Exh. 4

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

CLEANUP AND ABATEMENT ORDER NO. 89-49

GREYHOUND LINES, INCORPORATED
GREYHOUND MAINTENANCE CENTER
539 FIRST AVENUE, SAN DIEGO
PARCEL NO. 535-072-03-00
BLOCK 92, LOTS C THRU J
SAN DIEGO COUNTY

California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

1. Greyhound Lines, Inc. (hereinafter Greyhound) owns and operates a bus maintenance center at 539 First Avenue. The site is within the San Diego Mesa Hydrographic Subunit (8.2) of the Coronado Hydrographic Unit (8.0).

2. On September 9, 1987, the Regional Board sent a letter to Greyhound requesting information regarding past practices associated with the subject site.

3. By letter dated September 21, 1987, Greyhound informed the Regional Board that five tanks currently exist at the facility. They include:

   One small, abandoned steel waste oil tank,
   Two 10,000 gallon steel diesel tanks,
   One 8,000 gallon steel motor oil tank, and
   One 1,000 gallon steel waste oil tank.

4. The site is a part of the Marina Redevelopment Project in the center city area of the City of San Diego. The project is being administered by the Redevelopment Agency of the City of San Diego. The Centre City Development Corporation, Inc. (CCDC) is a nonprofit corporation established by the City of San Diego to administer downtown redevelopment projects, including the Marina Redevelopment Project.

5. In 1987, CCDC discovered a subsurface hydrocarbon plume near the intersection of Market Street and First Avenue. The subsurface plume is composed of petroleum hydrocarbon with a carbon chain which ranges from gasoline to diesel and appears to be an accumulation of several coalescing sources. A 3.0 foot thickness of petroleum hydrocarbon was measured in a ground-water monitoring well adjacent to the eastern boundary of the subject property. The subject site is on the southern margin of this hydrocarbon plume.

6. By letter dated November 12, 1987, Regional Board staff requested Greyhound to conduct a subsurface investigation to ascertain whether or not fuel has been discharged into the environment.

7. In response to our letter of November 12, 1987, Regional Board staff received, and subsequently approved, a workplan from Applied GeoSystems for Greyhound. According to the workplan, the small waste oil tank mentioned in Greyhound's September 21, 1987 letter, appears to be a 5,000 gallon tank, presumably constructed of steel.

8. Regional Board staff subsequently received a technical subsurface investigation report summary, dated February 12, 1988, and additional information submitted by letter, dated February 23, 1988, from Greyhound. This information was inadequate to determine whether the tank system had discharged fuel to the subsurface.

9. By letter dated April 1, 1988, Regional Board staff requested Greyhound to conduct a new subsurface investigation.

10. Greyhound submitted the requested technical report prepared by Kleinfelder, Inc. dated December 21, 1988. Regional Board staff requested additional information by letter dated March 24, 1989. Greyhound has submitted a portion of the requested information in a letter dated May 3, 1989.

11. The following pertinent information has been provided to date:

    a. The two 10,000 steel fuel tanks and the 5,000 gallon waste oil tank (abandoned about 1975) were installed in 1953 and are now 36 years old. The tanks apparently do not have secondary containment nor are they equipped with cathodic protection.

    b. From 1953 to 1967, the 10,000 gallon tanks held leaded gasoline. From 1967 to 1973, they held diesel No. 1-D. From 1974 to Present, they have held diesel No. 2-D.

    c. The two 10,000 gallon steel tanks are believed to extend to a depth of 12 feet. To date, however, no soil samples, above the 15-foot horizon, have been analyzed for petroleum hydrocarbons.

    d. The Kleinfelder report indicated that a maximum organic vapor meter reading of >1,000 occurred at the 10-foot sampling point, however no soil sample analysis was performed. It appears that there is soil contamination which occurs above the historic high ground-water level (16-18 feet below ground surface), and occurs within 10 feet of the 10,000 gallon tanks.

    e. Monitoring wells drilled near the 10,000 gallon tanks detected 4 to 5 feet of floating hydrocarbon product. The floating product beneath the facility contains the same petroleum hydrocarbon constituents which have historically been stored on site in the 10,000 gallon tanks.

    f. Results of precision tests conducted by Greyhound in 1987 and 1988 indicate that the 4 active tanks are leaking small amounts of product.

    g. No information has been provided by Greyhound regarding whether the abandoned waste oil tank still contains waste oil.

    h. No information has been provided regarding whether the product lines and associated piping have been precision tested.

    i. Significant soil and ground-water contamination exists beneath the site at the 15 to 20 feet depth. Soil above the 15 foot level has not been adequately assessed.

12. From available data, it appears that a discharge of hydrocarbon fuel to the environment has occurred, and is still occurring, in the vicinity of the Greyhound maintenance center tanks and that the discharge has reached the historic water table.

13. The *Comprehensive Water Quality Control Plan Report, San Diego Basin (9)* (Basin Plan) was adopted by this Regional Board on March 17, 1975; approved by the State Water Resources Control Board on March 20, 1975; and updated by the Regional Board on February 27, 1978; March 23, 1981; January 24 and October 3, 1983; August 27, 1984; and December 16, 1985. The updates were subsequently approved by the State Board.

14. The Basin Plan established no beneficial uses for surface or ground waters in the San Diego Mesa Hydrographic Subunit.

15. The Basin Plan established the following beneficial uses for San Diego Bay:

    a. Industrial Service Supply
    b. Navigation
    c. Water Contact Recreation
    d. Non-Contact Water Recreation
    e. Ocean Commercial And Sport Fishing
    f. Saline Water Habitat
    g. Preservation of Rare and Endangered Species
    h. Marine Habitat
    i. Fish Migration
    j. Shellfish Harvesting

16. The quality of the ground water of the San Diego Mesa Hydrographic Subunit and of the San Diego Bay water is subject to the provisions of the State Water Resources Control Board's Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California.* This policy is incorporated in the Basin Plan. Under the terms and conditions for Resolution No. 68-16, the existing (predischarge) quality of ground water in the San Diego Mesa Hydrographic Subunit and the surface water of San Diego Bay must be maintained unless it is demonstrated that a decrease in water quality (1) will be consistent with maximum benefit to the people of the state, (2) will not unreasonably affect beneficial uses, and (3) will not result in water quality less than that prescribed in the Basin Plan or other adopted policies.

17. The Basin Plan contains the following prohibition:

> "Dumping or deposition of oil, garbage, trash or other solid municipal, industrial or agricultural waste into natural or excavated sites below historic water levels or deposition of soluble industrial wastes at any site is prohibited, unless such site has been specifically approved by the Regional Board for that purpose."

The subject site has not been specifically approved by the Regional Board for the above purpose.

18. Section 13304(a) of the California Water Code states the following:

"Any person who has discharged or discharges waste into the waters of this state in violation of any waste discharge requirement or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, cause or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board clean up such waste or abate the effects thereof or, in the case of threatened pollution or nuisance, take other necessary remedial action."

19. Greyhound has caused or permitted petroleum hydrocarbons to be discharged or deposited on the site where such wastes have been and probably will be discharged into the ground water. The on-going discharge of petroleum hydrocarbons to the ground water has resulted in pollution of the ground water and threatens to pollute waters of San Diego Bay for beneficial uses listed in Finding No. 15. Additionally, the on-going discharge violates Resolution 68-16 because the Regional Board finds that the decrease in ground-water quality is not consistent with the maximum benefit to the people of the state.

20. These discharges have polluted and threaten to further pollute ground water of the basin and threaten to pollute surface water of San Diego Bay.

21. Regional Board files indicate that the ground water has a total dissolved solids (TDS) concentration that ranges from 1,085 to 3,080 parts per million (ppm) and, under the federal definition, qualifies as a potential underground source of drinking water. The United States Environmental Protection Agency's (EPA) definition of an "underground source of drinking water" is found in Title 40, Code of Federal Regulations (40 CFR), Section 146.3, and states the following:

"Underground source of drinking water (USDW) means an aquifer or its portion:

(1) (i) Which supplies any public water system; or
(ii) Which contains a sufficient quantity of ground water to supply a public water system; and
(a) Currently supplies drinking water for human consumption; or
(b) Contains fewer than 10,000 mg/l total dissolved solids; and
(2) Which is not an exempted aquifer."

As defined under 40 CFR Section 141.2(e) a "public water system" means:

"a system for the provision to the public of piped water for human consumption, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least 60 days out of the year."

Presently, the ground water is not being used as a drinking water source. However, some time in the future this water source may be utilized. The discharge of petroleum hydrocarbons degrades the existing water quality and renders it unusable for drinking water unless the ground water is treated.

22. The ground water beneath the site is in continuity with waters of the bay. The petroleum hydrocarbon concentrations are hazardous to marine life and may impact other beneficial uses of San Diego Bay, as described in Finding No. 15, if allowed to migrate to the bay.

23. Greyhound has demonstrated negligence in the discharge of petroleum hydrocarbons to the environment as follows:

    a. Single-walled steel tank construction which is subject to corrosion,
    b. No cathodic protective coating of the tanks,
    c. No early warning site monitoring to detect any discharges,
    d. No tank over-spill protection, and
    e. The lack of thorough and adequate tank tests, given the age (36 years old) of the steel tanks.

24. Greyhound installed the underground fuel tanks at the site. The existence of soil and ground-water contamination at the site indicates that the tanks and/or associated piping has leaked. Petroleum hydrocarbon from the tanks has been and are being discharged to the ground water. These discharges constitute a continuing public nuisance in violation of Civil Code Section 3490. The discharges also violated Health and Safety Code Section 5411 and California Water Code Section 13304(a).

25. Civil Code Section 3490 prohibits the creation or continuation of a public nuisance. The courts have held that water pollution constitutes a public nuisance. In addition, Health and Safety Code Section 5411 prohibits the discharge of waste which will result in pollution, contamination, or nuisance. The past and on-going subsurface discharge of petroleum hydrocarbons has resulted in pollution and in threatened pollution.

26. For reasons explained above, the Regional Board finds that Greyhound has discharged and is discharging petroleum hydrocarbons at the site in violation of Section 13304(a) of the California Water Code.

27. Regional Board considers this property one of several properties which have contributed to the ground-water plume for which Cleanup and Abatement Orders will be issued to collectively mitigate the contamination.

28. This enforcement action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et. seq.) in accordance with Section 15321, Chapter 3, Title 14, California Code of Regulations.

IT IS HEREBY ORDERED, that pursuant to Section 13304 of the California Water Code, Greyhound Lines, Inc. (hereinafter the discharger) shall comply with the following directives:

1. The discharger shall conduct a subsurface investigation and submit the results in a report to this office, no later than August 31, 1989, which characterizes the vertical and horizontal extent of petroleum hydrocarbon contamination in the soil and ground water (both free product and dissolved) resulting from the unauthorized release from the maintenance center at the subject site. The report shall contain the following information:

include a. A site map showing the location of all borings and monitoring wells.

Identify site Baseline b. Provide a true and accurate map which depicts all past and present tank locations and all associated piping and any underground utilities that might act as conduits along which petroleum hydrocarbons could migrate.

N/A c. Answers to the following questions:

(1). Why was the 5,000 gallon waste oil tank abandoned? N/A Has this tank ever been precision tested for tightness? Was the tank abandoned with waste oil still in the tank? Is there waste oil presently in the tank?

(2). Why did the 1976 plot plan state that the diesel fuel tanks will be abandoned? N/A

(3). Has the piping and associated product lines ever precision tested for tightness? Were product lines ever repaired or replaced? N/A

(4). How long does Greyhound retain repair and product inventory reconciliation records? 3 yrs

N/A d. The water levels and fuel product thicknesses in all wells on or immediately adjacent to the property (to the nearest 0.01 foot). N/A

include e. A site map showing the ~~contours and/or~~ boundary of the soil contamination. ? found under tanks or piping that is due to leaks or spills or overfills

f. A site map showing the hydrologic contours and the boundary of the free product plume and the dissolved product ground-water contamination.

include g. All soil samples should be analyzed for the following:

(1). Benzene, Toluene, Ethylbenzene, and total Xylenes (using EPA method 8020),
(2). Total Petroleum Hydrocarbons [using EPA method 418.1 and California Department of Health Services (CDOHS) method],
(3). Organic Lead (using CDOHS method),
(4). Polynuclear Aromatic Hydrocarbons (using EPA method 8100).

N/A h. All ground-water samples should be analyzed for the following:

(1). Benzene, Toluene, Ethylbenzene, and total Xylenes (using EPA method 8020)
(2). Total Petroleum Hydrocarbons (using CDOHS method)
(3). Total Lead (using EPA method 7421)
(4). Polynuclear Aromatic Hydrocarbons (using EPA method 8100).

2. The discharger shall submit a remedial action strategy proposal, no later than October 16, 1989, which addresses the removal and/or treatment of the soil contamination.

3. The discharger shall submit a remedial action strategy proposal, no later than November 30, 1989, which addresses the removal of any free product and the removal and/or treatment of the ground-water contamination.

4. The discharger shall take:

   a. Effective remedial action to immobilize and remove any free product plume.

   b. Effective remedial action to immobilize and clean up petroleum hydrocarbon dissolved in the ground water to the following levels:

Constituent	Cleanup Level
Benzene	40 ppb
Toluene	5,000 ppb
Ethylbenzene	430 ppb
Total Xylenes	1,750 ppb

   c. Effective remedial action to remove and/or treat all soil contamination to a level which would prevent leaching of petroleum hydrocarbons to the ground water which would cause contamination in the ground water to exceed the cleanup levels stated in Directive 4(b) above.

5. The discharger shall submit monitoring reports to this office on a quarterly basis until, in the opinion of the Regional Board Executive Officer, the site has been cleaned up. The monitoring reports shall describe the progress made in the cleanup operations and shall demonstrate that the petroleum hydrocarbons discharged from the maintenance center has been and remains immobilized. The quarterly monitoring reports shall include, but not be limited to, the following information:

   a. A map of the site with hydrologic contours showing the ground-water flow pattern and the locations of all wells.

   b. A map of the site showing the boundary of the free petroleum hydrocarbon product plume (if any).

   c. The water levels and product thickness (if any) in all of the wells (to the nearest 0.01 foot).

   d. A description of the remedial actions employed by the discharger.

   The quarterly monitoring reports shall be submitted to this office in accordance with the following schedule:

Reporting Period	Due Date
June, July, August	September 30
September, October, November	December 30
December, January, February	March 30
March, April, May	June 30

6. The discharger shall dispose of all ground water and/or soil polluted with petroleum hydrocarbons in accordance with all applicable local, state, or federal laws and regulations.

7. After the discharger demonstrates to the Regional Board Executive Officer's satisfaction that the final cleanup levels have been achieved throughout the soil and ground-water contamination zones, the discharger shall continue to monitor the ground water and submit quarterly monitoring reports in accordance with Directive No. 5 of this Order for a period of one year. If at any time during this post-cleanup monitoring the data indicate that the final cleanup levels have not been maintained, the discharger shall immediately resume appropriate remedial cleanup actions. If the final cleanup levels have not been exceeded for the year of monitoring, then no further monitoring will be required.

Ordered by: Ladin H. Delaney

Ladin H. Delaney
Executive Officer

Dated: May 19, 1989

JPA