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STAFF RECOMMENDATION
ON CONSISTENCY DETERMINATION

Consistency Determination No. CD-050-03
Staff: LJS-SF
File Date: 6/5/03
60th Day: 8/4/03
75th Day: 8/19/03
Commission Meeting: 7/11/03

FEDERAL AGENCY: **U.S. Navy**

PROJECT
LOCATION:

Ocean waters offshore of San Nicolas Island, Ventura County
(Exhibits 1-3).

PROJECT
DESCRIPTION:

Replacement of two sections of damaged underwater fiber optic cable line by: (1) installing two new offshore fiber optic cable lines through one horizontal directional drilling tube extending from San Nicolas Island to a point 4,000 feet offshore; (2) laying two parallel fiber optic cable lines on the ocean floor for 4.3 miles between the tube exit point and the intersection with existing fiber optic cable lines extending from the Naval Air Warfare Center at Point Mugu; and (3) splicing together the new and existing cable lines.

SUBSTANTIVE FILE DOCUMENTS:

See Page 15.

EXECUTIVE SUMMARY

The U.S. Navy has submitted a consistency determination for replacement of two sections of damaged underwater fiber optic cable offshore of San Nicolas Island. The cables are an element of the Navy's Fiber Optic Communication Underwater System (FOCUS), which is the critical communications component operations at the Point Mugu Sea Range. In 1989 the Commission concurred with the Navy's consistency determination CD-045-89 for construction of the FOCUS project for installation of two fiber optic cable lines extending between Point Mugu and San Nicolas Island. The two cables coming ashore at San Nicolas Island have deteriorated extensively and require frequent and costly short-term repairs. Cable failures are occurring more frequently, particularly during the winter when nearshore current and wave conditions batter the cables across rock substrate (generally in water less than 40 feet deep) and degrade the cables to the brink of failure with a resultant disruption of Sea Range communications during repair operations.

The Navy proposes to remedy this situation by installing during the fall of 2003: (1) a new seashore landing for the FOCUS cable lines at San Nicolas Island using horizontal directional drilling (HDD) technology underneath the ocean floor to an exit point 4,000 feet offshore in water 60-70 feet deep; (2) a new onshore cable segment to connect the new cable landing to the existing FOCUS cable infrastructure; and (3) two 1.5-inch diameter fiber optic cables through the HDD bore hole, extending the cables 4.3 miles across the ocean floor, and splicing these cables into the existing FOCUS cables two miles offshore. As proposed, the two cable segments landward of the intersection points would be abandoned in place.

The project is an allowable use and the least environmentally damaging alternative to replacing the damaged cables. However, the Commission believes that the Navy's proposal to abandon two bypassed cable segments in place on the ocean floor is inconsistent with the provisions of Sections 30230 and 30233(a) of the Coastal Act to protect (and mitigate impacts to) marine resources. The abandoned cable segments which extend across sandy areas, extend across rock substrate, or are anchored with bolts or other mechanical fasteners to rock substrate should and can be removed from the ocean floor, and this can be accomplished with minimal adverse effects to the marine environment. To bring the project into consistency with Sections 30230 and 30233(a), the Commission conditions its concurrence to state that the proposed project would be consistent with the California Coastal Management Program (CCMP) if:

... the Navy will remove all portions of the bypassed FOCUS cable segments that are not grouted extensively into rocky substrate to anchor them in place ... within one year after the replacement FOCUS cable lines become operational ... In addition, prior to commencement of project construction, the Navy will submit to the Executive Director a written commitment to remove the proposed new FOCUS cable replacements when they reach the end of their operational life or are no longer used by the Navy.

The Commission notes that as provided in 15 CFR § 930.4(b), should the Navy not agree with the Commission's condition of concurrence, then all parties shall treat this conditional concurrence as an objection.

The project includes a spill prevention, monitoring, and response plan to ensure that use of HDD technology and drilling fluids during construction of the bore hole will not adversely affect water quality in ocean waters offshore of San Nicolas Island. The project is therefore consistent with the water quality protection policies (Sections 30230-32) of the Coastal Act. The project includes avoidance and mitigation measures to ensure that onshore construction activities will not adversely affect environmentally sensitive habitat or archaeological resources adjacent to or in the vicinity of the HDD drilling site or the cable trenching route. The project is therefore consistent with the environmentally sensitive habitat and archaeological resource policies (Sections 30240 and 30244) of the Coastal Act. The short duration of the cable installation work will ensure that project impacts on recreational and commercial fishing in the Navy's controlled waters offshore of San Nicolas Island will be negligible. The project is therefore consistent with the public access and recreation policies (Sections 30210-13 and 30220) of the Coastal Act.

STAFF SUMMARY AND RECOMMENDATION:

I. Project Description. The U.S. Navy proposes to replace two sections of damaged fiber optic cable line offshore of San Nicolas Island (**Exhibits 1-3**). The nine-mile-long by 3.6-mile-wide island is owned and operated by the Navy as a major element of the 36,000 square-mile Point Mugu Sea Range and is located 65 miles southwest of Point Mugu in Ventura County (**Exhibits 4 and 5**). The island is extensively instrumented with metric tracking radar, electro-optical devices, telemetry, and communications equipment necessary to support Navy fleet training and weapons testing. The subject cable lines are an element of the Navy's Fiber Optic Communication Underwater System (FOCUS), which is the critical communications component for testing, evaluation, and training operations at the Point Mugu Sea Range. Radar and telemetry data are transmitted at high speed through the FOCUS cables between San Nicolas Island and Point Mugu (where activities throughout the Sea Range are coordinated).

In 1989 the Commission concurred with the Navy's consistency determination CD-045-89 for construction of the FOCUS project for installation of two fiber optic cable lines extending between Point Mugu and San Nicolas Island. The cables were enclosed within four-inch-diameter steel tubes through the surf zones at Point Mugu and San Nicolas Island landings. At the former location, the tubes were encased in a concrete box culvert and buried beneath the winter beach profile. At the island approach, the tubes self-buried where the sea floor is sandy; where rocky substrate was encountered, U-shaped bolts were used to anchor the tubes. Along the two cable routes between the mainland and the island, the protective steel tubes were not used and the cables self-buried in sand substrate or rested on hard-bottom surfaces in water depths that reached 5,000 feet.

The Navy reports that the existing FOCUS cables coming ashore at San Nicolas Island have reached the end of their fatigue and corrosion life, have deteriorated extensively, and require frequent and costly short-term repairs. Failures of the steel tube casing in the surf zone and of

the cable itself where it is not encased in the tube (out to water depths of 50 feet, a distance of approximately 4,000 feet offshore) are occurring more frequently, particularly during the winter when dynamic nearshore current and wave conditions cause failures and prevent diving repair operations. A near complete failure of the cable lines at the San Nicolas Island landing occurred in January 2003, which necessitated further significant anchoring and repair work. The movement of cables across rock substrate due to nearshore currents and waves (generally in water less than 40 feet deep) cuts grooves and trenches into the rock and degrades the cables to the brink of failure. Recent inspections of the cables in the San Nicolas Island landing zones indicated that ongoing repairs are effective for the short-term but that continued exposure to nearshore marine environment stresses create a 100% likelihood of complete cable failure during the next five years, with a resultant disruption of Sea Range communications (**Exhibits 6 and 7**).

The Navy proposes to remedy this situation with the following actions (**see Exhibit 3**):

- Installation of a new seashore landing for the FOCUS cable lines at San Nicolas Island using horizontal directional drilling (HDD) technology from a previously-disturbed construction site on the island one-half mile west of Coast Guard Beach, 20-50 feet underneath the ocean floor, to an exit point 4,000 feet offshore in water 60-70 feet deep;
- Installation of one new onshore cable segment to connect the new cable landing to the existing FOCUS cable infrastructure; requires 0.4 miles of new trenching in existing road right-of-way and using 6.6 miles of existing conduit.
- Installation of two 1.5-inch diameter FOCUS offshore cables through the 9-inch-diameter HDD bore hole to the exit point, and then extending the two cables 4.3 miles across the ocean floor where they will splice into the two existing FOCUS cables at points 1.5 to 2 miles offshore in water 100 to 200 feet deep. Cable segments will self-bury in sandy sediments. The two bypassed landing segments would be left in place on the ocean bottom.

The Navy proposes to undertake the FOCUS cable installation during the fall of 2003, prior to the onset of the next winter storm season.

II. Status of Local Coastal Program.

The standard of review for federal consistency determinations is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) of the affected area. If the Commission certified the LCP and incorporated it into the California Coastal Management Program (CCMP), the LCP can provide guidance in applying Chapter 3 policies in light of local circumstances. If the Commission has not incorporated the LCP into the CCMP, it cannot guide the Commission's decision, but it can provide background information. The Ventura County LCP has been incorporated into the CCMP.

III. Federal Agency's Consistency Determination.

The Navy has determined the proposed project consistent to the maximum extent practicable with the California Coastal Management Program.

IV. Applicable Legal Authorities.

Section 307 of the Coastal Zone Management Act (CZMA) provides in part:

(c)(1)(A) Each Federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs.

In addition, 15 CFR § 930.4 provides, in part, that:

(a) Federal agencies, ... should cooperate with State agencies to develop conditions that, if agreed to during the State agency's consistency review period and included in a Federal agency's final decision under Subpart C ... would allow the State agency to concur with the federal action. If instead a State agency issues a conditional concurrence:

(1) The State agency shall include in its concurrence letter the conditions which must be satisfied, an explanation of why the conditions are necessary to ensure consistency with specific enforceable policies of the management program, and an identification of the specific enforceable policies. The State agency's concurrence letter shall also inform the parties that if the requirements of paragraphs (a)(1) through (3) of the section are not met, then all parties shall treat the State agency's conditional concurrence letter as an objection pursuant to the applicable Subpart . . . ; and

(2) The Federal agency (for Subpart C) ... shall modify the applicable plan [or] project proposal, ... pursuant to the State agency's conditions. The Federal agency ... shall immediately notify the State agency if the State agency's conditions are not acceptable; and

...

(b) If the requirements of paragraphs (a)(1) through (3) of this section are not met, then all parties shall treat the State agency's conditional concurrence as an objection pursuant to the applicable Subpart.

V. Consistent to the Maximum Extent Practicable.

Section 930.32 of the federal consistency regulations provides, in part, that:

(a)(1) The term "consistent to the maximum extent practicable" means fully consistent with the enforceable policies of management programs unless full consistency is prohibited by existing law applicable to the Federal agency.

The Commission recognizes that the standard for approval of Federal projects is that the activity must be "consistent to the maximum extent practicable" (Coastal Zone Management Act Section 307(c)(1)). This standard allows a federal activity that is not fully consistent with the CCMP to proceed, if compliance with the CCMP is "*prohibited [by] existing Federal law applicable to the Federal agency's operations*" (15 C.F.R. § 930.32). The Navy did not provide any documentation to support a maximum extent practicable argument in its consistency determination or in any subsequent documents. Therefore, there is no basis to conclude that existing law applicable to the Federal agency prohibits full consistency.

VI. Motion:

I move that the Commission conditionally concur with the Navy's consistency determination CD-050-03.

VII. Staff Recommendation:

The staff recommends a **YES** vote on the motion. Passage of this motion will result in a conditional concurrence with the determination and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

VIII. Resolution To Conditionally Concur With Consistency Determination:

The Commission hereby **conditionally concurs** with the consistency determination made by the Navy on the grounds that the project would be consistent with the enforceable policies of the CCMP, provided the Navy agrees to modify the project consistent with the condition specified below, as provided for in 15 CFR §930.4.

Condition:

1. Cable Removal. After installation of the replacement FOCUS cable lines at San Nicolas Island and after the replacement cable lines are operational, the Navy will remove all portions of the bypassed FOCUS cable segments that are not grouted extensively into rocky substrate to anchor them in place. Cable segments that sit on either rocky or sandy substrate, whether anchored (using bolts or other hardware) or not, must be removed within one year after the replacement FOCUS cable lines become operational. At that time, the Navy will submit to the Executive Director written confirmation and the necessary supporting materials (including, but not limited to, maps, diagrams, and written reports) that adequately document the removal of the bypassed FOCUS cable segments. In addition, prior to commencement of project construction, the Navy will submit to the Executive

Director a written commitment to remove the proposed new FOCUS cable replacements when they reach the end of their operational life or are no longer used by the Navy.

IX. Findings and Declarations.

The Commission finds and declares as follows:

A. Marine Resources. The Coastal Act provides the following:

Section 30230. *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.*

Section 30231. *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.*

Section 30232. *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 cleanup facilities and procedures shall be provided for accidental spills that do occur.*

Section 30233. *(a) 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:*

...

(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. . . .

1. Marine Habitat. The proposed cable replacement project involves filling within coastal waters and therefore triggers the three-part test of Section 30233(a): (1) the project must be one of the eight enumerated allowable uses; (2) the project must be the least environmentally

damaging feasible alternative; and (3) the project must include feasible mitigation measures to minimize adverse environmental impacts. In regards to the first test, the proposed cable replacement project is an incidental public service and allowable use under Section 30233(a)(5) (similar to determinations the Commission has made with respect to other fiber optic cable projects). The project will replace two damaged segments of fiber optic cable located on hard and soft bottom habitat off San Nicolas Island with two new segments that will initially be placed in a drill hole bored under the seafloor for three-quarters of a mile and then traverse the sandy ocean floor for approximately 4.3 miles to the junction with the existing FOCUS cable lines running from Point Mugu.

The second test required by Section 30233(a) centers on project alternatives. There is no alternative to replacing the damaged FOCUS cable segments, as the existing FOCUS system is essential to the continued operation of the Navy's Point Mugu Sea Range. In addition, the Navy determined that use of horizontal directional drilling (HDD) to bore from San Nicolas Island to on offshore exit point is a required element of the cable replacement project in order to avoid the nearshore currents and wave action that have damaged the existing FOCUS cables in water depths less than 50 feet. However, the Navy did examine numerous alternative locations for bringing the replacement FOCUS cables ashore to San Nicolas Island using HDD technology. The Navy states in its consistency determination that HDD operational requirements (including the maximum available bore hole length using HDD of 4,000 feet) and environmental siting limitations were identified in order to develop reasonable location options for the new FOCUS cable segments and to minimize potential environmental effects. The Navy determined that the replacement cable locations should involve the least amount of new offshore cable, reach deep water (greater than 50 feet) in as short a horizontal distance as possible to minimize cable exposure to nearshore currents and waves, and minimize the extent of rocky bottom habitat overlaid by the offshore cable alignment. The Navy examined the following alternative locations:

- No action: eliminated due to high risk of cable failure and the resulting need for continued maintenance activity in rocky, intertidal waters.
- Existing cable landing site on north shore at Tranquility Beach: eliminated because the HDD exit point would be in shallow water less than 50 feet deep.
- South shore sites: eliminated because the length of cable needed to connect with the existing FOCUS cables on the north shore is at least 12 miles, and because most of the south shore is a breeding and haul-out location for pinnipeds and is designated critical habitat for the western snowy plover.
- West shore sites: eliminated because the HDD exit point would be in shallow water less than 50 feet deep.

- North shore west of Coast Guard Beach (the proposed alternative): suitable because the HDD exit point is at a water depth between 60 and 70 feet and is within 4.3 miles of the existing FOCUS cables.

Initially, the Navy proposed that the HDD bore hole would depart San Nicolas Island in a northeasterly direction and perpendicular from the shoreline to a point 4,000 feet seaward in water 60-70 feet deep. The two FOCUS cable lines would then traverse the seafloor in a northwesterly direction for 4.3 miles to the intersection with the existing FOCUS cables running from Point Mugu. The Navy anticipated the possibility that portions of the seafloor cable could cross rocky substrate and stated that in the first mile from the HDD exit point, anchoring the cable to the rocky substrate might be required. The Commission staff inquired as to possible alternative paths from the exit point to the FOCUS cable intersection points that would avoid rocky substrate, including having the cables follow a segmented, non-linear route. The Commission staff also noted that in recent Commission actions on seafloor cable installation projects, mitigation was typically required when cables were unable to avoid hard bottom habitat, and that the Navy would need to avoid such habitat, provide mitigation where such crossings generated adverse effects on such habitat, or demonstrate conclusively why the proposed cable crossings would not generate adverse effects on hard bottom habitat.

The Navy responded by undertaking an underwater side-scan sonar survey of the proposed HDD exit point and seafloor cable route during the week of June 2, 2003 (**Exhibit 8**). The Navy reported to the Commission staff on June 16 that the survey results indicated that: (1) by adjusting the HDD bore hole alignment from San Nicolas Island from a northeasterly direction to a north-northeasterly direction, the HDD exit point will avoid rocky substrate; and (2) the seafloor cable route traverses sediments and not rocky substrate. The sonar results seemed to indicate the possible presence of either rock substrate near the cable intersection points or a more coarse sediment on the ocean floor in this area. The Navy took grab samples of the ocean floor material and confirmed that the sonar images reflected coarse sediments and not rocky substrate. With this information, the Commission agrees with the Navy that the proposed cable replacement route is the least environmentally damaging alternative.

The third test required by Section 30233(a) centers on mitigation measures to minimize any adverse environmental impacts on marine resources from the proposed replacement FOCUS cables on the ocean floor. Use of HDD technology to place the first 4,000 feet of cable under the ocean floor directly offshore of San Nicolas Island avoids generating adverse effects on biologically rich intertidal and shallow water areas. The Navy reports that the two one-inch diameter cables will extend 4.3 miles between the 60-70 foot-deep HDD exit point and the 100-200-foot-deep FOCUS cable intersection point. The two cables will cover a total seafloor area of 3,784 sq.ft. To calculate the area of impact of an seafloor cable, the Commission typically doubles the diameter of the subject cable, which in this case is one inch. Therefore, the area of impact would equal 7,568 sq.ft. or 0.17 acres of sandy ocean floor habitat. The cables will cross this substrate and, as has been demonstrated in previous seafloor cable projects (including the original FOCUS project), will eventually self-bury in the sand. The cables will be aligned parallel to the ocean currents and wave directions that exist in the waters off the north shore of

San Nicolas Island. In the first mile of cable extending from the exit point, this alignment will serve to protect the cable from battering or movement by currents and waves. Beyond the first mile, the cables will be placed at water depths between 90 and 200 feet where they will not be affected by ocean currents or waves. Due to the extensive distribution of sandy bottom habitat in the project area, the expected lack of movement of the cable on the seafloor, and the relatively small area of impact, the Navy determined that the cables will not generate any significant adverse effects on sandy bottom habitat.

The Navy also determined that the seafloor cables will not adversely affect marine flora or fauna along the cable route, aside from temporary impacts on turbidity during cable placement. No kelp forests or other sensitive marine habitat occurs within the cable alignment. The project is scheduled to take place outside the breeding season of northern elephant seals, which use haul-out areas in the vicinity of the onshore drilling site just west of Coast Guard Beach. The project will occur during the California sea lion pupping season, but sea lions do not use the beach in the vicinity of the drilling site for pupping. Adult sea lions and northern elephant seals do use Coast Guard Beach but based on historic use of the area, they will be at least 300 feet from the drilling site, which is visually screened from the haul-out areas by 25-foot-high sand dunes. Construction personnel will not be allowed to venture outside the laydown area of the drilling site, and beach access will be prohibited throughout the drilling period to avoid affecting marine mammals that might be in the project vicinity.

The original FOCUS cable project (CD-045-89) did not address the issue of removing from the marine environment any cable segments that were damaged or reached the end of their operational life. However, the Navy does address this issue in the subject consistency determination. The Navy proposes to abandon in place approximately 3.8 miles of FOCUS cable that will be bypassed by the replacement cables. The Navy states in its consistency determination that:

The nearshore portions of these cables have been extensively anchored for maintenance purposes, so removal of the cables would potentially cause disruption to the marine environment. In addition, there has been substantial growth of marine flora on the existing FOCUS cables, as shown in the photo above. The cables have in essence become a part of the ocean bottom and currently support a diverse habitat. Therefore, removal of the cables would result in potential damage to the marine environment. This is particularly true in areas where they have been grouted extensively to anchor them in place against the strong nearshore ocean currents; as a result, the grout would have to be broken up and extensive jack hammering would be necessary in order to free the cable from the ocean bottom. Therefore, as noted above, the cables would be left in place to minimize damage to marine habitat and environment.

The Commission agrees with the Navy's determination that removal of abandoned cable segments that are grouted into trenches and grooves in rocky substrate (features caused by the cables scraping across the rock as a result of ocean currents and waves) would generate adverse impacts to marine habitat, and agrees that those segments should be left in place. However, the

Commission believes that cable segments which extend across sandy areas, extend across rock substrate, or are anchored with bolts or other mechanical fasteners to rock substrate should and can be removed from the ocean floor and that this can be accomplished with minimal adverse effects to the marine environment. In reviewing coastal development permits for ocean cable installation, the Commission now typically requires permit applicants to remove cables from the ocean floor when they are no longer needed or have reached the end of their operational life. The marine environment offshore of San Nicolas Island will benefit from removing cables that are no longer operational and that will serve no future purpose for the Navy. The Commission finds that: (1) the temporary impacts to marine habitat from diver-assisted removal operations are outweighed by the permanent removal from the ocean of damaged and abandoned FOCUS cables; and (2) removal of the proposed FOCUS cable replacements when they reach the end of their operational life or are no longer used by the Navy is feasible and necessary in order to ensure that the marine environment along the cable route is returned to its natural state.

The Commission therefore concludes that the Navy's proposal to leave the abandoned FOCUS cables in place on the seafloor, and the absence of a commitment to remove the proposed FOCUS cable replacements when no longer needed by the Navy, is inconsistent with the provisions of Sections 30230 and 30233 of the Coastal Act to protect (and mitigate impacts to) marine resources. Furthermore, in order for the Commission to find the proposed project consistent with Section 30233(a) of the Coastal Act, the Commission is conditioning its concurrence as follows:

Cable Removal. After installation of the replacement FOCUS cable lines at San Nicolas Island and after the replacement cable lines are operational, the Navy will remove all portions of the bypassed FOCUS cable segments that are not grouted extensively into rocky substrate to anchor them in place. Cable segments that sit on either rocky or sandy substrate, whether anchored (using bolts or other hardware) or not, must be removed within one year after the replacement FOCUS cable lines become operational. At that time, the Navy will submit to the Executive Director written confirmation and the necessary supporting materials (including, but not limited to, maps, diagrams, and written reports) that adequately document the removal of the bypassed FOCUS cable segments. In addition, prior to commencement of project construction, the Navy will submit to the Executive Director a written commitment to remove the proposed FOCUS cable replacements when they reach the end of their operational life or are no longer used by the Navy.

Therefore, the Commission concludes that if modified in accordance with the Commission's conditional concurrence, the proposed FOCUS cable replacement project would be consistent with the marine resource protection policies of Sections 30230 and 30233(a) of the Coastal Act.

2. Water Quality. The ocean waters surrounding San Nicolas Island comprise a State Water Quality Protection Area (formally designated an Area of Special Biological Significance). Therefore, the Navy has proposed to avoid placing the FOCUS replacement cables in the biologically rich intertidal and nearshore waters off San Nicolas Island and instead use horizontal

directional drilling (HDD) technology to drill a bore hole at a depth of 25-30 feet underneath the seafloor to bring the FOCUS cables to a point 4,000 feet offshore in 60-70 feet of water. A hole is drilled through the earth and under the seafloor using a drill string and drill head. The position of the drill head is continuously tracked and the direction of the drill is changed so the drill head exits the seafloor at the desired location (**Exhibit 9**).

The drilling process will use drilling fluid materials to assist the progress of the drill head through the substrate. The drilling fluids are comprised of bentonite clay drilling mud, a non-toxic water-based drilling mud derived from organic clay. The "drill mud" provides lubrication for the drill head, helps to cut through formations, suspends the cuttings, and carries the cuttings back through the drill hole to an onshore containment pit. All the drill muds are recirculated during the drilling process. The consistency determination states that the project's use of HDD technology could generate a worse-case unavoidable release of between 200 and 4,000 gallons of drilling fluid by seepage through fractures in the seabed and by pressure discharge at the completion of drilling when the drill bit penetrates the exit point on the seafloor. However, the Navy reports that:

An extensive survey, including core sampling, would be conducted prior to the drilling operation. A qualified geologist would determine the geological conditions of the seabed in advance and help establish the proper drilling pressure to minimize the unavoidable seepage during drilling and discharge at the completion of HDD and also to avoid fracturing. All procedures in the project-specific spill prevention plan would be followed.

After consultation with the Commission staff, the Navy also agreed to incorporate into the proposed project a Bentonite Spill Prevention and Monitoring Plan, with provisions similar to those required by the Commission in previous HDD projects. The Navy submitted with this plan with the consistency determination (**Exhibit 10**) and the plan includes the following elements:

- *An estimate of a reasonable worst case release of drilling fluids into marine waters caused by project operations.*
- *A clear protocol for monitoring and minimizing the use of drilling fluids during HDD operations, including a criterion for identifying an unanticipated drilling fluid release and proposed fracture sealants.*
- *A response and clean-up plan in the event of a spill or accidental discharge of drilling fluids.*
- *A list of all clean-up equipment that will be maintained on-site.*

With the incorporation of a spill prevention, monitoring and response plan into the project consistency determination, the Commission agrees with the Navy that the proposed installation of the FOCUS cable replacement segments using HDD technology will not adversely affect water quality in the waters off San Nicolas Island. Therefore, the Commission finds that the

project is consistent with the water quality protection policies (Sections 30230-32) of the Coastal Act.

B. Environmentally Sensitive Habitat. The Coastal Act provides the following:

Section 30240.

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Section 30244. *Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

The onshore components of the proposed project will be installed in existing developed areas and will not adversely affect sensitive habitat or coastal resources. The proposed drilling site is located one-half mile west of Coast Guard Beach and within an existing borrow site that provides soil for island construction projects, and the 20-inch-wide, 0.4 mile-long cable trench will be excavated in the middle of Beach Road or in the road shoulder. The remaining 6.6 miles of cable will be installed inside existing conduit. No vegetation will be removed and standard erosion control measures will be employed at all upland construction areas to minimize non-point water quality impacts.

As the proposed drilling site is located approximately 50 feet from the inland boundary of critical habitat for the western snowy plover, special conservation measures (including plover surveys before and during construction activity, physical barriers to isolate the drilling site from plover habitat, no nighttime work or lighting, daily trash removal, cessation of work at the drilling site if a nesting plover or an adult plover with chicks are found in the immediate vicinity of the drilling site, and a snowy plover education program for all work personnel) negotiated with the U.S. Fish and Wildlife Service (Service) will be implemented to minimize any potential effects on snowy plovers during the 21-day construction period. In accordance with Section 7 of the Endangered Species Act, informal consultation was completed this year between the Navy and the Service regarding potential impacts to snowy plovers, and the Service concurred with the Navy's finding that the project would not adversely affect the snowy plover.

Regarding archaeological resources in the project areas, the Navy reports that:

There is one prehistoric resource located in the immediate vicinity of the proposed drilling site: CA-SNI-1. This is a habitation site that is considered eligible to the National Register

of Historic Places (National Register). No known historic or architectural resources are located on or near the proposed drilling site. There are no documented prehistoric resources along the route of the proposed alignment. No known historic or architectural resources are located within 0.25 miles of the proposed alignment.

Archaeological studies focusing on underwater resources have identified 20 ships known to have sunk off the coast of San Nicolas Island. At least five of these ships are reported wrecked on or just off the north side of the island. Most shipwreck remains are likely to be found at harbors and at hazards on the western and eastern ends of the island. No shipwrecks have been recorded near the offshore cable alignment.

Although no underwater archaeological resources have been documented near the offshore cable alignment, there is a possibility that submerged archaeological sites could exist just offshore. These sites would have been occupied over 7,000 years ago when sea levels were lower than current levels. . . However, the offshore cable alignment occurs in a zone with a low-to-moderate potential for submerged sites. . .

The Navy states that it will flag the boundaries of all known archaeological sites in the vicinity of the HDD site and the onshore cable alignment in order to avoid disturbing those sites. In addition, if subsurface archaeological deposits are encountered during drilling or trenching activities, all work will cease until a qualified archaeologist is consulted regarding the significance of the uncovered resources.

With the aforementioned avoidance and mitigation measures, the Commission agrees with the Navy that the proposed upland construction activities associated with the FOCUS replacement project will not adversely affect environmentally sensitive habitat or archaeological resources adjacent to or in the vicinity of either the HDD site or cable trenching route. Therefore, the Commission finds that the project is consistent with the environmentally sensitive habitat and archaeological resource policies (Sections 30240 and 30244) of the Coastal Act.

C. Public Access and Recreation. The Coastal Act provides the following:

Section 30210. *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.*

Section 30211. *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.*

Section 30212. *(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:*

(1) It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources. . .

Section 30213. *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.*

Section 30220. *Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

San Nicolas Island is owned and used by the Navy for military-related purposes and as a result, public access is strictly controlled for security and public safety reasons. In addition, the island's immediate offshore waters are also strictly controlled for the same reasons. However, recreational and commercial boating and fishing does occur in the area where the offshore cables will be placed on the ocean floor, within the constraints of military operations and temporary area closures. Private vessels will still be able to operate in these waters during project construction but will need to avoid the immediate work area and project vessels during the expected 18-day installation period.

The Commission agrees that the proposed FOCUS cable replacement project is necessary to maintain communication systems on the Point Mugu Sea Range. The Commission notes that the Navy has long conducted training and testing operations within the Sea Range without apparent significant conflicts with public recreational and commercial uses of these waters. The short duration of the cable installation work should ensure that project impacts on public recreation in this area will be negligible. Therefore, the Commission finds that the proposed FOCUS cable replacement is consistent with the public access and recreation policies (Sections 30210-13 and 30220) of the Coastal Act.

Substantive File Documents:

1. CD-045-89 (U.S. Navy)
2. E-1-029 (TYCO)

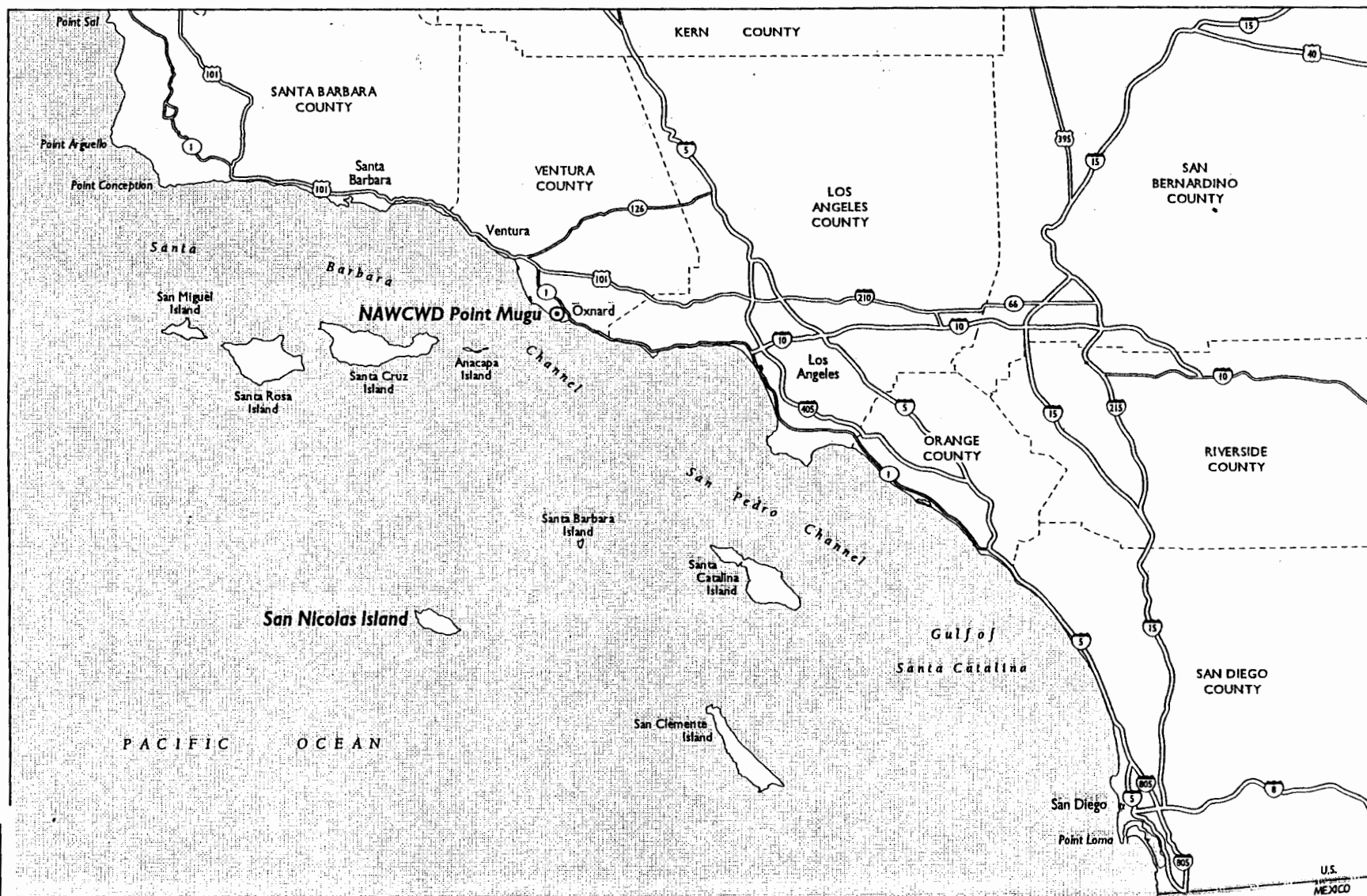


Figure 1
Regional Location
NAWCWD Point Mugu and San Nicolas Island

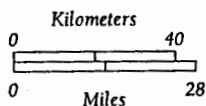


EXHIBIT NO. 1

APPLICATION NO.

CD-050-03

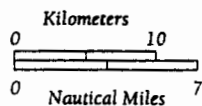
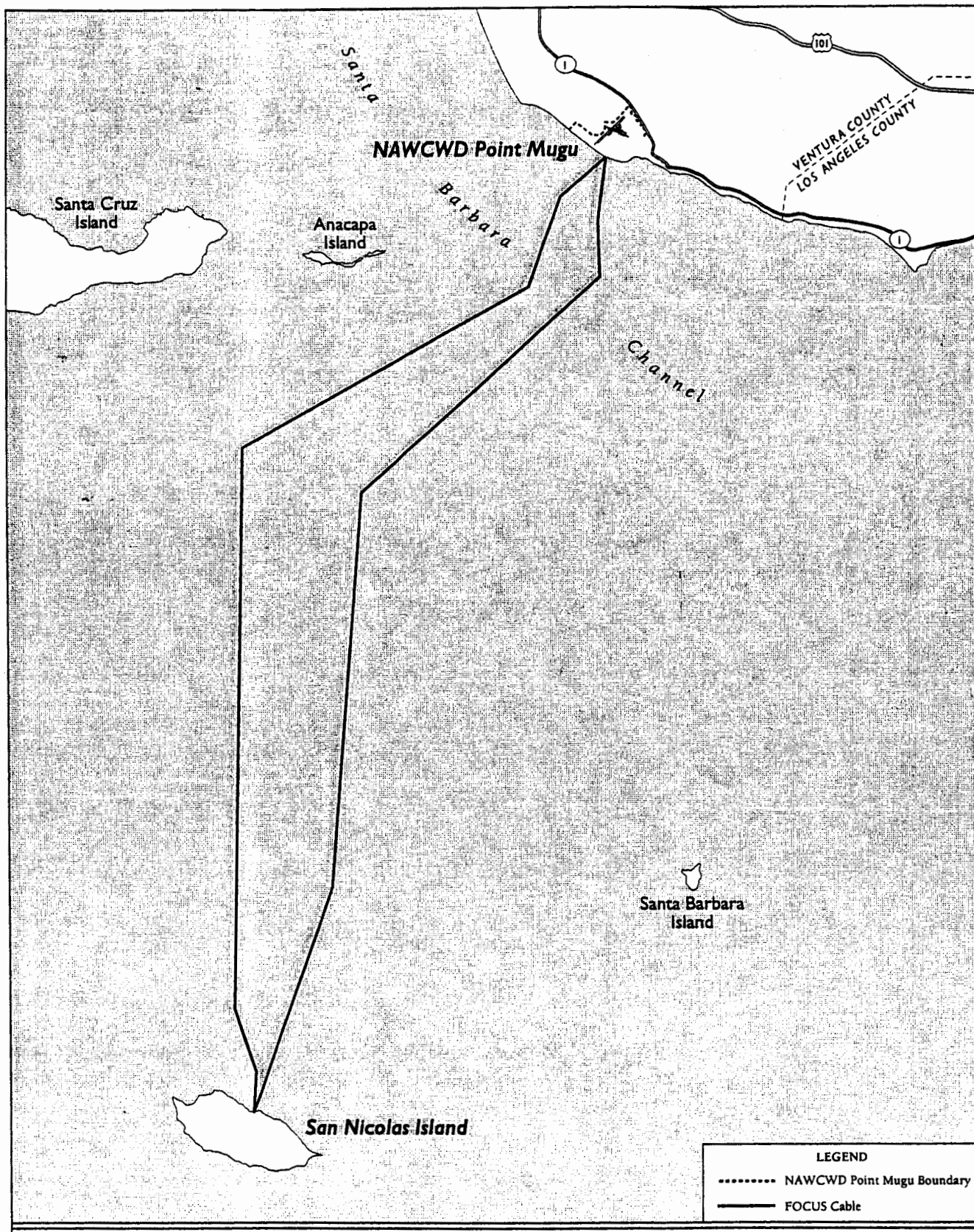
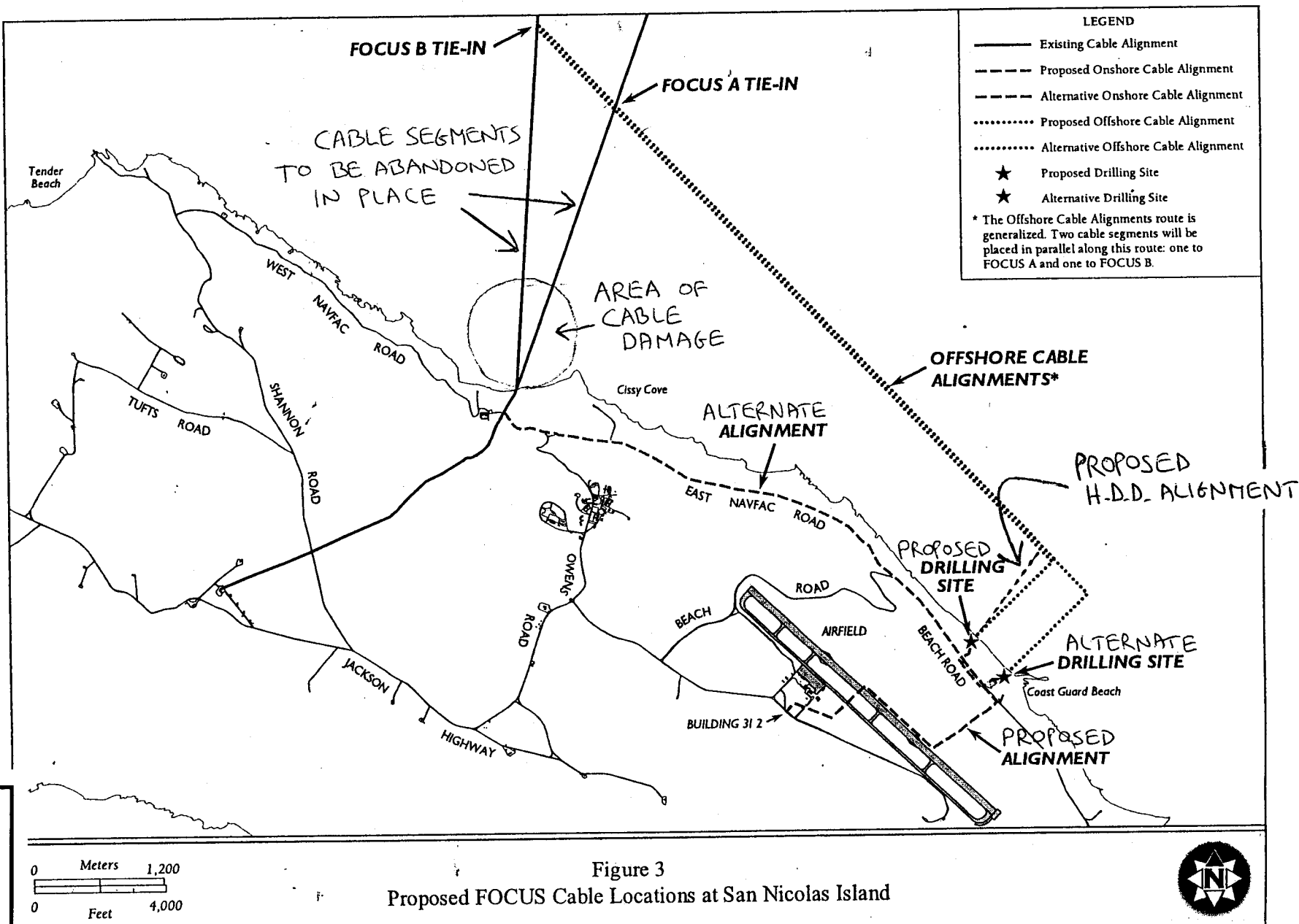


Figure 2
FOCUS Cable Route from Point Mugu to San Nicolas Island

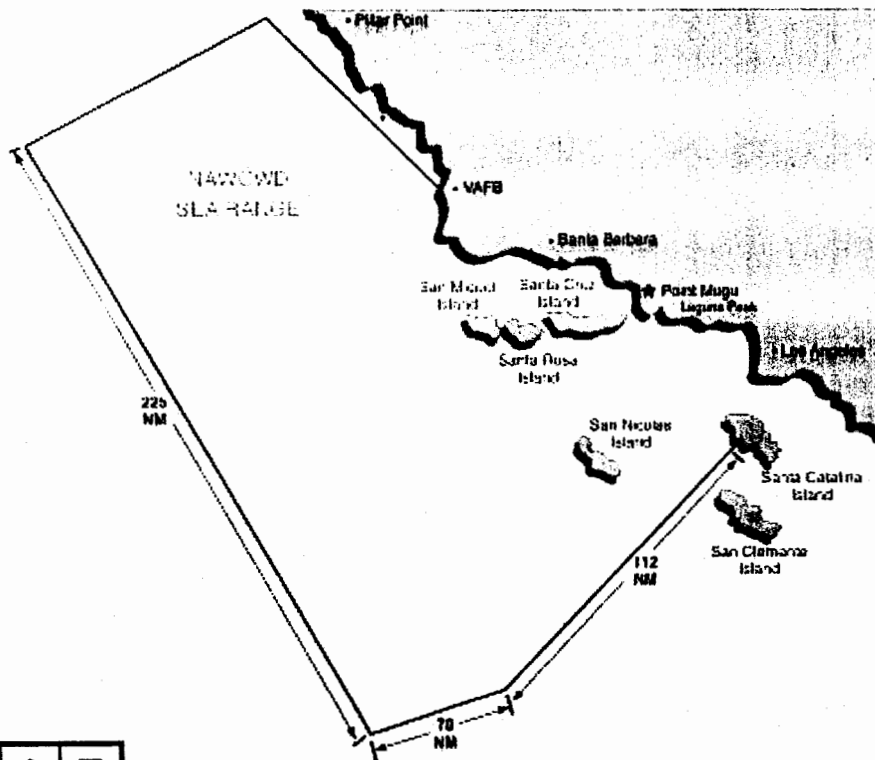
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APPLICATION NO.

CD-050-03

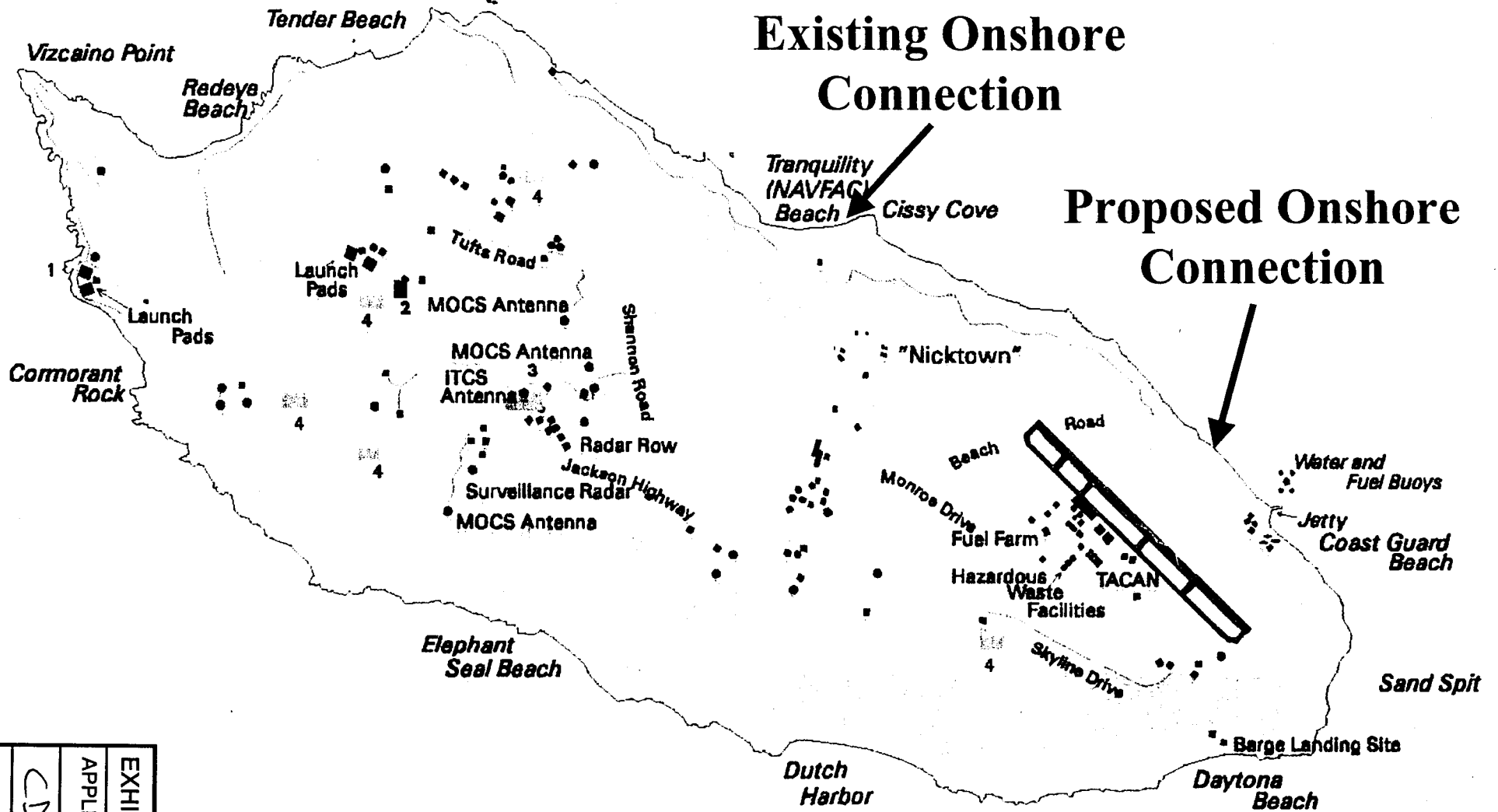



Sea Range



- Vital for testing & training
- San Nicolas Island is cornerstone of the Sea Range
 - Instrumentation for tracking & monitoring

EXHIBIT NO. 4
APPLICATION NO.
CD-050-03
California Coastal Commission



 California Coastal Commission	EXHIBIT NO. <i>S</i>
APPLICATION NO. <i>CD-050-03</i>	

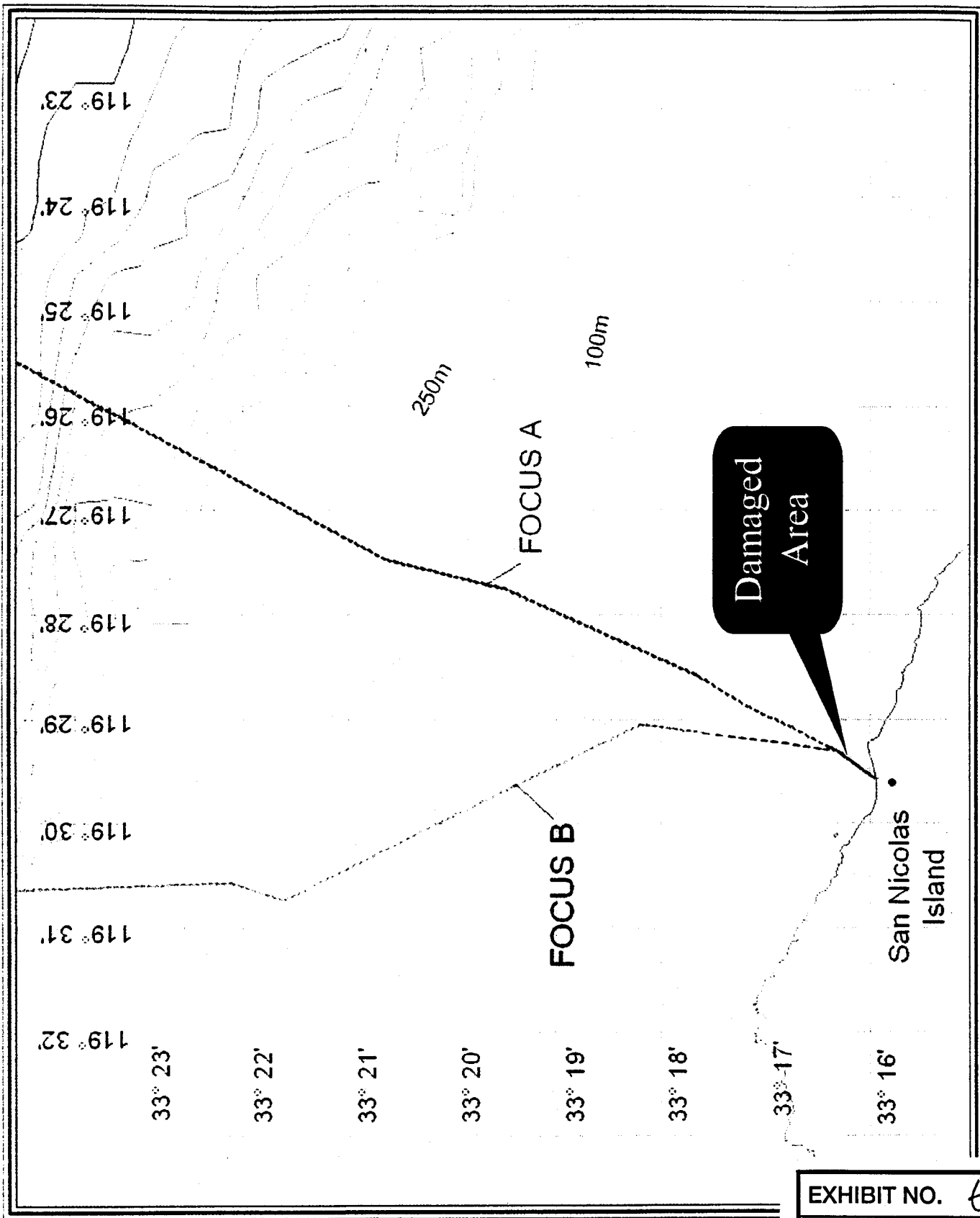



EXHIBIT NO. 6
APPLICATION NO.
CD-050-03
California Coastal Commission



DAMAGED CABLE SECTION

EXHIBIT NO. 7
APPLICATION NO.
CD-050-03
 California Coastal Commission

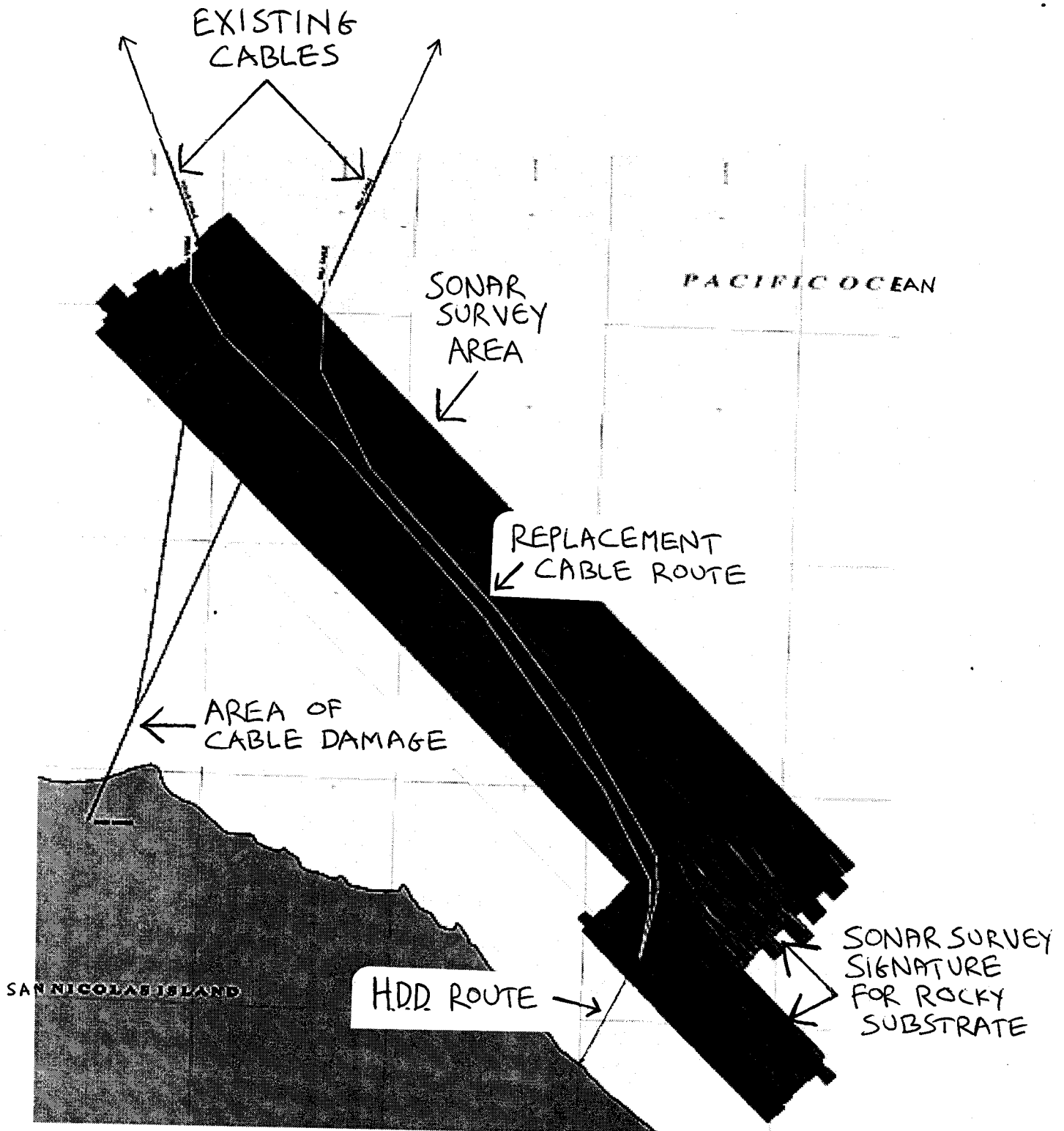


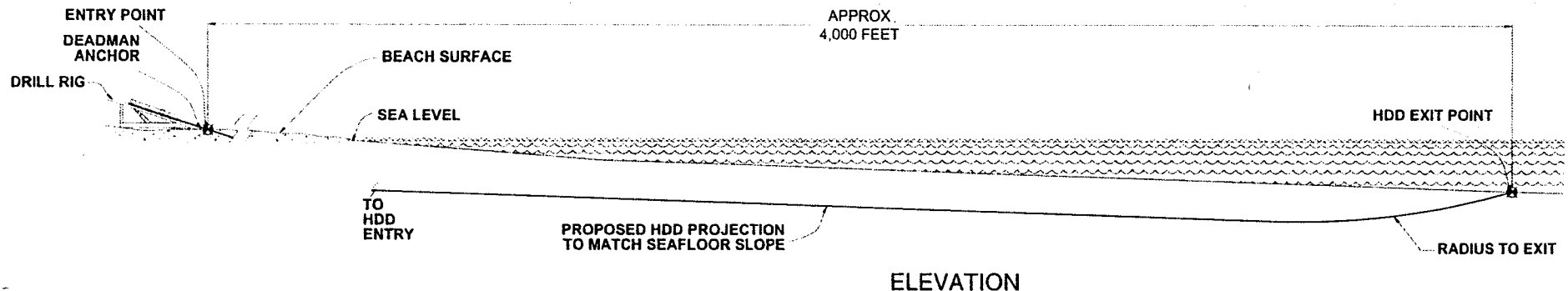
EXHIBIT NO. 8

APPLICATION NO.


CD-050-03

California Coastal Commission

Horizontal Directional Drilling (HDD)



- Avoid high surge in shallow water
- 4,000 foot limit


EXHIBIT NO. 9
APPLICATION NO.
CD-050-03
 California Coastal Commission

BENTONITE SPILL PREVENTION AND MONITORING PLAN

FOCUS Cable Repair San Nicolas Island, California



June 2003

EXHIBIT NO. 10
APPLICATION NO.
CD-050-03
 California Coastal Commission

**Bentonite Spill Prevention and Monitoring Plan
San Nicolas Island FOCUS Cable Repair**

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Bentonite Spill Prevention and Monitoring Plan
Naval Air Warfare Center Weapons Division
Fiber-Optic Communications Underwater System Repair
San Nicolas Island, California

June 2003

CHAPTER 1
DRILLING PROCESS

Horizontal Directional Drilling (HDD) is commonly used to provide protection for terrestrial and submarine cables. A hole is drilled through the earth and under the seafloor using a drill string and drill head. The position of the drill head is continuously tracked and the direction of the drill is changed so the drill head exits the seafloor at the desired location. The drill string is typically several tens of feet below the surface except at the exit point.

The equipment to be used in the San Nicolas Island HDD operation includes a drill rig, power unit, control cab, spare parts and tool van, self contained high pressure/high volume mud pump and a closed loop solids control system. This equipment will be located at a convenient site onshore a short distance from the shoreline.

The San Nicolas Island drilling process will use Bentonite drilling fluid materials to assist the progress of the drill head through the substrate. Bentonite is a fine clay substance derived from natural-occurring sodium montmorillonite clays mined in Wyoming. Bentonite drilling fluids ("drill mud") are used in HDD to provide lubrication for the drill head, help cut through formations, suspend the cuttings, and carry the cuttings back up the annulus of the pilot hole to a containment pit. The cuttings are separated from the drilling mud by the solids control unit. All of the drilling fluids are recirculated during the drilling process.

These fluids and cuttings will be pumped from the containment pit to the solids control unit, cleaned and re-used; thus, creating a complete recycled use of drilling mud. Mud volume, pressure, viscosity, sand content and weight will be continuously monitored during all phases of the drilling operation. Occasionally, during normal drilling operations, drill mud can migrate into the formation or travel to the surface (referred to as a "frac-out"). By monitoring the mud system, HDD personnel can determine the correct properties and pressures needed for drilling different types of formations, i.e. maximum cleaning, minimum loss of circulation and maximum frac-out control. Loss of circulation due to fluid migration or frac-outs can be reduced and contained or eliminated by strict monitoring and implementing proper HDD controls and procedures.

Due to the curvature of the drill string, the calculated volume of Bentonite mud released offshore due to hydrostatic head is the amount contained in the length of pipe equal to the elevation difference between the launch point and the depth of the drill pipe exit on the seafloor. The San Nicolas Island launch point elevation will be approximately 20 feet (6 meters [m]) above sea level and the exit will be in approximately 70 feet (21 m) of water. The expected drill entry angle for the formations at San Nicolas Island will be about 12 degrees. The approximate length of drill pipe from the launch point to 70 feet (21 m) below sea level is 433 feet (132 m). The drill pipe has an internal diameter of five inches (13 centimeters), so the volume of material that could be released offshore due to hydrostatic head is about 442 gallons (1671 liters).

In the event the drill pipe fractured (a mechanical failure) at or near the lowest point in its trajectory (arc) and the drilling was near completion, the volume of mud contained in the drill pipe could migrate into the surrounding formation. This volume of material represents a worst case release of 4,000 gallons (15,142

liters) into the surrounding geology. However, the mud would be "contained" within the subsurface formation, and it is unlikely any would migrate to the surface or be released offshore.

CHAPTER 2**SAN NICOLAS ISLAND HDD SPILL PREVENTION PLAN**

Proper drilling procedures will minimize leakage or inadvertent release of drilling mud either to the surface or into the ocean. One of the most important functions is to maintain sufficient depth of the drill path. This will reduce or eliminate the possibility of mud reaching the surface. In sand and silt formations, 25 to 30 feet (8 to 9 m) of cover is normally a sufficient, safe depth and in a consolidated rock formation 20 to 25 feet (6 to 8 m) is generally sufficient. However, some rock formations have fissures or fractures that might allow mud to migrate to the surface and even depths of 40 to 50 feet (12 to 15 m) may not prevent leakage. This condition is not expected at San Nicolas Island. A depth of 25 to 30 feet (8 to 9 m) should be adequate for San Nicolas Island HDD. A core taken along the drill path will verify the competency of the geology prior to starting drilling operations.

Towards the end of drilling operations, the following procedures will be followed to minimize the risk of release of drilling fluids into the ocean. As the directional drill bit approaches the submerged exit point, the drilling rate will be reduced to the minimum necessary to ensure a clean borehole while minimizing the risk of release of drilling fluids. Prior to the drillhead exiting the seafloor, the driller will cease drilling with Bentonite and switch to fresh water. This procedure will purge the Bentonite from the drill pipe and the annulus of the borehole. Fresh water will be used down hole until the fluid returns appear "clean." This procedure will be initiated about 90 feet (27 m) from the planned exit point to allow ample distance for purging the Bentonite. Drilling will continue with fresh water until the drill string exits the seafloor. This will minimize the risk of releasing Bentonite during the exit event offshore.

During all phases of drilling, the drilling supervisor will monitor the internal drill pipe mud pressure on a continuing basis as each joint of drill pipe is advanced along the predetermined borehole alignment. If the mud pressure drops suddenly while the drilling is in progress, the drilling process will be halted immediately and an investigation will be made to determine if the pressure drop is due to release of fluids, fluid migration or from changes in substrate properties. This will be standard drilling procedure to minimize the risk of inadvertent release of mud.

If a fracture or migration occurs, the drilling supervisor will add "loss of circulation" materials (LCM) to seal the borehole. These materials are a mixture of environmentally safe products such as cottonseed hull, cedar shavings or other similar materials. If the addition of LCMs is successful in sealing the borehole, drilling will continue until the drill head has advanced to within about 90 feet (27 meter) of the planned exit location, where fresh water purging operations will start. If the addition of LCM is not successful, only two options are available:

- 1) If the drill string is close to the "90-ft from the end" mark, the driller can shift to fresh water and continue drilling
- 2) If the drill string is not near the 90-ft mark, the driller can terminate the bore, trip the drill string (remove the drill pipe) and restart the bore at a slightly different angle.

Taken together, these actions constitute the spill prevention plan for San Nicolas Island.

CHAPTER 3

DRILLING FLUID MONITORING PLAN

The objective of the fluid monitoring program is to quickly identify and minimize the release of drilling fluids and to determine the size, extent and location of the release. The three basic HDD zones at the San Nicolas Island project site are: (1) the terrestrial portion of the drill path from the drill rig to the mean high water mark; (2) the surf zone portion of the drill path, which is the area of breaking waves from approximately 100 feet (30 m) offshore to the mean high water mark; and finally (3) the offshore segment of the drill path, from the edge of the surf zone out to the exit of the bore on the seafloor, where vessel operation is not limited by water depth or surf conditions.

3.1 MONITORING ALONG THE TERRESTRIAL ZONE

The terrestrial segment of the drill path will be visually inspected for evidence that drilling mud has surfaced. The drilling operations team will track the drill head position and advise an observer to focus visual inspections in a specific area. In addition, a "spotter" on the hill above the drilling site will monitor the drill path with binoculars for any evidence of mud leakage. The spotter will have two-way radio communications directly to the drilling supervisor. A member of the drilling crew or Naval Facilities Engineering Service Center (NFESC) team will be available to walk the terrestrial drill path if required and look for evidence of mud release. This observer will also be provided with two-way radio communications to the drilling supervisor. If any drilling fluid is observed on the surface, drilling operations will be halted until the condition is verified. Corrective measures will be taken to mitigate the problem (e.g., addition of Loss of Circulation Materials).

3.2 MONITORING IN THE SURF ZONE

In the near shore surf zone (the area inaccessible by the support vessel), the spotter will provide continuous observations along the drill path and the drill team will monitor the drilling fluid pressure. If evidence of a release is found, drilling operations will be halted and corrective measures will be implemented. If a fluid release in this segment of the drill path is suspected, divers will verify the condition by swimming the route.

3.3 MONITORING IN OPEN WATER

In open water, monitoring will be performed by the spotter and a designated individual onboard the vessel. Since drilling operations will be during daylight hours and the waters offshore near the drilling site are usually very clear, it is expected the spotter and vessel personnel will be able to quickly see evidence of released material. Vessel personnel will also have radio communications with the drilling supervisor. If evidence of a release is found, drilling operations will be halted and corrective measures will be implemented. If a fluid release in this segment of the drill path is suspected, divers will verify the condition.

CHAPTER 4

SPILL RESPONSE PLAN

As part of San Nicolas Island drilling operations and spill response plan, all drilling personnel will be assigned specific responsibilities. NFESC personnel on site will be designated as spill monitors and spotters. A drilling contractor employee will be designated as the spill response coordinator. The NFESC dive team and vessel will provide observations and support during all offshore drilling operations.

The drilling contractor will monitor mud returns for a loss in volume and/or mud pressure and will report immediately to the drilling supervisor a loss of pressure or a volume change that would indicate a release. Drilling operations will be immediately halted and the reasons for the loss of pressure or release will be determined. If evidence of a release or frac-out is found, and the distance drilled is such that the drill head is underwater, divers will be deployed to verify the possible mud release. If a frac-out or release is located, the necessary equipment to contain and vacuum the mud will be placed into operation. In addition, filter bags will be available on site to contain and filter any minor Bentonite release. Offshore containment and vacuum equipment are part of the spill response equipment and will be on the support vessel at all times.

The ocean currents at the planned borehole exit are relatively strong, and any small release of mud will most likely be dispersed quickly. Because Bentonite is a fine, small-grained material, a buildup of material on the seafloor is not expected at the site. If it is found that there is drilling fluid on the seafloor, an airlift device and dredge scow of sufficient capacity to handle the pumped fluids will be available on the support vessel to vacuum the affected area.

CHAPTER 5

CONTAINMENT EQUIPMENT AND MATERIALS

The following is a list of the equipment that will be kept on ready standby at the project site.

Terrestrial:

- LCMs
- Straw bales
- Backhoe
- Portable vacuum unit
- Silt containment fence
- 2-way radios
- Binoculars

Offshore:

- Support vessel
- Dive team
- Airlift
- Containment bladder/dredge scow
- Filter bags
- 2-way radios
- Binoculars

