

REPORT

MARINE MAMMAL PROTECTION ACT SMALL TAKE EXEMPTION PERMIT APPLICATION FOR CONTINUED OPERATION OF THE LONG BEACH GENERATING STATION COOLING WATER SYSTEM

Prepared for

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TABLE OF CONTENTS

1.0 Introduction..... 1

2.0 Detailed Description of the Specific Activity that can be Expected to Result in Incidental Taking of Marine Mammals 1

3.0 The Date(s) and Duration of Such Activity and the Specific Geographical Region Where It Will Occur..... 1

4.0 The Description of the Status, Distribution, and Seasonal Distribution of the Affected Species or Stocks of Marine Mammals Likely to be Affected by Such Activities 2

 4.1 Harbor Seals 2

 4.2 California Sea Lions 2

5.0 Type of Incidental Taking Authorization Being Requested 3

6.0 By Age, Sex, and Reproductive Condition (If Possible), the Number of Marine Mammals that may be Taken, and the Number of Times Such Takings are Likely to Occur..... 3

 6.1 Harbor Seals 3

 6.2 California Sea Lions 3

7.0 The Anticipated Impact of the Activity Upon the Species or Stock of Marine Mammal 3

8.0 The Anticipated Impact of the Activity on the Availability of the Species or Stocks of Marine Mammals for Subsistence Uses..... 4

9.0 The Anticipated Impact of the Activity Upon the Habitat of the Marine Mammal Populations, and the Likelihood of Restoration of the Affected Habitat..... 4

10.0 The Anticipated Impact of the Loss or Modification of the Habitat on the Marine Mammal Populations Involved..... 4

11.0 The Availability and Feasibility (Economical and Technological) of Equipment, Methods, and Manner of Conducting Such Activity or Other Means of Effecting the Least Practicable Adverse Impact Upon the Affected Species or Stocks, Their Habitat, and on Their Availability for Subsistence Uses, Paying Particular Attention to Rookeries, Mating Grounds, and Other Areas of Similar Significance 4

12.0 Where the Proposed Activity Would Take Place In or Near a Traditional Arctic Subsistence Hunting Area And/or Affect the Availability of a Species or Stock of Animal for Arctic Subsistence Uses, the Applicant Must Submit Either a Plan of Cooperation or Information that Identifies What Measures Must be Taken to Minimize Adverse Effects on the Availability of Marine Mammals for Subsistence Uses..... 5

13.0 The Suggested Means of Accomplishing the Necessary Monitoring and Reporting of Impacts on Marine Mammals that are Expected to be Present While Conducting Activities 5

14.0 The Suggested Means of Learning of, Encouraging, and Coordinating Research Opportunities, Plans, and Activities Relating to Reducing Such Incidental Taking and Evaluating Its Effects 5

15.0 References..... 6

Appendices

Appendix A Site Photographs

1.0 INTRODUCTION

In the past, the National Marine Fisheries Service (NMFS), Southwest Region has authorized incidental take of small numbers of marine mammals and sea turtles in coastal power plants under the Regional Stranding Network Program. Long Beach Generating Station (LBGS) in Long Beach, California, has been operating under this program. The existing authorization is in the form of a Letter of Authorization (LOA) from the NMFS, which allows Long Beach Generation, LLC to take marine mammals and sea turtles at the LBGS. As a result of amendments to the Marine Mammal Protection Act (MMPA), authorization to take small numbers of marine mammals incidental to routine plant operations must be renewed. LBGS requests a small take exemption permit for a small number of seals and sea lions that may be taken as a result of continuing plant operations at the existing LBGS. This document provides a description of the site history and existing plant operations, species accounts, facility impacts on each species, and monitoring recommendations.

2.0 DETAILED DESCRIPTION OF THE SPECIFIC ACTIVITY THAT CAN BE EXPECTED TO RESULT IN INCIDENTAL TAKING OF MARINE MAMMALS

The facility is located in western Los Angeles County, situated in the City of Long Beach along the coast of the Pacific Ocean. The LBGS is bounded on the west and north by the Port of Long Beach. The small take exemption permit for marine mammals will allow continuation of existing, planned power plant operation within the framework of existing operations at the LBGS.

History of Operations

The current configuration of the Long Beach power plant has been in operation since 1977. The site has a history of power plants for almost the last 100 years. The intake structure of the plant consists of a single forebay area within the Cerritos Channel in the Port of Long Beach (Photograph 1) along with two individual intake pipes serving the two steam units at the site. The pipes are at an approximate depth of 64 feet (Photographs 2 and 3) and flow directly into rotating cleansing screens and then continue on to the condensers in the plant. The outfall structure is a single pipe located in Cerritos Channel of the Long Beach Harbor at an approximate depth of 35 feet. Photograph 4 depicts the onshore structures at the LBGS. The temperature differential of the water from the intake structure to the outfall structure is approximately 20 degrees. The LBGS NPDES permit with the Regional Water Quality Control Board (RWQCB) allows a maximum combined discharge volume of 526 MGD of once-through cooling water. Volume fluctuates on an hourly, daily, and annual basis.

3.0 THE DATE(S) AND DURATION OF SUCH ACTIVITY AND THE SPECIFIC GEOGRAPHICAL REGION WHERE IT WILL OCCUR

The LBGS is an electric generating facility located in Long Beach, California (Figure 1). During peak electrical system demand, (normally, but not limited to, the warmer months), at least one circulating water pump is in operation at all times. Volume fluctuates on an hourly, daily, and annual basis.

4.0 THE DESCRIPTION OF THE STATUS, DISTRIBUTION, AND SEASONAL DISTRIBUTION OF THE AFFECTED SPECIES OR STOCKS OF MARINE MAMMALS LIKELY TO BE AFFECTED BY SUCH ACTIVITIES

This section describes the marine mammal species of the eastern Pacific Ocean that are most likely to be found within the activity area, and therefore, may be affected by LBGS operations. The historic operation of the LBGS is part of the environmental baseline, and the historic effects of the LBGS operations on these species is used to determine the future effects on marine mammal species pursuant to the MMPA.

Common marine mammals found in the eastern Pacific Ocean include California sea lion (*Zalophus californianus californianus*), harbor seal (*Phoca vitulina richardsi*), northern elephant seal (*Mirounga angustirostris*), several species of dolphins, and several species of whales. Although many of the whale and dolphin species may make use of coastal habitat, they are transitory in nature and are usually found in the pelagic habitat of the ocean outside of the area of potential effect for this project. Northern elephant seals are usually found on offshore islands and are not expected in the area of potential effect for this facility. Northern elephant seals have never been observed at the LBGS; therefore, they are omitted from further discussion herein. Seals and sea lions are also rather transitory in nature; however, they use coastal habitat more extensively and may occur within the area of potential effect for this facility. The status, population size and distribution of each species expected in the activity area (harbor seals and California sea lions), and the historic effects of the power plant operations on these species are discussed below.

4.1 Harbor Seals

Harbor seals are not considered Endangered or Threatened under the FESA, or depleted under the MMPA. This species is found in near-shore coastal and estuarine areas from Baja California, Mexico, to the Pribilof Islands in Alaska. Harbor seals are commonly found in bays and inlets along the coast of the Pacific Ocean. There are 400-500 haulout sites distributed along the mainland and offshore islands in the eastern Pacific Ocean and include intertidal sandbars, rocky shores and beaches along the coast of southern California. The minimum population size estimated by the NMFS is 27,962 harbor seals, and this number is increasing as fishery mortality is declining (Forney et al. 2000).

No harbor seals have been found in the forebay area or intake and outflow structures since the LBGS began operation in 1977.

4.2 California Sea Lions

California sea lions are not considered Endangered or Threatened under the FESA, or depleted under the MMPA. California sea lions are found from southern Mexico to southwestern Canada, and breed on islands in southern California, western Baja California, and the Gulf of California. The minimum population size estimated by the NMFS is 109,854 California sea lions. The population is growing at 6.2 percent per year (Forney et al. 2000). California sea lions are commonly found in bays and inlets, and on beaches along the coast of the Pacific Ocean. Four rookeries are known in southern California, and haulout sites are located along the coast between Point Conception and the Oregon/California border.

No California sea lions have been found in the forebay area or intake and outflow structures since the LBGS began operation in 1977.

5.0 TYPE OF INCIDENTAL TAKING AUTHORIZATION BEING REQUESTED

The type of incidental taking authorization being requested in this application is a Letter of Authorization (LOA) for take by harassment, injury and/or death of marine mammals as a result of continued plant operations, which will renew the existing LOA issued by the NMFS Southwest Region in 1983.

6.0 BY AGE, SEX, AND REPRODUCTIVE CONDITION (IF POSSIBLE), THE NUMBER OF MARINE MAMMALS THAT MAY BE TAKEN, AND THE NUMBER OF TIMES SUCH TAKINGS ARE LIKELY TO OCCUR

Under the existing conditions at LBGS, no marine mammals have been found in or near the structures associated with power plant operations. These records over the past 23 years are considered the environmental baseline of the power plant.

6.1 Harbor Seals

No harbor seals have been entrained at or found near the grounds of the LBGS since 1977. Based on this environmental baseline, future incidental take of less than one harbor seal per year is anticipated. The continued operation of the LBGS has had, and is anticipated to continue to have, a negligible effect on harbor seals. Continuation of existing plant operations will not change the environmental baseline; therefore, the number of marine mammal entrainments is not expected to change.

6.2 California Sea Lions

No California sea lions have been entrained at or found near LBGS since 1977. Based on this environmental baseline, incidental take of less than one California sea lion per year is anticipated. The continued operation of the LBGS has had, and is anticipated to continue to have, a negligible effect on California sea lions. Continuation of existing plant operations will not change the environmental baseline, therefore, the number of marine mammal entrainments is not expected to change.

7.0 THE ANTICIPATED IMPACT OF THE ACTIVITY UPON THE SPECIES OR STOCK OF MARINE MAMMAL

The continued operation of the LBGS has had, and is anticipated to continue to have, a negligible effect on the populations or stocks of harbor seals and sea lions. As discussed in the previous section, the stocks of both harbor seals and California sea lions are increasing in the eastern Pacific Ocean, and the minimal historic impacts on these marine mammals resulting from LBGS operations is not reasonably likely to affect these species or stock through effects on annual rates of recruitment or survival.

8.0 THE ANTICIPATED IMPACT OF THE ACTIVITY ON THE AVAILABILITY OF THE SPECIES OR STOCKS OF MARINE MAMMALS FOR SUBSISTENCE USES

There are currently no subsistence uses for harbor seal and California sea lions in this area; thus, no impact on the availability of these species for subsistence uses will occur.

9.0 THE ANTICIPATED IMPACT OF THE ACTIVITY UPON THE HABITAT OF THE MARINE MAMMAL POPULATIONS, AND THE LIKELIHOOD OF RESTORATION OF THE AFFECTED HABITAT

The continued operation of the LBGS has had, and is anticipated to continue to have, a negligible effect on the habitat of harbor seals and sea lions in the vicinity of the intake and outflow structures in Cerritos Channel in the Port of Long Beach; therefore, habitat restoration is not necessary. Because there will be no change to the existing conditions, it is not anticipated that the LBGS will have significant adverse impacts upon the habitats of marine mammals in the Port of Long Beach as a result of continued operation.

10.0 THE ANTICIPATED IMPACT OF THE LOSS OR MODIFICATION OF THE HABITAT ON THE MARINE MAMMAL POPULATIONS INVOLVED

The continued operation of the LBGS has had, and is anticipated to continue to have, a negligible effect on the habitat of harbor seals and sea lions. The existing conditions, which include the intake and outflow structures in their current locations in Cerritos Channel in the Port of Long Beach, are considered the environmental baseline. Because there will be no change to the existing conditions, the habitat of harbor seals and sea lions is not anticipated to be modified as a result of the continued operations of the LBGS.

11.0 THE AVAILABILITY AND FEASIBILITY (ECONOMICAL AND TECHNOLOGICAL) OF EQUIPMENT, METHODS, AND MANNER OF CONDUCTING SUCH ACTIVITY OR OTHER MEANS OF EFFECTING THE LEAST PRACTICABLE ADVERSE IMPACT UPON THE AFFECTED SPECIES OR STOCKS, THEIR HABITAT, AND ON THEIR AVAILABILITY FOR SUBSISTENCE USES, PAYING PARTICULAR ATTENTION TO ROOKERIES, MATING GROUNDS, AND OTHER AREAS OF SIMILAR SIGNIFICANCE

Under the existing operating conditions, LBGS currently causes no significant adverse impacts on marine mammal species, their habitat, or their availability for subsistence uses as evidenced by the lack of incidents of marine mammal entrainments in the past 17 years of reporting and 23 years of operations under the existing operating conditions. Existing LBGS operations also are not reasonably likely to adversely affect these species or stock through effects on annual rates of recruitment or survival. Because there will be no change to the existing conditions, it is not anticipated that the LBGS will have significant adverse impacts upon marine mammal species, their habitat, their

availability for subsistence uses, or their annual rates of recruitment or survival as a result of continued operation. There are no known practicable methods of reducing risk to marine mammals beyond those already in place at the LGBS.

12.0 WHERE THE PROPOSED ACTIVITY WOULD TAKE PLACE IN OR NEAR A TRADITIONAL ARCTIC SUBSISTENCE HUNTING AREA AND/OR AFFECT THE AVAILABILITY OF A SPECIES OR STOCK OF ANIMAL FOR ARCTIC SUBSISTENCE USES, THE APPLICANT MUST SUBMIT EITHER A PLAN OF COOPERATION OR INFORMATION THAT IDENTIFIES WHAT MEASURES MUST BE TAKEN TO MINIMIZE ADVERSE EFFECTS ON THE AVAILABILITY OF MARINE MAMMALS FOR SUBSISTENCE USES

The activity does not take place in or near a traditional Arctic subsistence hunting area and does not affect the availability of a species or stock of marine mammal for Arctic subsistence uses.

13.0 THE SUGGESTED MEANS OF ACCOMPLISHING THE NECESSARY MONITORING AND REPORTING OF IMPACTS ON MARINE MAMMALS THAT ARE EXPECTED TO BE PRESENT WHILE CONDUCTING ACTIVITIES

As a participant in the Regional Stranding Network Program with NMFS, the LGBS must complete a marine mammal stranding report for all cases of marine mammal entrapment. NMFS is notified verbally and in writing within 24 hours, and reports are submitted on a monthly basis to the Stranding Network Coordinator at NMFS.

Because there will be no change to the existing conditions, no change in operations are recommended. Continuation of the current monitoring and reporting program is recommended, with the possibility of review and comment by the NMFS.

14.0 THE SUGGESTED MEANS OF LEARNING OF, ENCOURAGING, AND COORDINATING RESEARCH OPPORTUNITIES, PLANS, AND ACTIVITIES RELATING TO REDUCING SUCH INCIDENTAL TAKING AND EVALUATING ITS EFFECTS

Independent research is currently being conducted on methods to prevent or reduce the lethal incidental taking of marine mammals through intake structures associated with coastal power plants. Should new, improved methods be identified, they could be evaluated, and incorporated if appropriate at some future time. However, less than one marine mammal per year is taken at the LGBS, which indicates that take of marine mammals at this power plant is sufficiently minimized under the current operating conditions and that additional methods are unlikely to provide improvement over existing conditions.

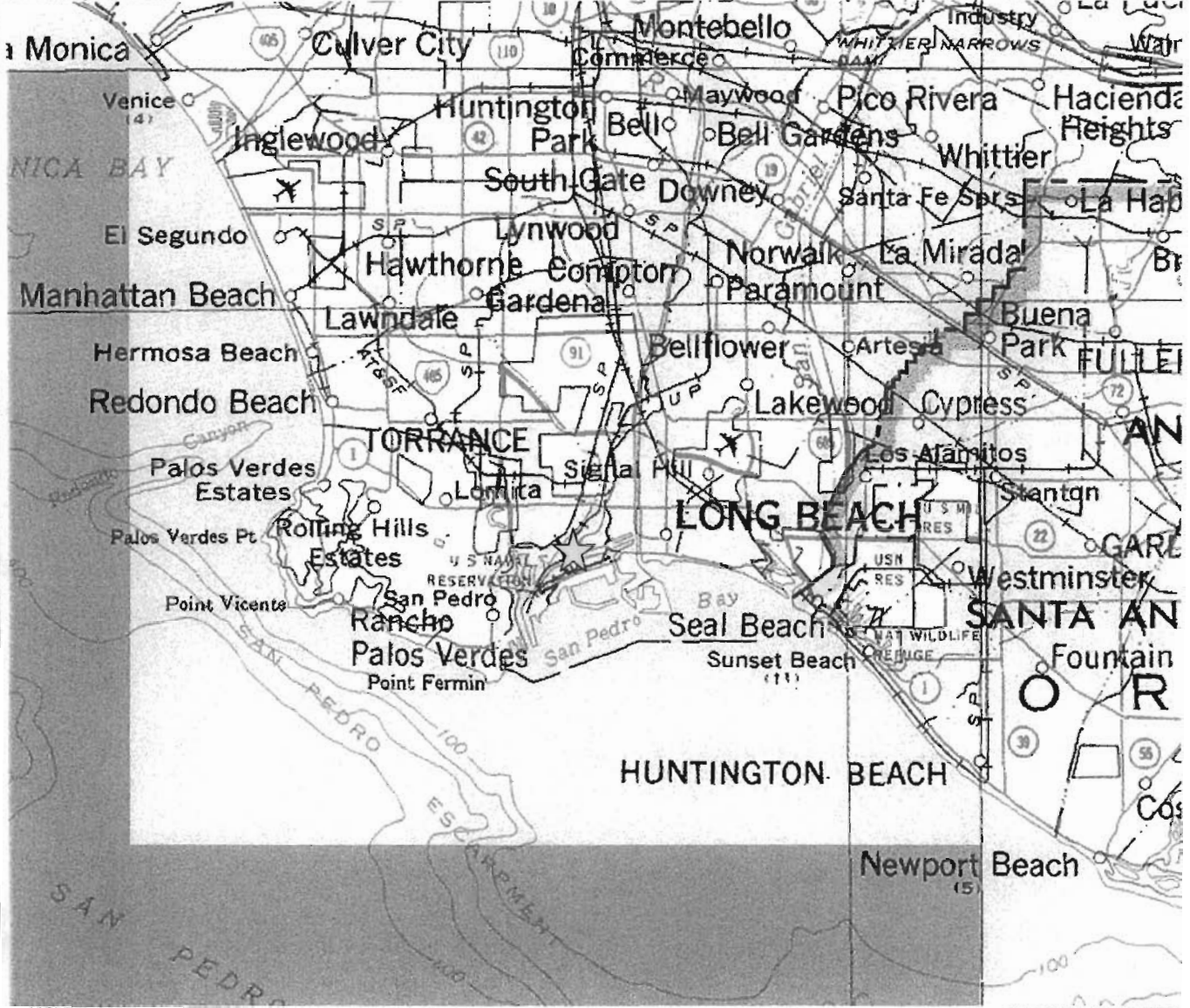
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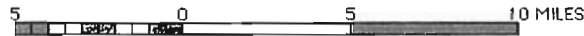
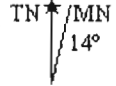
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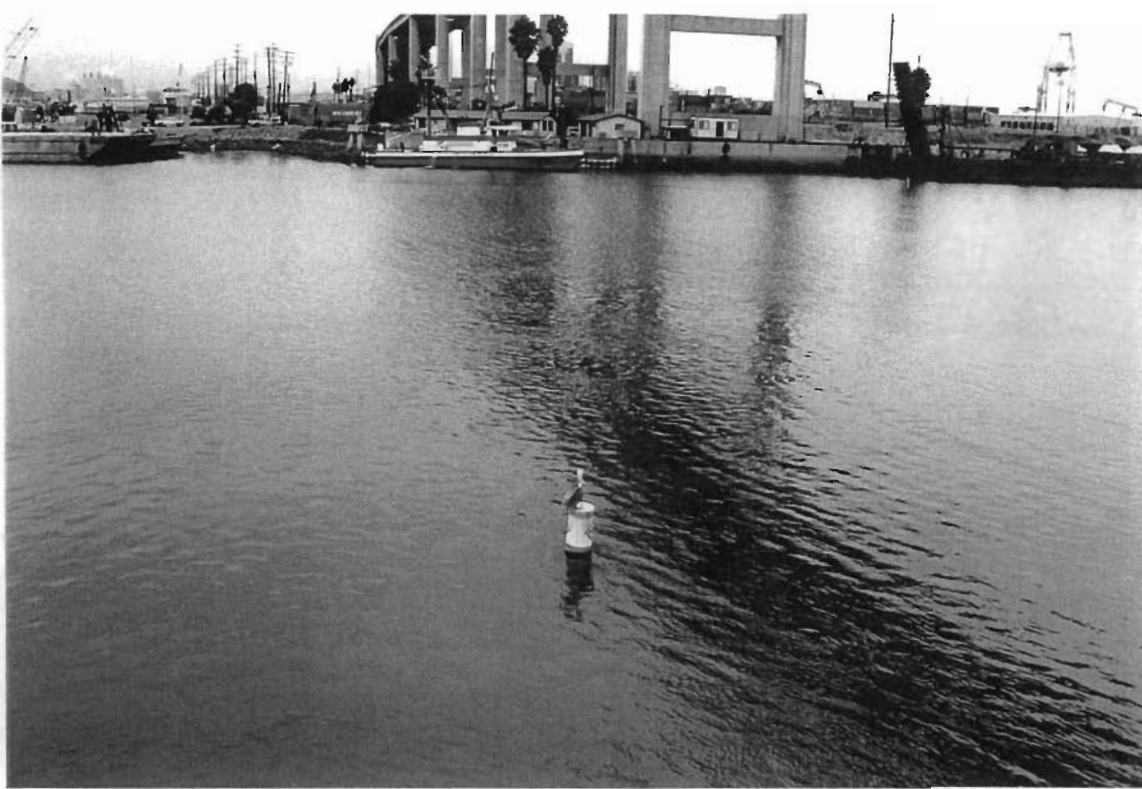


LONG BEACH GENERATING STATION

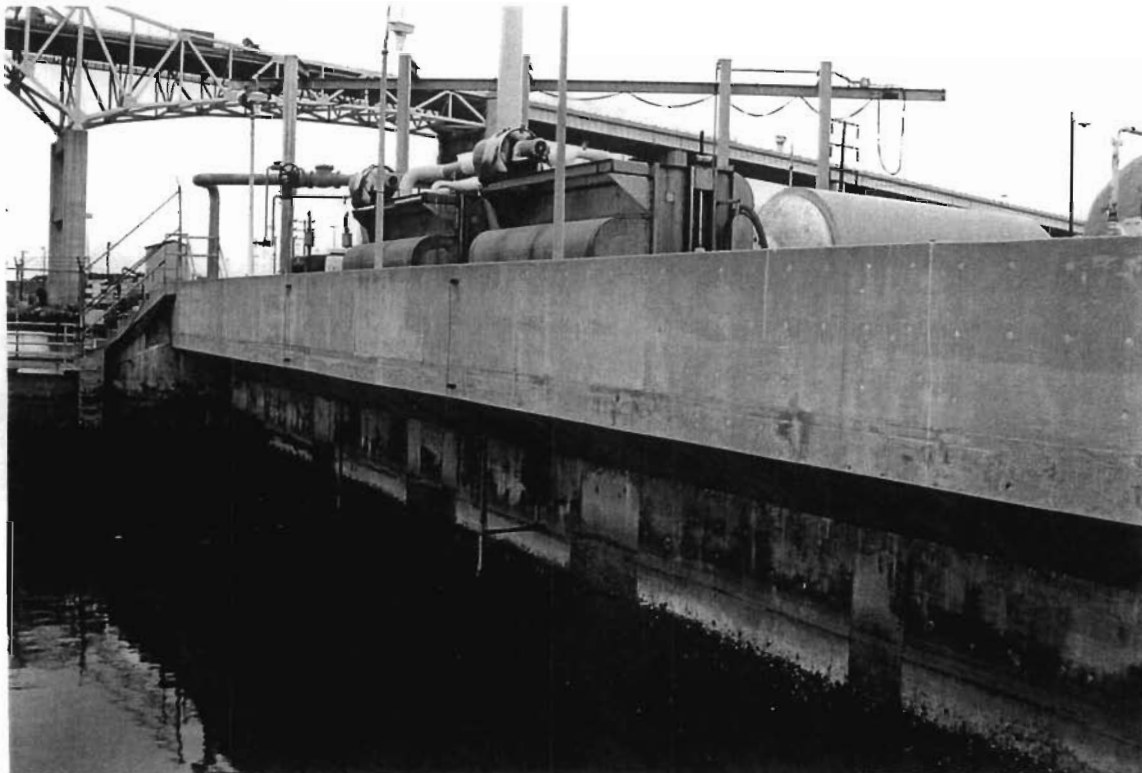
SITE LOCATION MAP

FIGURE 1

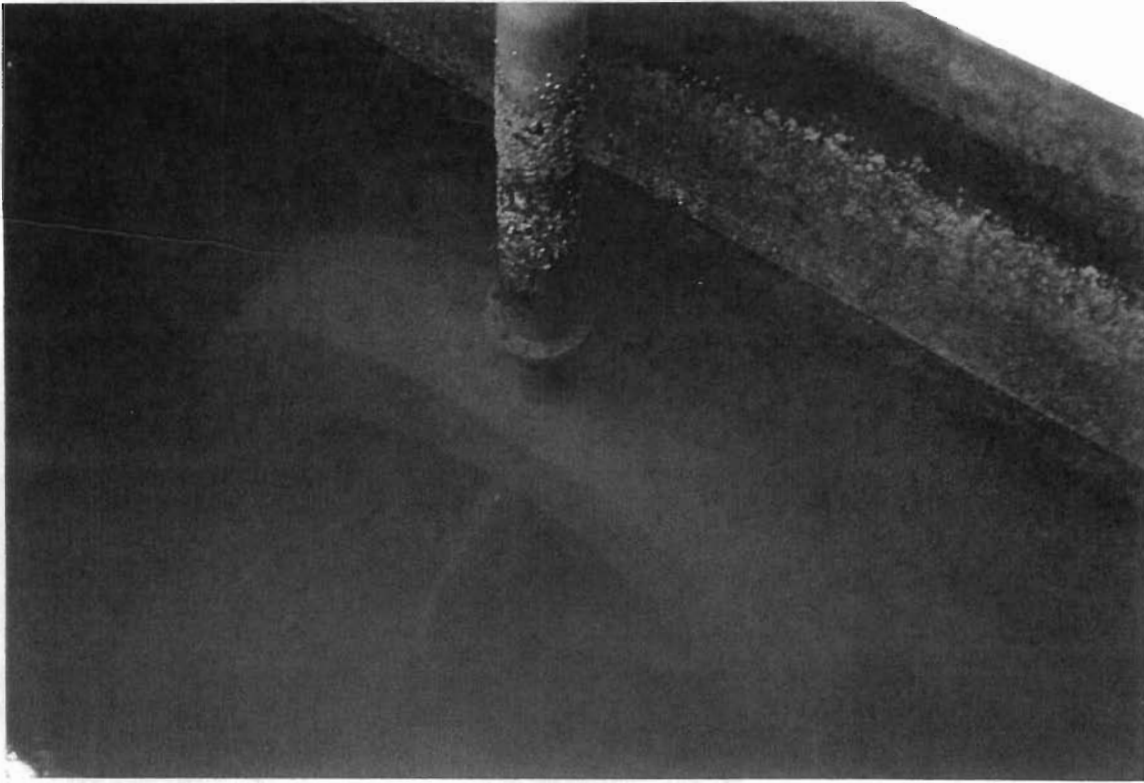
☆ = Facility Site



Photograph 1: View west of Long Beach Harbor where intake structures are located.



Photograph 2: View of forebay area; note low flow rate of the water.



Photograph 3: View of intake pipe in forebay area.



Photograph 4: View of onshore structures of Long Beach Generating Station.