CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 93-127

SITE CLEANUP REQUIREMENTS FOR:

RICHMOND ROD & GUN CLUB, INC.
3155 GOODRICK AVENUE
RICHMOND, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. **Site Description** - The Richmond Rod & Gun Club (hereinafter called the Discharger) is located on a parcel of about 92 acres in Richmond adjacent to the shore of San Pablo Bay (see Figure 1). The club is about 2.2 miles almost directly south of Pinole Point and about 1000 feet from where Rheem Creek empties in the Bay. The site has five skeet ranges, two trap ranges, several rifle and pistol ranges and storage areas for trailers, boats and duck blinds. To shoot the clay targets at the skeet and trap ranges, only shotguns are used.

   The skeet and trap ranges are located on a narrow piece of land which extends out into the Bay. A mud flat of about 16 acres is directly north of the ranges and a marsh is south.

2. **Site History** - The Discharger has operated the skeet and trap ranges since about 1960. The ranges have been used for both recreational and competition shooting. On July 15, 1993, the Discharger banned the use of lead shot at the skeet and trap ranges. It is the intention of the club to prohibit lead shot at these ranges in the future.

3. **Sources of Pollution** - The lead pellets from the shotguns are discharged north toward and into open waters and the mud flat. The pellets can land a considerable distance, 300 to 400 feet, from the shooting positions. It is estimated that many tons of lead were deposited into the mud flat during the more than 30 years of shooting. Broken clay targets were also deposited into the mud flat.

4. **Previous Investigation** - An investigation was conducted in 1991 to determine the extent and quantity of lead in the mud flat sediments and the water column. To accomplish the investigation, 20 on-site and 2 off-site sediment core samples, along with 2 on-site water column samples, were collected.

   Before the samples were chemically analyzed, the lead pellets were removed from the sediment samples. The highest detected total lead concentration in the sediment was 300 mg/kg. The highest detected total lead concentration in pellet form, based

on the pellets plus the sediment, was 84,000 mg/kg. Lead was not detected in the water column samples.

5. **Environmental Concerns** - The two primary areas of concern are lead and clay target deposition. The potential effects of lead from shotgun clubs are well documented. Direct ingestion of lead pellets causes waterfowl deaths. In the San Pablo Bay area, dabbling ducks, such as canvasbacks, are at special risk. In both fresh and marine water, lead becomes available to biota through the transformation process of oxidation. Clay targets contain asphaltenes, which in turn can contain polynuclear aromatic hydrocarbons. These types of hydrocarbons are classified as carcinogenic.

6. **Scope of this Order** - This Order contains prohibitions and tasks that require the Discharger to: 1) cease the deposition of lead shot into waters of the State or waters of the United States; 2) define the extent of lead pollution in waters of the State or waters of the United States; 3) determine the degree to which the lead is biologically available; 4) develop a remedial action plan to cleanup or manage the lead pollution; and 5) implement the remedial action plan.

7. On October 28, 1968, the State Board adopted Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality Waters in California." This policy calls for maintaining the existing high quality of State waters unless it is demonstrated that any change would be consistent with the maximum public benefit and not unreasonably affect beneficial uses. The discharge of waste to the surface water at this site is in violation of this policy. Therefore, the surface water quality needs to be restored to its original quality to the extent reasonable.

8. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on September 16, 1992. The Basin Plan contains water quality objectives and beneficial uses for San Pablo Bay and contiguous surface waters.

9. The existing and potential beneficial uses of San Pablo Bay and contiguous surface waters include:

   a. Industrial service supply
   b. Navigation
   c. Water contact recreation
   d. Non-contact water recreation
   e. Ocean commercial and sport fishing
   f. Wildlife habitat
   g. Preservation of rare and endangered species

h. Fish migration
i. Fish spawning
j. Shellfish harvesting
k. Estuarine habitat

10. The Discharger has caused or permitted, and threatens to cause or permit, waste to be discharged or deposited where it is or probably will be discharged to waters of the State and creates a condition of pollution or nuisance.

11. This action is an Order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions of the CEQA pursuant to Section 15321 of the Resources Agency Guidelines.

12. The Board has notified the Discharger and interested agencies and persons of its intent under California Water Code Section 13304 to prescribe Site Cleanup Requirements for the discharge and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.

13. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the Discharger shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous materials in a manner which will degrade, or threaten to degrade, water quality or adversely affect, or threaten to adversely affect, the beneficial uses of the waters of the State or waters of the United States is prohibited.

2. Specifically, the discharge or deposition of lead shot into waters of the State or waters of the United States is prohibited.

B. **PROVISIONS**

1. The Discharger shall perform all investigation and cleanup work in accordance with the requirements of this Order. All technical reports submitted in compliance with this Order shall be satisfactory to the Executive Officer, and, if necessary, the Discharger may be required to submit additional information.

2. To comply with all Prohibitions of this Order, the Discharger shall meet the following compliance task and time schedule:

COMPLIANCE DATE AND TASKS

a. **COMPLIANCE DATE: November 1, 1993**

WORKPLAN FOR IMPLEMENTATION OF LEAD BAN: Submit a workplan acceptable to the Executive Officer containing a proposal, including a time schedule, for implementation of a ban on lead shot and methods for enforcing this ban.

b. **COMPLIANCE DATE: November 1, 1993**

WORKPLAN FOR BIOLOGICAL CHARACTERIZATION: Submit a technical report acceptable to the Executive Officer containing a proposal, including a time schedule, to characterize the biology in the area where the lead has been deposited, and determine whether the lead has become biologically available and is affecting, or can potentially affect, plants or animals. A remedial action plan acceptable to the Executive Officer may be submitted in lieu of this workplan for biological characterization.

c. **COMPLIANCE DATE: February 1, 1994**

WORKPLAN FOR ALTERNATIVES TO CLAY TARGETS THAT CONTAIN ASPHALT: Submit a workplan acceptable to the Executive Officer containing a proposal, including a time schedule, to investigate the use of alternatives to clay targets that contain asphalt.

d. **COMPLIANCE DATE: To be established by Executive Officer based on proposal submitted pursuant to Provision 2.b.**

COMPLETION OF BIOLOGICAL CHARACTERIZATION: Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report acceptable for Provision 2.b.

e. **COMPLIANCE DATE: To be established by Executive Officer based on the report submitted pursuant to Provision 2.d.**

REMEDIAL ACTION PLAN: Submit a technical report acceptable to the Executive Officer containing a remedial action plan and an implementation time schedule. This report shall evaluate the removal of lead deposits in the mud flats and, possibly, the adjacent land areas. Removal evaluation shall consider pellet and sediment phases, and the degree of removal may be based on biological data.

f. **COMPLIANCE DATE: To be established by Executive Officer based on the report submitted pursuant to Provision 2.e.**

WORKPLAN FOR SEDIMENT POLLUTION CHARACTERIZATION: Submit a technical report acceptable to the Executive Officer containing a proposal, including a time schedule, to further define the horizontal and vertical extent of lead sediment pollution, including both pellet and finely divided forms. The requirement for further sediment pollution characterization will depend on the results of the biological characterization and the details of the remedial action plan.

g. **COMPLIANCE DATE: To be established by Executive Officer based on proposal submitted pursuant to Provision 2.f.**

COMPLETION OF SEDIMENT CHARACTERIZATION: Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report acceptable for Provision 2.f.

h. **COMPLIANCE DATE: To be established by Executive Officer based on proposal submitted pursuant to Provision 2.e.**

COMPLETION OF REMEDIAL ACTION: Submit a technical report acceptable to the Executive Officer documenting the completion

of the necessary tasks identified in the technical report acceptable for Provision 2.e.

3. If the Discharger is delayed, interrupted or prevented from meeting one or more of the compliance dates specified in this Order, the Discharger shall promptly notify the Executive Officer, and the Board may consider revision to this Order.

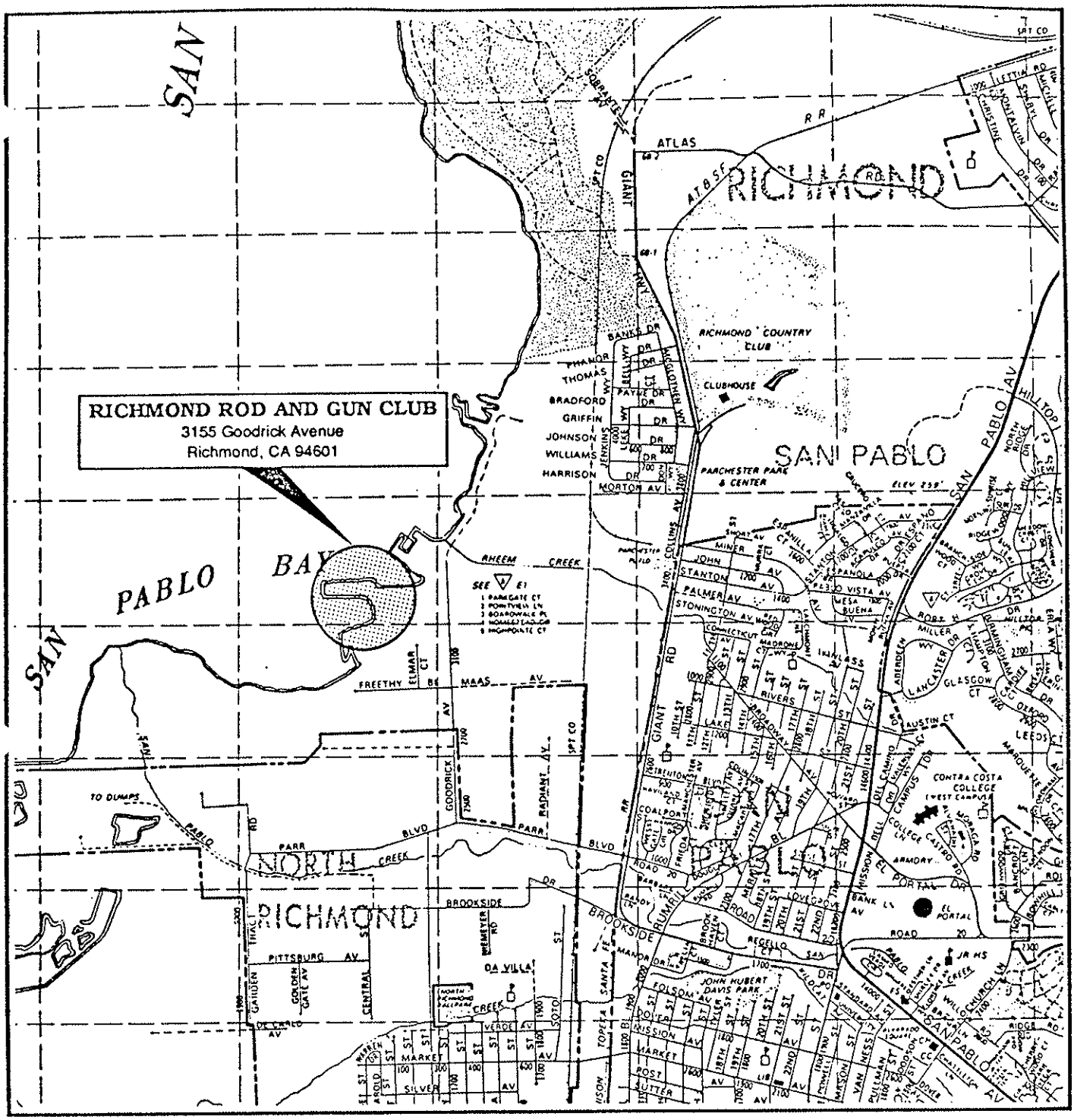
4. The Discharger shall file a report with the Board at least 30 days in advance of any changes in occupancy or ownership associated with the Site described in this Order.

5. The Board will review this Order periodically and may revise the requirements or compliance schedule when necessary.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Region, on October 20, 1993.

Steven R. Ritchie
Executive Officer

Attachments: Figure 1 — Site Map



MAP SOURCE:
Thomas Bros. Map
Alameda and Contra Costa County, 1991

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Figure 1 : SITE LOCATION MAP

Project No. 2405

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ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

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