associated with Demolition of Remnant Pier Structure in State of California Tidelands Lease PRC-421, Santa Barbara County, California. Prepared for Fairweather Pacific. Prepared by Littoral Ecological & Environmental Services (LEES). September 1, 2004.

Work Statement for Pre- and Post-Demolition Assessment of Kelp Resources Associated with Removal of Remnant Pier Structures in State of California Tidelands Lease PRC-421, Santa Barbara, California. Prepared for Fairweather Pacific, LLC. Prepared by Littoral Ecological & Environmental Services (LEES). August 9, 2004. Revised December 13, 2004.

Draft Proposal Submitted to the State Lands Commission, In Response to the Need for Monitoring at Bird Island Mitigation Reef. Prepared for the California State Lands Commission. Prepared by Santa Barbara Channelkeeper. August 4, 2004. Revised October 18, 2004.

PRC-421 Draft Seabird Monitoring Proposal. Prepared for the California State Lands Commission. Prepared by Santa Barbara Audubon Society, Inc. May 31, 2004. Revised October 12, 2004.

ARCO PRC-421 Oil Spill Contingency Plan. Revised August 17, 2004.

ARCO Revised PRC-421 Pier Removal Project Execution Plan (Option 6). Prepared by Fairweather Pacific, LLC. August 17, 2004.

California State Lands Commission Minute Item 58: ARCO and DFG (Applicants). Calendar Date June 7, 2004. Including all exhibits and meeting minutes.

Description of Pre-Demolition Conditions for Natural Hardbottom Substrate near the Remnant Pier Structure in State of California Tidelands Lease PRC-421, Santa Barbara County, California. Prepared for Fairweather Pacific, LLC. Prepared by Littoral Ecological & Environmental Services (LEES). December 10, 2004.

Letter Correspondence

December 9, 2004. From John Lorentz to Audrey McCombs. With enclosures.

December 2, 2004. From John Lorentz to Brian Shafritz. With enclosures:

- Application to the Santa Barbara County Air Pollution Control District
- California State Lands Commission Notice of Determination, dated June 8, 2004
- ARCO PRC-421 Revised Project Air Emission Calculations/Tables
- Excerpts from EIR

November 30, 2004. From John Lorentz to Audrey McCombs. With enclosures:

- Fugro Bathymetry Survey
- Oceaneering Dive Survey Report

November 18, 2004. From Todd Normane to Audrey McCombs.

August 19, 2004. From John Lorentz to Audrey McCombs. With enclosures:

- Aerial Photo showing approximate locations of Well Nos. 10, 7, 4, and 1
- Draft Supplementary Notice to DOGGR for Well #7
- Draft Supplementary Notice to DOGGR for Well #10
- Report of Well Abandonment, Well #7. February 16, 1954
- Report of Well Abandonment, Well #10. February 16, 1954
- Excerpt from Munger Oil Field Map Book, Page 132

July 28, 2003 [*sic.* 2004] From Jon Moore to Simon Poulter.

April 30, 2004. From John Lorentz to Alison Dettmer. With enclosures:

- Project Description
- Execution Plan
- Rigging Plan

May 28, 2002. From California Department of Fish and Game to California State Lands Commission.

E-mail Correspondence

December 3, 2004. From John Lorentz to Audrey McCombs. Subject: Reef Sketches. With attachments:

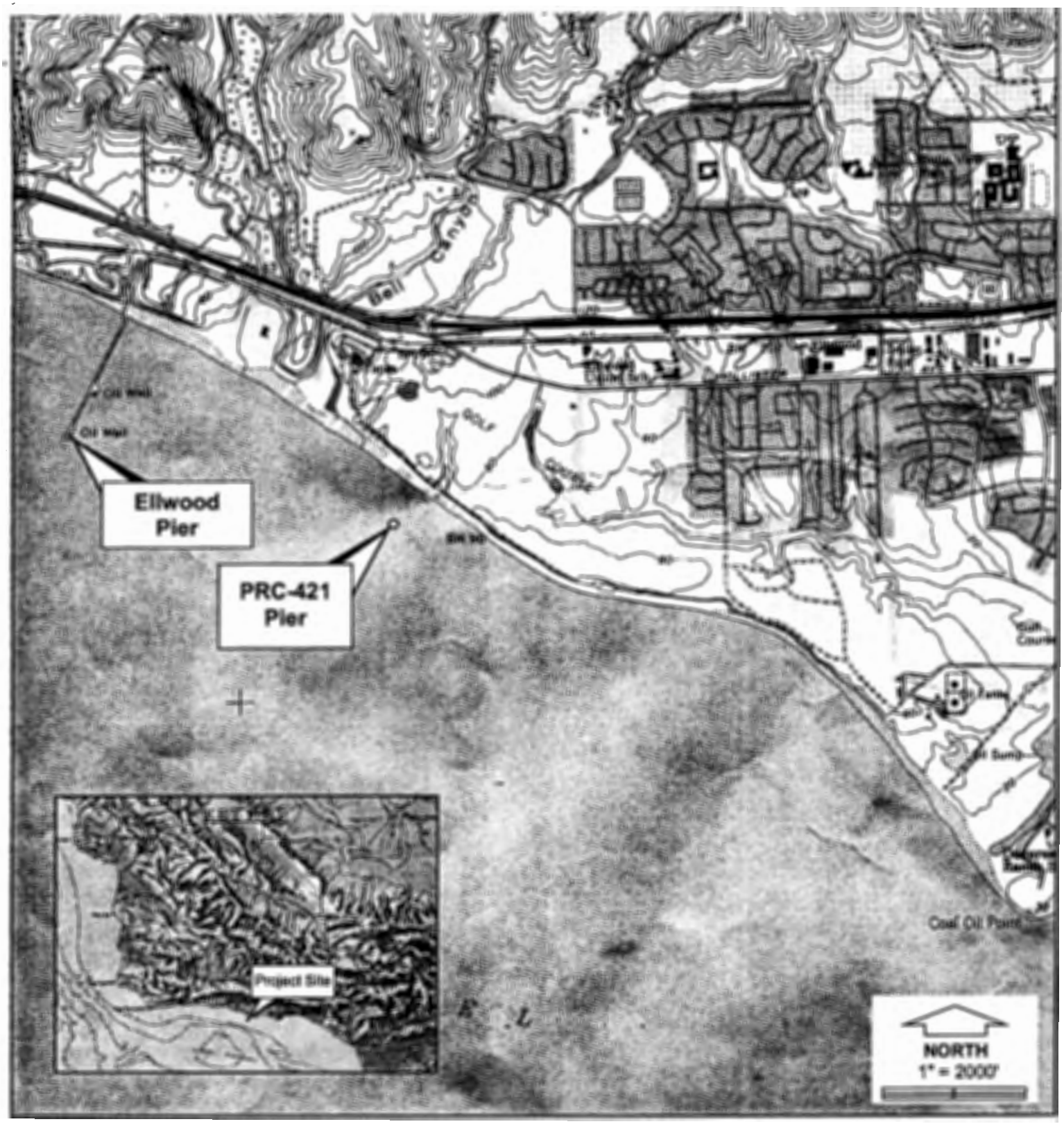
- Revised Bird Roost Platforms (elevation view) sketch
- Revised Reef (plan view) sketch

November 20, 2004. From John Lorentz to Audrey McCombs. Subject: FW: Aerial Survey

November 12, 2003. From John Lorentz to Audrey McCombs, *et all.* Subject: PRC-421 Quarry Rock Update

August 19, 2004. From John Lorentz to Audrey McCombs. Subject: DEIR Page 4.4-41

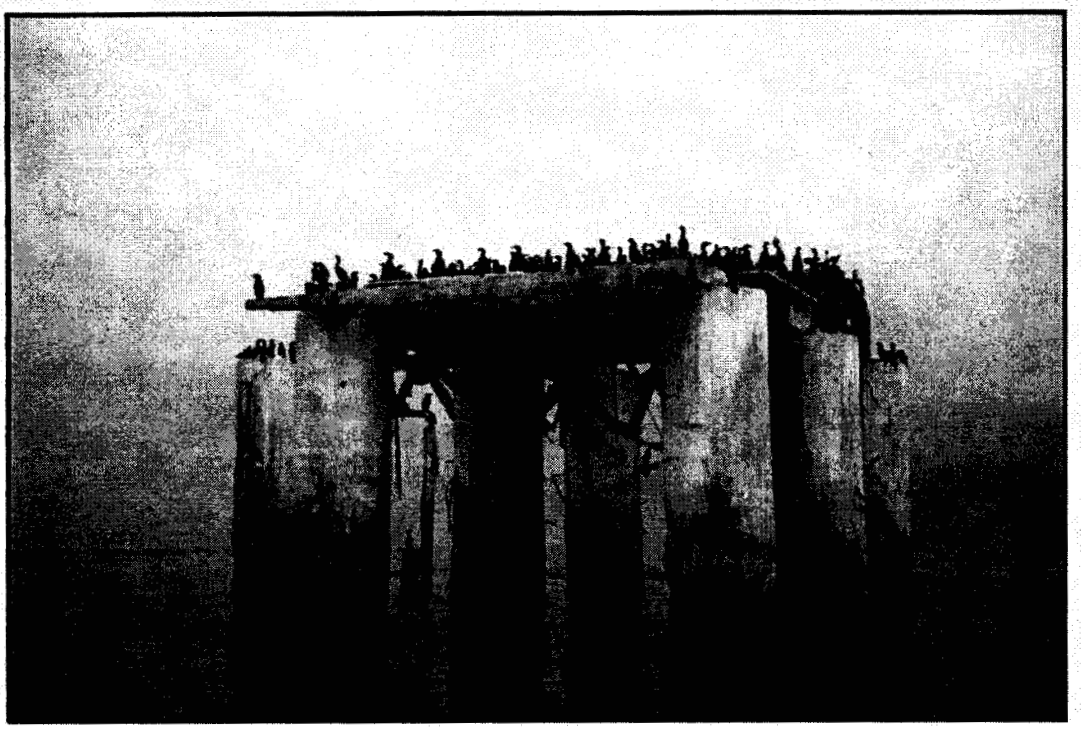
April 16, 2004. From John Lorentz to Eric Gillies. Subject: FW: PRC 421 County Comment Response



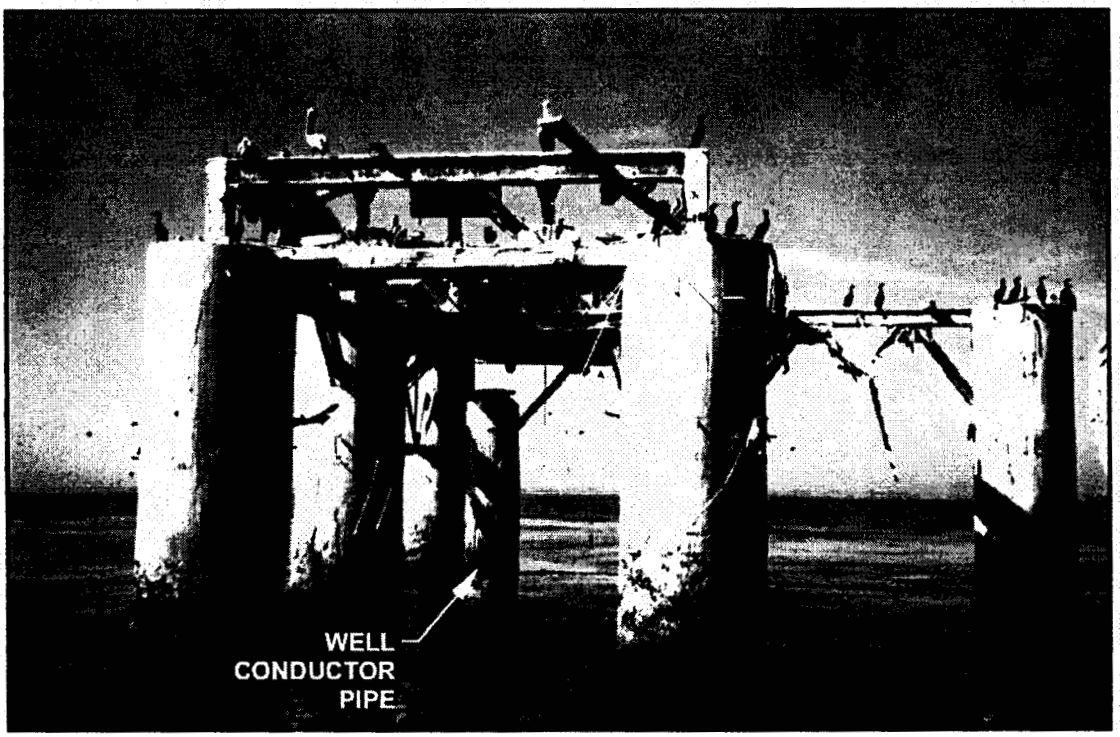
SOURCE: USGS Dos Pueblos Canyon - 1988

Project Location

EXHIBIT NO. 1
APPLICATION NO.
E-04-010



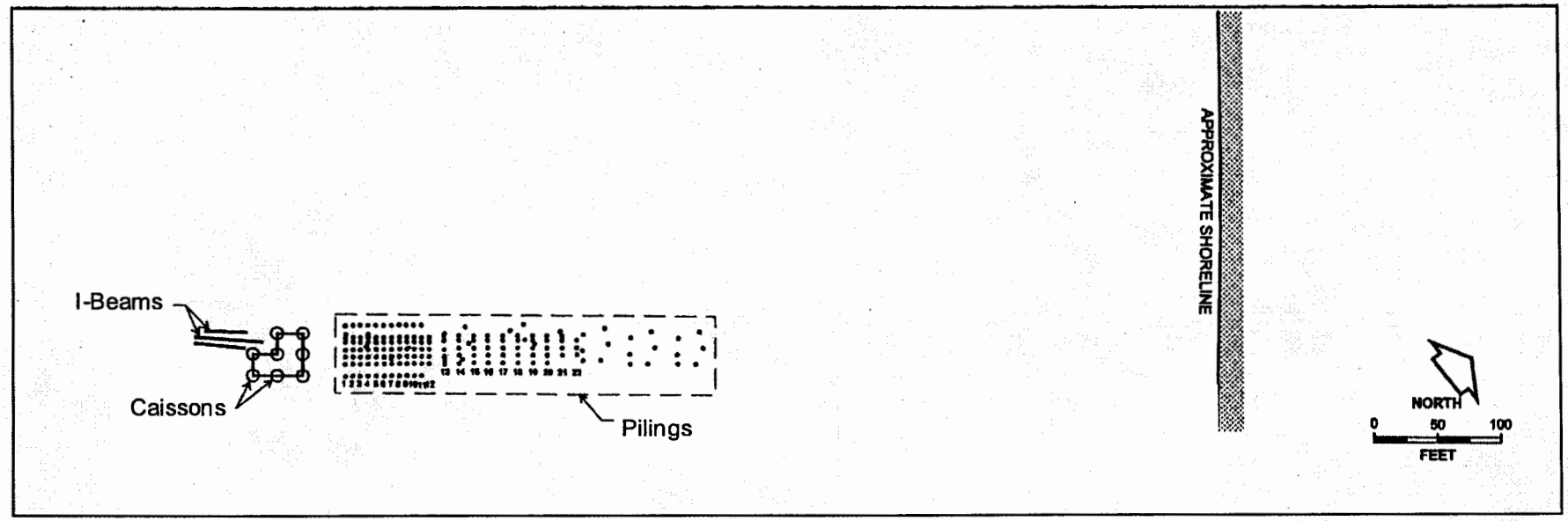
A: View North of Pier Structure

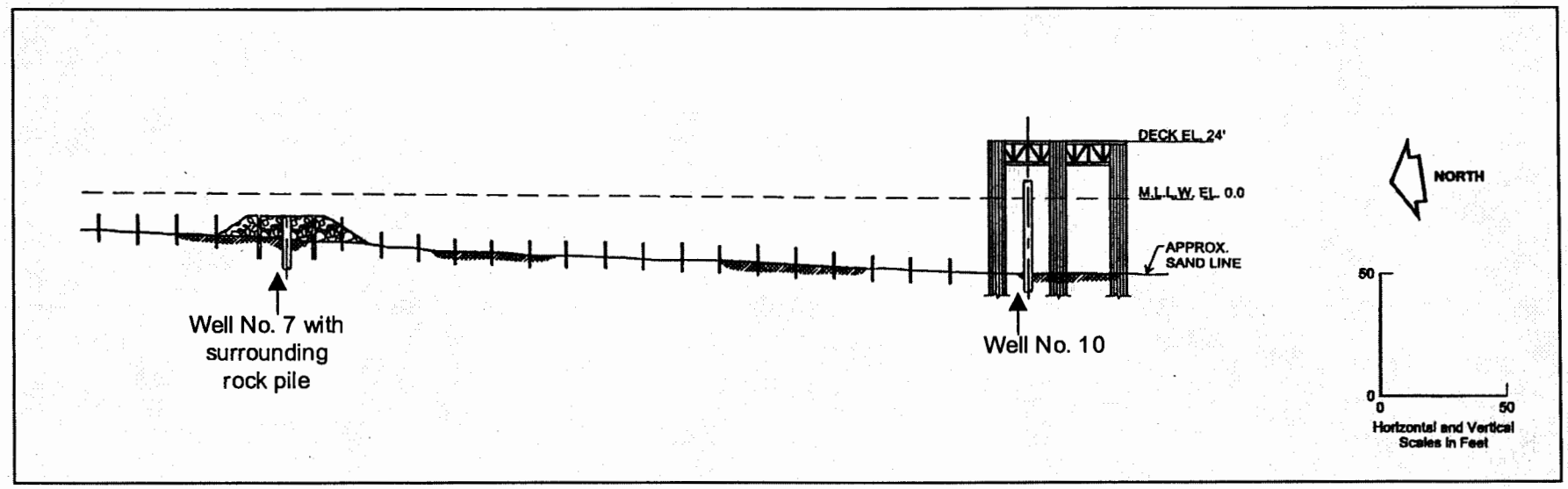


B: View South of Pier Structure, with Well Conductor Pipe #10

Site Photographs

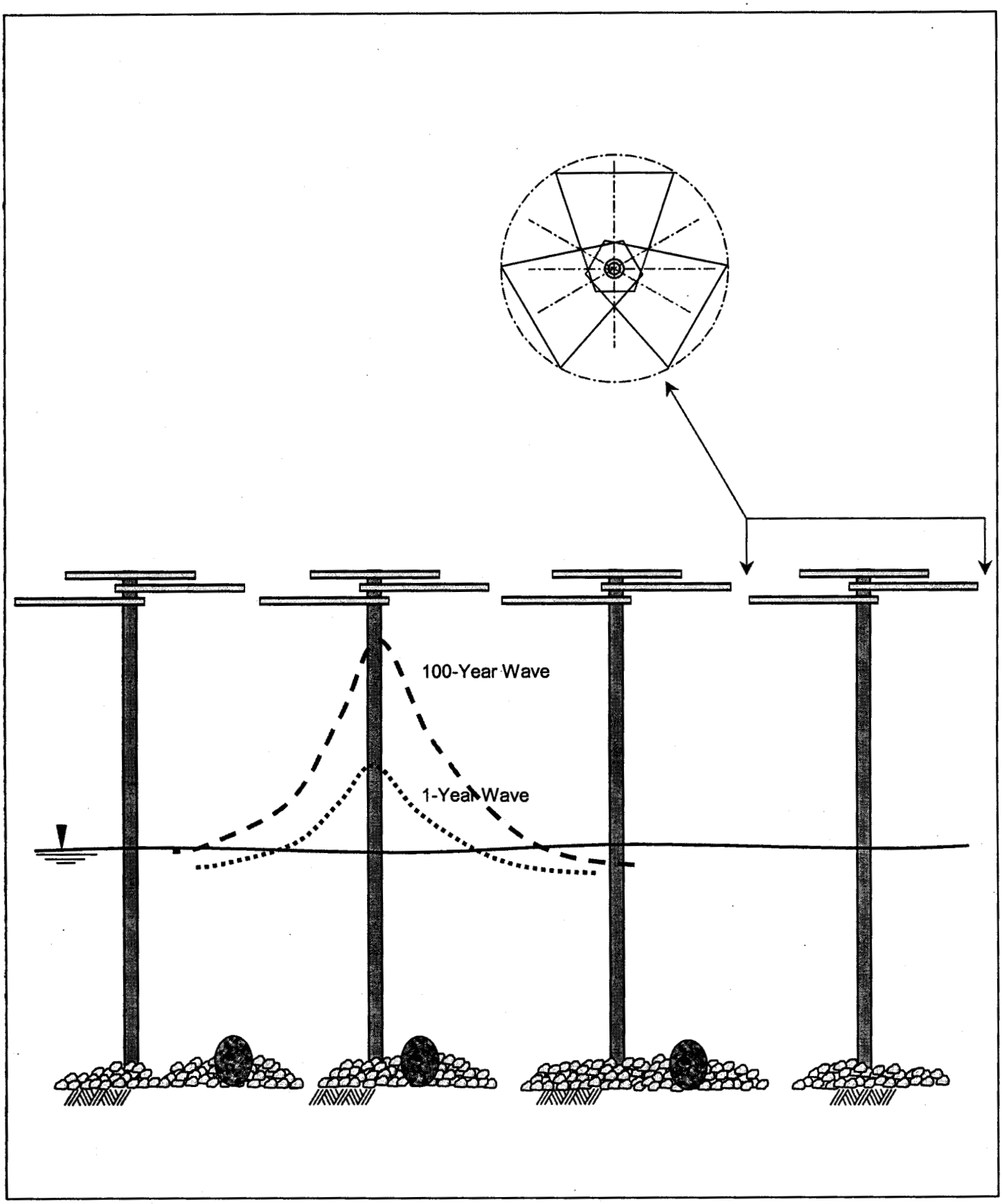
EXHIBIT NO. 2
APPLICATION NO.
E-04-010





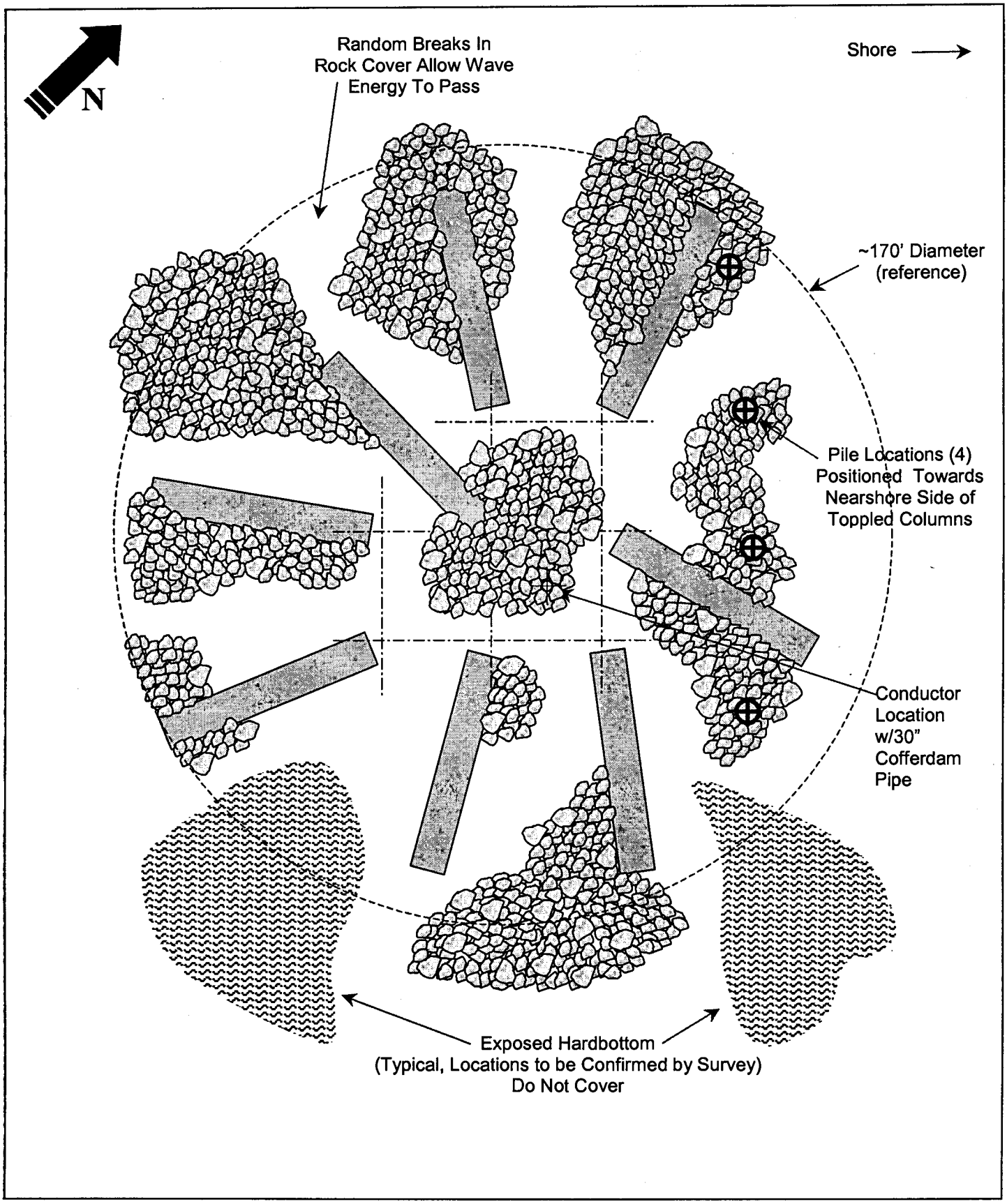
Pier Structure Diagram

EXHIBIT NO. 3
APPLICATION NO.
E-04-010



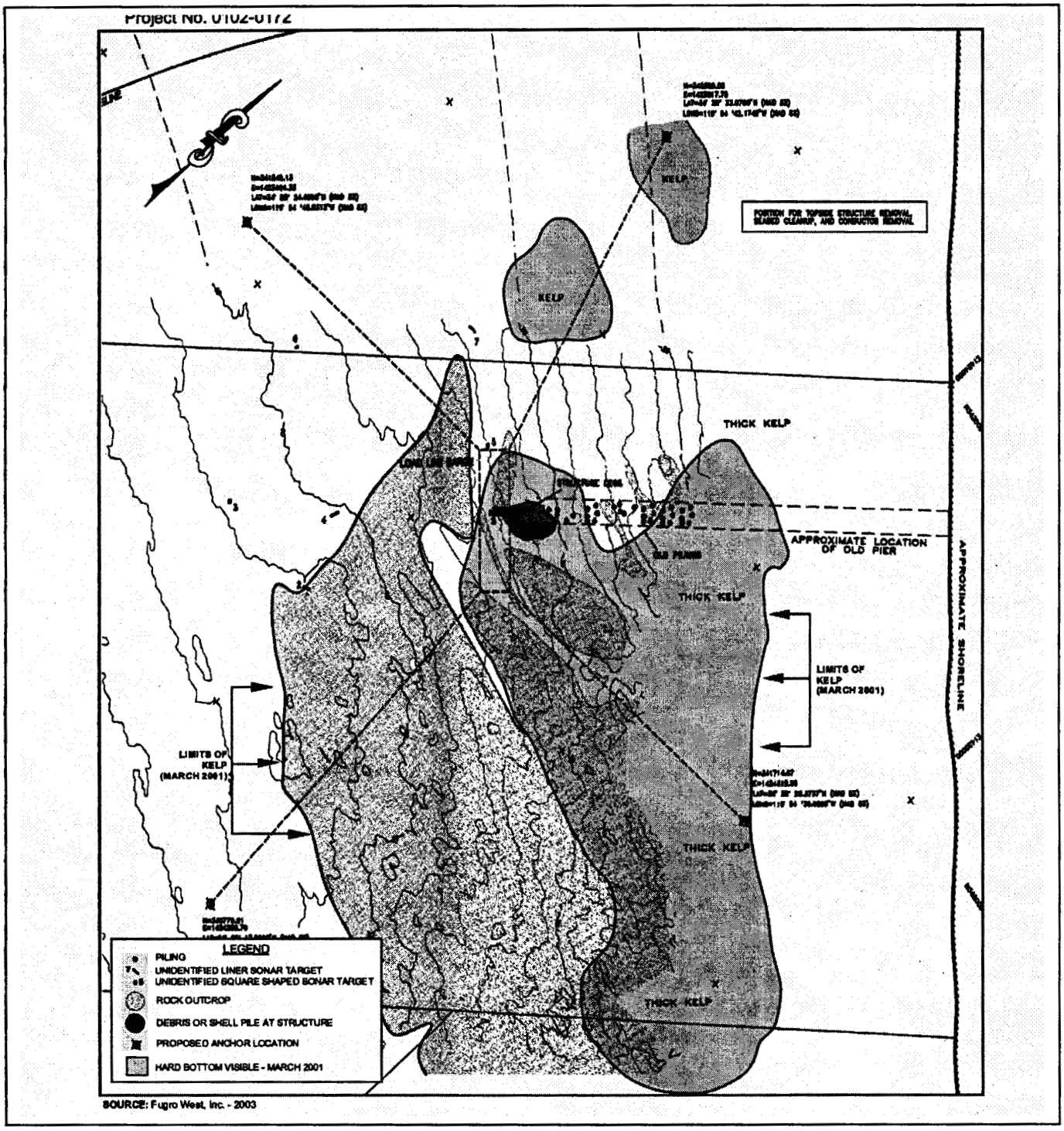
Bird Roosting and Nesting Platforms
(Elevation View)

EXHIBIT NO. 4
APPLICATION NO.
E-04-010



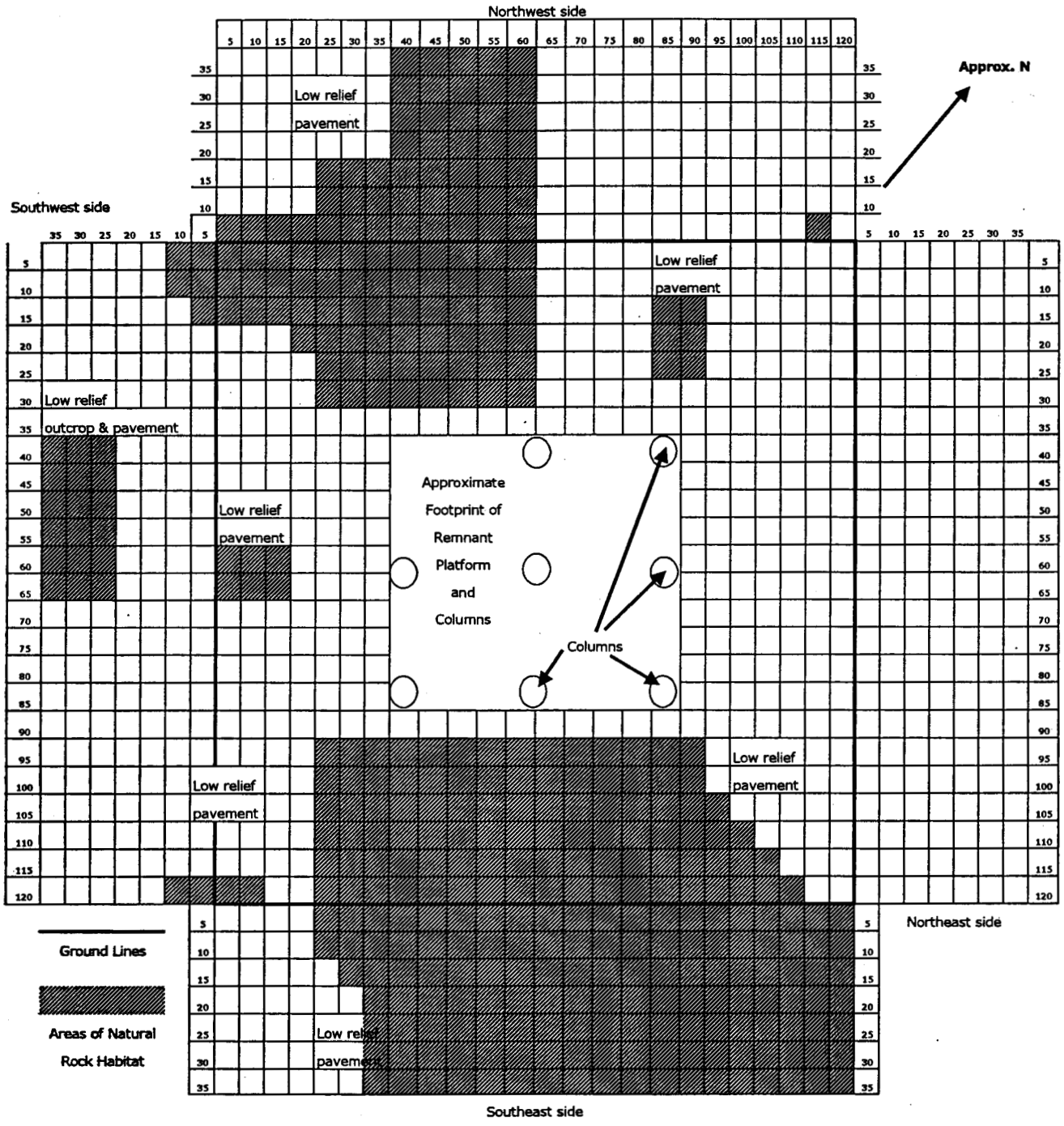
Artificial Reef: Conceptual
(Plan View)

EXHIBIT NO. 5
APPLICATION NO.
E-04-010



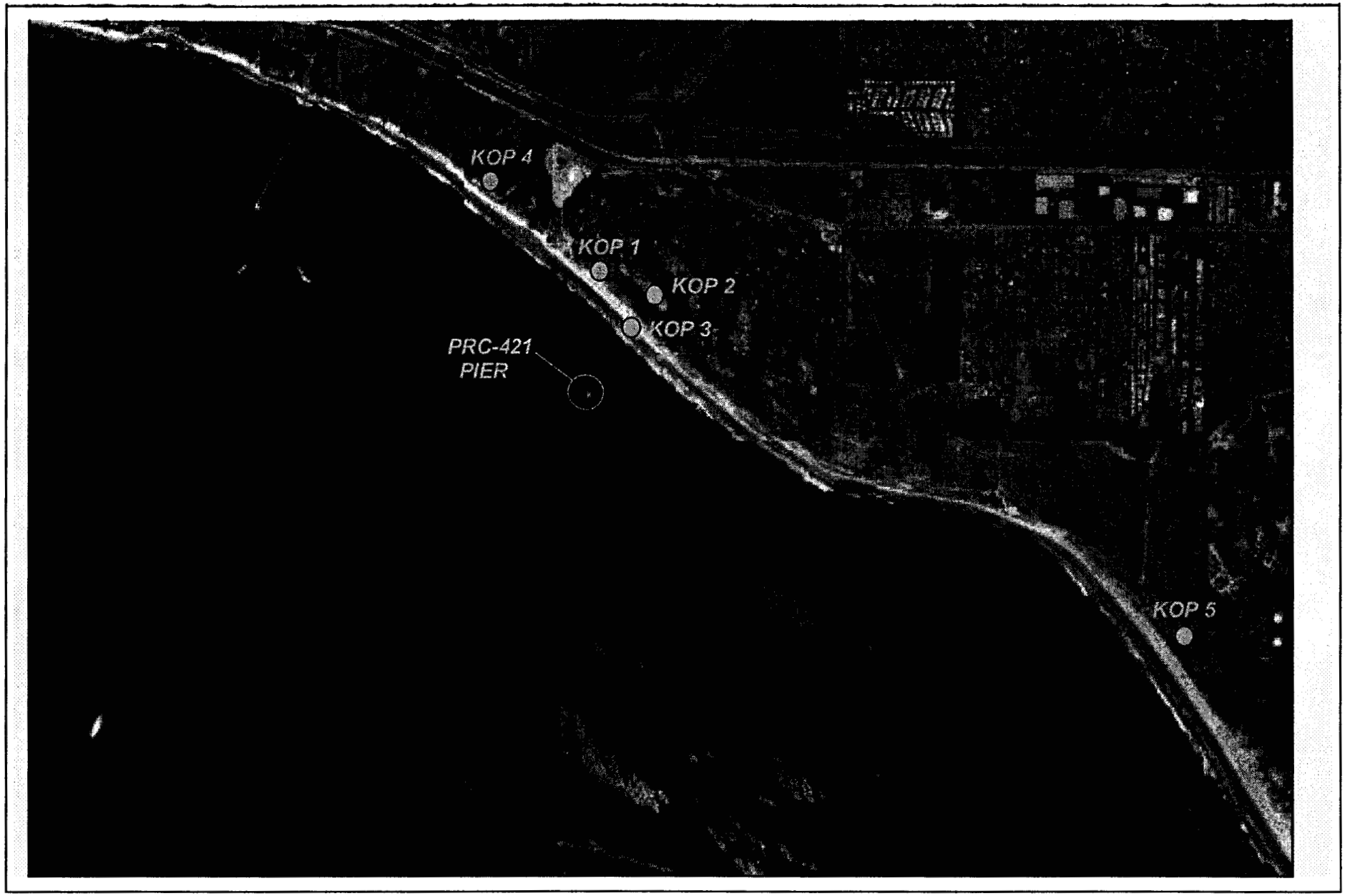
Surficial Kelp and Hardbottom in Anchor Corridors

EXHIBIT NO. 6
APPLICATION NO.
E-04-010



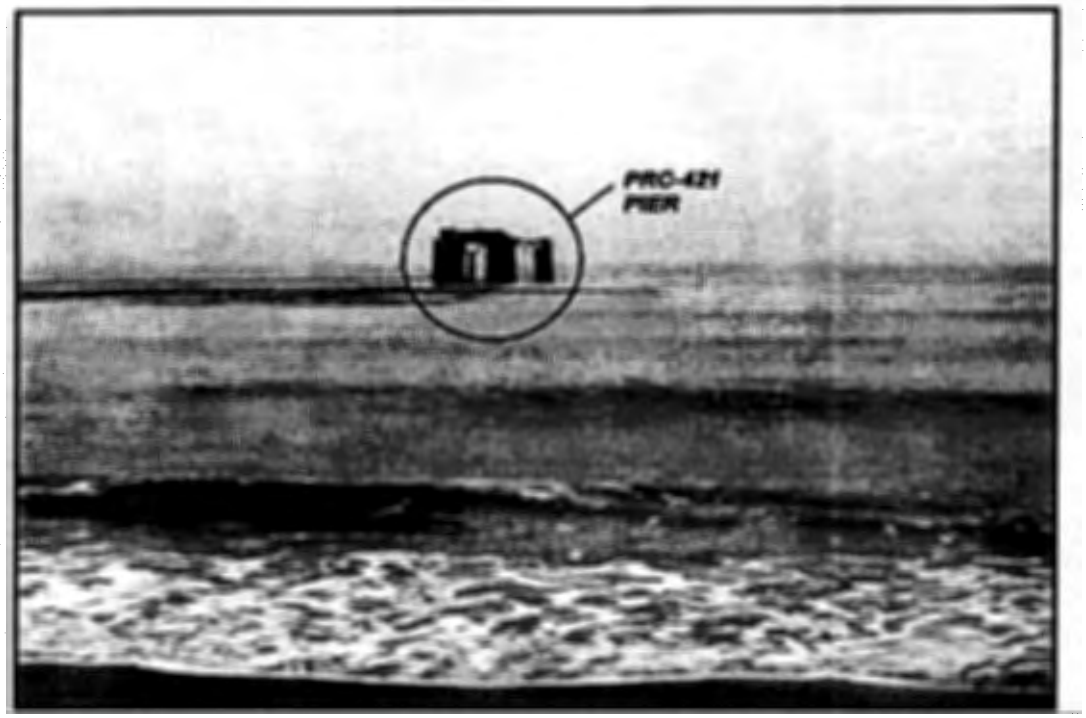
Natural Hardbottom in the Area of the Existing Caissons and Proposed Reef

EXHIBIT NO. 7
APPLICATION NO.
E-04-010



Key Observation Point (KOP) Locations

EXHIBIT NO. 8
APPLICATION NO.
E-04-010

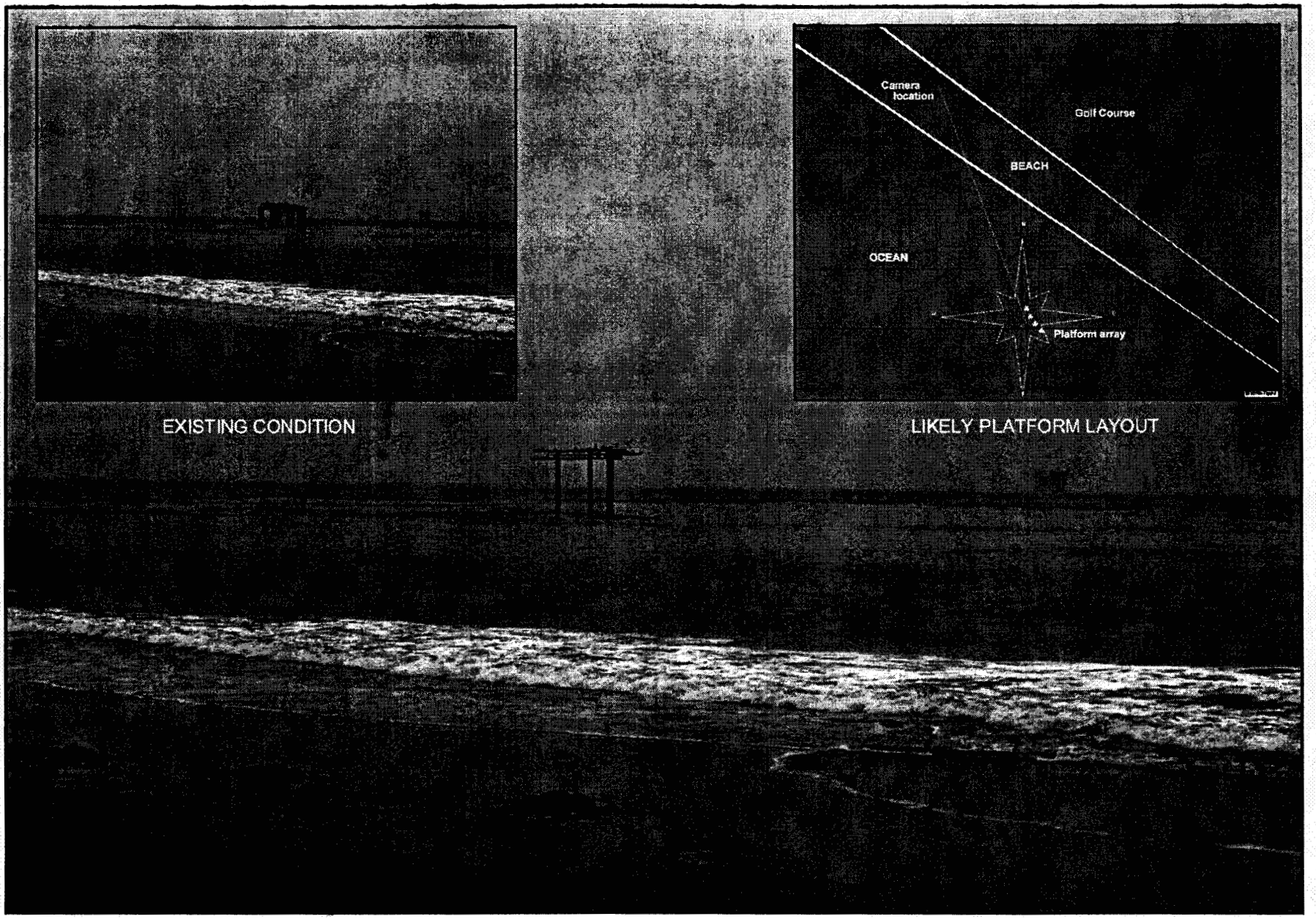


KOP 3: View toward project site from Haskell;s beach, directly onshore from PRC-421. Pier approximately 850 feet southwest.

KOP 5: View toward project site from trail along cliff edge above Ellwood Beach. Trail is within the undeveloped area southwest for Santa Barbara County Shores Park. Pier is approximately 7500 feet northward.

Site Photographs

EXHIBIT NO. 9
APPLICATION NO.
E-04-010



Post-Project Visual Simulation

EXHIBIT NO. 10
APPLICATION NO.
E-04-010