



**OPERATIONS AND MAINTENANCE PLAN  
PENINSULA DRIVE  
MARINA BAY PROJECT  
RICHMOND, CALIFORNIA**

This plan has been prepared on behalf of Richmond Community Redevelopment Agency by PES Environmental, Inc. (PES) as a plan for inspecting and maintaining two capped areas located on portions of Peninsula Drive in the South Shore Areas of the Marina Bay Project in Richmond, California (Plate 1). Peninsula Drive is a public roadway that generally runs to the east and west along the northern side of the peninsula comprising the South Shore Areas. It is bounded on the north by the Esplanade (a public walkway along Richmond Marina Bay) and Richmond Marina Bay, and on the south by Vincent Park (formerly Peninsula Park), and Areas V, W, Y, U, and T, from the west to east, respectively. Areas W, Y, and U of the Marina Bay project have been redeveloped for residential use (Plate 2).

Two areas of encapsulated soil are located beneath portions of Peninsula Drive<sup>1</sup>. The two areas comprise approximately 18,520 square feet (ft<sup>2</sup>) of capped area. An approximately 7,450 ft<sup>2</sup> area north of Areas W and Y, referred to as the Western Portion, contains encapsulated lead-bearing soils. Lead-bearing soils between the Peninsula Drive alignment and the Esplanade were excavated and placed in 6-inch lifts atop the lead-bearing soils beneath the Peninsula Drive alignment<sup>2</sup>. A second area of approximately 11,070 ft<sup>2</sup> in size, referred to as the Eastern Portion and located between Area U and Area T, contains encapsulated hydrocarbon-bearing soils. The caps were completed when Peninsula Drive was constructed by placing road base and asphaltic concrete roadway over the affected soils. A map depicting areas of the caps and the underlying lead- or hydrocarbon-bearing soils is provided on Plate 3. Exhibit A of the Covenant to Restrict Use of Property<sup>1</sup>, provides more detailed descriptions of the locations of the two affected portions of Peninsula Drive.

The goal of the inspection and maintenance actions is to maintain the integrity of the caps. To accomplish this goal, this plan: (1) details the frequency and procedures for routine operation and maintenance; (2) documents reporting requirements; and (3) details the procedures to be implemented for non-routine operation and maintenance.

### **ROUTINE OPERATION AND MAINTENANCE**

Annually, the site owner will complete inspection and maintenance activities during the month of February (unless an extension of time is obtained from the Department of Toxic Substances Control [DTSC] or its successor):

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<sup>1</sup> Covenant to Restrict Use of Property, Environmental Restriction, Peninsula Drive, Marina Bay Redevelopment, Richmond, California dated February 9, 2005.

<sup>2</sup> Harding Lawson Associates, 1991. *Postremedial Operations Report, Lead-Bearing Soils Area and Hydrocarbon Zone 7, Marina Bay Development, Richmond, California*. August 27.

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- (1) The roadway asphalt cap will be inspected by a California-registered civil engineer for signs of cracking or other degradation which might compromise the integrity of the cap. Field notes describing the observations made at the time of inspection will be prepared and will detail the pavement conditions; and
- (2) Cracks or other degradation of the asphalt will be patched or otherwise repaired within 30 days of the inspection.

### **Annual Reporting**

Annually, the site owner will submit a report to DTSC within 45 days of the inspection. The report will include the field inspection notes and a description of repairs.

### **5-Year Reporting**

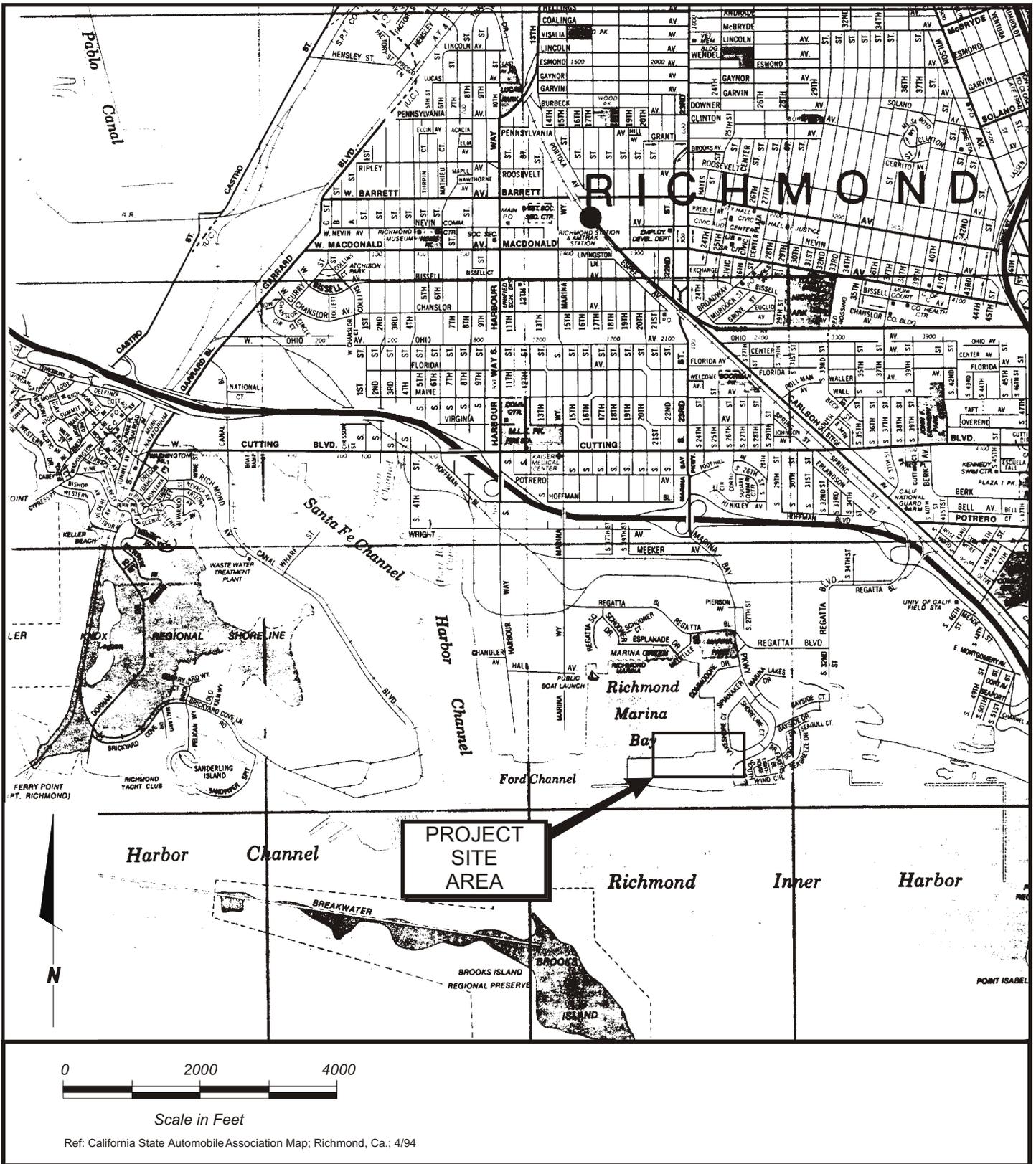
Every 5 years a 5-year review report will be prepared by a California-registered civil engineer. Ninety days before the end of the 5-year period, the site owner will submit a work plan to DTSC describing how the 5-year review will be conducted. The 5-year review report will be submitted to DTSC 30 days after approval of the work plan. The report will describe the inspection and maintenance activities that were conducted over the past 5 years. The report will include, at a minimum, a review of the status and effectiveness of the cap and if necessary, make recommendations to modify the cap or cap design. A copy of field inspection notes for the prior 5-year period will be included in the report.

### **NON-ROUTINE OPERATION AND MAINTENANCE**

This plan is intended to describe only those procedures for routine inspection and maintenance of the cap. If it is determined by the site owner that major cap repairs or other subsurface construction activities are needed at Peninsula Drive that will result in penetration of the cap to the underlying lead-bearing and/or petroleum hydrocarbon-bearing soil, then: (1) all applicable regulations to provide protection of worker safety and health will be followed; (2) a Soil Management Plan including a Health and Safety Plan will be submitted to DTSC for review and approval prior to any construction activity; and (3) DTSC will be notified prior to commencement of work.

Attachments: Plate 1 – Site Location Map  
Plate 2 – Vicinity Map  
Plate 3 – Site Plan

**ATTACHMENTS**



**PES Environmental, Inc.**  
Engineering & Environmental Services

**Site Location Map**  
Peninsula Drive O&M Plan  
Marina Bay Project  
Richmond, California

PLATE

**1**

