

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

ADDENDUM NO. 1  
TO

CLEANUP AND ABATEMENT ORDER NOS. 89-48, 89-49, 89-50, AND 89-51  
REGARDING  
THE PETROLEUM HYDROCARBON CONTAMINATION OF GROUND WATER  
IN THE DOWNTOWN SAN DIEGO AREA

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

1. On May 19, 1989, the Regional Board Executive Officer issued the following Cleanup and Abatement Orders:
  - a. No. 89-48 to G.T.F. Properties and Shell Oil Company;
  - b. No. 89-49 to Greyhound Lines Inc.;
  - c. No. 89-50 to the Redevelopment Agency for the City of San Diego;
  - d. No. 89-51 to Golden West Hotel and Unocal Corporation

These orders were issued for violation of Section 13304(a) of the California Water Code for discharges of petroleum hydrocarbon to the vadose zone and underlying ground water.

2. Based on technical reports submitted to date, the Regional Board considers the above named parties to have contributed to ground-water contamination.
3. The Cleanup and Abatement Orders referenced above established the following directives:
  - a. The discharger(s) 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 subject site.
  - b. The discharger(s) shall submit a remedial action strategy proposal, no later than October 16, 1989, which addresses the removal and/or treatment of the soil contamination.
  - c. The discharger(s) 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.

October 26, 1989

4. As a result of communication between Regional Board staff and the responsible parties, a new submittal date is necessary to allow the responsible parties time to develop an effective ground-water remediation proposal.
5. 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 Directive No. 3 of Cleanup and Abatement Order Nos. 89-48, 89-49, 89-50 (Third Revision), and 89-51 is revised as follows:

1. The discharger(s) shall submit a remedial action strategy proposal, no later than February 16, 1990, which addresses the removal of any free product and the removal and/or treatment of the ground-water contamination.

Ordered by:

Ladin H. Delaney  
Ladin H. Delaney  
Executive Officer

Dated: October 26, 1989

JPA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

ADDENDUM NO. 2  
TO

CLEANUP AND ABATEMENT ORDER NOS. 89-48, 89-49,  
89-50 (THIRD REVISION), AND 89-51  
REGARDING  
THE PETROLEUM HYDROCARBON CONTAMINATION OF GROUND WATER  
IN THE DOWNTOWN SAN DIEGO AREA

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

1. On May 19, 1989, the Regional Board Executive Officer issued the following Cleanup and Abatement Orders:
  - a. No. 89-48 to G.T.F. Properties and Shell Oil Company;
  - b. No. 89-49 to Greyhound Lines Inc.;
  - c. No. 89-50 to the Redevelopment Agency for the City of San Diego;
  - d. No. 89-51 to Golden West Hotel and UNOCAL Corporation.

These orders were issued for violation of Section 13304(a) of the California Water Code for discharges of petroleum hydrocarbon to the vadose zone and underlying ground water.
2. Based on technical reports submitted to date, the Regional Board considers the above named parties to have contributed to ground-water contamination.
3. The Cleanup and Abatement Orders referenced above established the following directives:
  - a. The discharger(s) 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 subject site.
  - b. The discharger(s) shall submit a remedial action strategy proposal, no later than October 16, 1989, which addresses the removal and/or treatment of the soil contamination.
  - c. The discharger(s) 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. As a result of communication between Regional Board staff and the responsible parties, a new submittal date is necessary to allow the responsible parties time to develop an effective ground-water remediation proposal.

Addendum No. 2 to  
C&A Order Nos. 89-48,  
89-49, 89-50 (Third Revision), & 89-51

-2-

February 15, 1990

5. 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 Directive No. 3 of Cleanup and Abatement Order Nos. 89-48, 89-49, 89-50 (Third Revision), and 89-51 is revised as follows:

1. The discharger(s) shall submit a remedial action strategy proposal, no later than April 16, 1990, which addresses the removal of any free product and the removal and/or treatment of the ground-water contamination.

Ordered by:

Ladin H. Delaney  
Ladin H. Delaney  
Executive Officer

Dated: February 15, 1990

JPA:amend\_2.C&A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

9771 Clairemont Mesa Blvd., Ste. 8  
San Diego, California 92124-1331  
Telephone: (619) 265-6114

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 16, 1990

Mr. Embry Byrd, Director Environmental Management P 550 242 109  
Greyhound Lines, Inc.  
901 Main Street, Suite 2500  
Dallas, Texas 75202

Mr. Kenneth M. Ries, Director P 550 242 110  
Environment and Energy  
The Greyhound Corporation  
Greyhound Tower  
111 West Clarendon  
Phoenix, Arizona 85077

Dear Messrs. Byrd and Ries:

RE: ISSUANCE OF ADDENDUM NO. 3 TO CLEANUP AND ABATEMENT ORDER  
NOS. 89-49.

Enclosed is a copy of Addendum No. 3 to Cleanup and Abatement (C&A) Order No. 89-49. This Addendum is being issued under the authority of Water Code Section 13304 to Greyhound Lines, Inc. and Transportation Leasing Company in response to the presence of petroleum hydrocarbon contamination in the soil and ground water beneath 539 First Avenue in downtown San Diego.

Addendum No. 3 adds the Transportation Leasing Company as a responsible party for the remediation of the Greyhound Maintenance Facility.

You are hereby notified that you have the right to a public hearing before the Regional Board concerning Addendum No. 3 to C&A Order No. 89-49. If you desire to have a public hearing at the Regional Board's next meeting on March 12, 1990, you must notify this office of your request in writing and submit any written testimony by March 2, 1990. If no written request is received, then a public hearing will not be scheduled. The March 12, 1990 Regional Board meeting will begin at 9:00 a.m. at the Encinitas City Council Chamber, 535 Encinitas Boulevard, Suite 100, Encinitas.

Messrs. Byrd and Ries  
Addendum No. 2

-2-

February 16, 1990

I strongly urge a prompt and complete response to each directive of C&A Order No. 89-49. My staff will be happy to work with you toward achieving compliance with the Cleanup and Abatement Order.

If you have any questions, please contact Mr. John Anderson at (619) 265-5114.



*for* LADIN H. DELANEY  
Executive Officer

JPA:adengry2.1tr

Enclosures

cc: Ms. Sheila Vassey, Senior Staff Counsel, Office of Chief Counsel, State Water Resources Control Board, Sacramento.

Mr. Kevin Heaton, Hazardous Materials Management Division, County of San Diego Department of Health Services, San Diego.

Mr. John Clemons, White & Bright, 355 W. Grand Avenue, Suite 2, Escondido, California 92025

Mr. Jeffrey R. Stoke, Lillick & McHose, 101 West Broadway, 18th floor, San Diego, California 92101

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

ADDENDUM NO. 3  
TO

CLEANUP AND ABATEMENT ORDER NO. 89-49

AN ADDENDUM ADDING TRANSPORTATION LEASING COMPANY  
AS A RESPONSIBLE PARTY TO ORDER NO. 89-49  
FOR CONTAMINATION PRESENT  
AT  
GREYHOUND MAINTENANCE CENTER  
539 FIRST AVENUE, SAN DIEGO  
SAN DIEGO COUNTY

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

1. On May 19, 1989, the Regional Board Executive Officer issued Cleanup and Abatement Order No. 89-49 to Greyhound Lines, Inc. for violation of Section 13304(a) of the California Water Code for discharges of petroleum hydrocarbons to the vadose zone and underlying ground water.
2. By letter dated January 24, 1990, Kenneth M. Ries, Director, Environment and Energy for Transportation Leasing Company (TLC), A Greyhound Company notified the Regional Board that TLC was assuming the responsibility for all remediation of soils and ground water at the Greyhound Maintenance Center. TLC is the former site and business owner of the Greyhound Maintenance Center at 539 First Avenue in San Diego.
3. The Regional Board has notified all known interested parties of its intent to modify C&A Order No. 89-49 to reflect the addition TLC as a responsible party for complying with C&A Order No. 89-49.

IT IS HEREBY ORDERED, that Cleanup and Abatement (C&A) Order No. 89-49 is modified as follows:

1. C&A Order No. 89-49 shall henceforth be referred to as Cleanup and Abatement Order No. 89-49 for Greyhound Lines, Incorporated and Transportation Leasing Company, Greyhound Maintenance Center.
2. The Directives contained in C&A Order No. 89-49 shall be applicable to Greyhound Lines, Inc. and Transportation Leasing Company and shall remain in full force and effect.
3. The word Discharger as it appears in C&A Order No. 89-49 shall hereafter be construed to refer to Greyhound Lines, Inc. and Transportation Leasing Company.

Ordered by:

*Ladin H. Delaney*  
Ladin H. Delaney  
Executive Officer

Dated: February 20, 1990  
JPA:amend\_3.GRY

ORIGINAL TO: MAY 13, 1991  
ADDENDUM 1: JULY 26, 1991  
②: MAR 5, 1995  
③: JUN 14, 1996

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

CLEANUP AND ABATEMENT ORDER NO. 91-45-4

[via JRO]

REDEVELOPMENT AGENCY OF THE CITY OF SAN DIEGO  
303 MARKET STREET

G.T.F. PROPERTIES DIS/PAKUL ECH

AND  
SHELL OIL COMPANY - RALPH'S DEC 1 1994

148 MARKET STREET

GOLDEN WEST HOTEL  
AND

UNOCAL CORPORATION  
235 MARKET STREET

VAPOR EXT. ECH

JUN 16 1994

GREYHOUND LINES, INCORPORATED  
AND

TRANSPORTATION LEASING COMPANY  
GREYHOUND MAINTENANCE CENTER  
539 FIRST AVENUE

B. J. J. T.

RAV ECH

JUN 3 1994

FOR  
PETROLEUM HYDROCARBON CONTAMINATION OF GROUND WATER  
IN THE DOWNTOWN SAN DIEGO AREA  
SAN DIEGO COUNTY

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

1. In 1987, during routine exploratory boring, a subsurface hydrocarbon plume was discovered near the intersection of Market Street and First Avenue in downtown San Diego. 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. The plume has an areal extent which covers all or portions of six city blocks.
2. On May 19, 1989, the Regional Board Executive Officer issued cleanup and abatement orders to the following responsible parties:
  - a. No. 89-48 to G.T.F. Properties and Shell Oil Company, 148 Market Street;
  - b. No. 89-49 to Greyhound Lines Inc., 539 First Avenue;



- c. No. 89-50 to the Redevelopment Agency for the City of San Diego, 303 Market Street;
- d. No. 89-51 to Golden West Hotel and UNOCAL Corporation, 235 Market Street.

These orders, which remain in effect, were issued pursuant to Section 13304(a) of the California Water Code for discharges of petroleum hydrocarbon to the vadose zone and underlying ground water.

These sites are within the San Diego Mesa Hydrographic Subunit (8.2) of the Coronado Hydrographic Unit (8.0).

- 3. The cleanup and abatement orders referenced above established the following directives:

- a. The discharger(s) 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 subject site.
- b. The discharger(s) shall submit a remedial action strategy proposal, no later than October 16, 1989, which addresses the removal and/or treatment of the soil contamination.
- c. The discharger(s) 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. These sites are within 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. Centre City Development Corporation (CCDC) is a nonprofit corporation established by the City of San Diego to administer downtown redevelopment projects, including the Marina Redevelopment Project.

- 5. By letter dated August 20, 1990, CCDC on behalf of the named responsible parties, submitted a remedial action plan (RAP), prepared by their consultant Geomatrix Consultants, to address the floating (free phase) petroleum hydrocarbon and ground water in the Marina Redevelopment Project area. The RAP indicates the following:

- a. The free product is generally stable and does not appear to be significantly migrating. The dissolved phase plume also has not shown significant migration.
  - b. Based on field measurements and ground-water modelling, the free product and dissolved phase plumes do not presently pose a threat to San Diego Bay. Continued ground-water monitoring will help verify the stability of the plumes.
  - c. Geomatrix concludes that by reducing the total mass of hydrocarbons in the subsurface, the potential future migration of hydrocarbons will be greatly reduced.
  - d. The parties propose to institute a petroleum hydrocarbon (product)-only extraction system which consists of a fixed petroleum hydrocarbon extraction system and a manual, periodic well skimming program. The fixed extraction system will be installed in the wells which have the greatest measured thickness of free product and will continually and automatically extract free product. The periodic well skimming program will include periodic removal of free product in those wells with a free product thickness >0.5 inch. They also plan to conduct a ground-water monitoring program.
6. Prior to initiating petroleum hydrocarbon recovery, monitoring wells which exhibit >0.5 inch of free phase hydrocarbon will be manually skimmed. Product recovery data will be used to evaluate which wells are best suited for inclusion in the fixed hydrocarbon extraction system.
  7. This Order has been issued in response to State Board Order No. WQ 90-2, "IN THE MATTER OF THE PETITION OF UNION OIL COMPANY OF CALIFORNIA FOR REVIEW OF CLEANUP AND ABATEMENT ORDER NO. 89-51 OF THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN DIEGO REGION", which recommended issuance of a consolidated order. This Order only addresses ground-water contamination and cleanup. These responsible parties are responsible for remediation of soils on each individual site under Cleanup and Abatement Order Nos. 89-48, 89-49, 89-50, and 89-51 and addenda.
  8. 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; December 16, 1985; March 24,

1986; November 16 and December 21, 1987; April 25, 1988; April 10, 1989 and March 12, 1990. The updates were subsequently approved by the State Board.

9. The Basin Plan established no beneficial uses for surface or ground waters in the San Diego Mesa Hydrographic Subunit.
10. The quality of the ground water of the San Diego Mesa Hydrographic Subunit 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 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.

11. 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.

12. These discharges have polluted and threaten to further pollute ground water of the basin.
13. 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 state definition, qualifies as a potential underground source of drinking water. 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.

14. The ground water beneath the area is in continuity with waters of the bay. However, ground-water monitoring data indicates that the free product and dissolved phase plumes have not migrated to the bay.
15. 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, the Redevelopment Agency of the City of San Diego; G.T.F. Properties, Shell Oil Company; Golden West Hotel, Union Oil Company; Greyhound Lines, Inc., and Transportation Leasing Company (hereinafter the dischargers) shall comply with the following directives:

1. The dischargers shall implement the Remedial Action Plan, dated August 17, 1990, prepared by Geomatrix Consultants, and institute free product removal no later than July 1, 1991. The implementation of the RAP shall include the following:
  - a. On a monthly basis, the dischargers shall measure the free product and water levels in all monitoring wells.
  - b. On a ~~quarterly~~<sup>reduced?</sup> basis, for the first year of implementation, the dischargers shall sample the following ground-water monitoring wells and analyze them using EPA Methods 8015 (modified for gasoline and diesel), 8020 (aromatic hydrocarbons), and 7040 (organic lead):  
  
GE-2, GE-3, GH-7, CC-10, CC-18, CC-19, NESD-3, and any additional well(s) specifically approved by the Regional Board Executive Officer.  
  
Following the first year, the above wells shall be sampled and analyzed semi-annually.
  - c. On an ~~annual basis~~, following the first year, the dischargers shall sample all wells listed under Directive 1.b., above, and the following ground-water monitoring wells for the same constituents as listed under Directive 1.b.:  
  
OMW-8, BW-13, CC-4, CC-15, CC-15, and any additional well(s) specifically approved by the Regional Board Executive Officer.

2. The dischargers shall continue free phase petroleum hydrocarbon removal until such time that they can demonstrate to the Regional Board Executive Officer's satisfaction that the technically recoverable free phase petroleum hydrocarbon on the ground water has been adequately removed in accordance with the directives of this cleanup and abatement order.
3. On those wells not included in the fixed extraction system that exhibit >0.5 inches of free hydrocarbon, the dischargers shall manually skim those wells on a monthly basis until January 1, 1992. At that time staff will reevaluate the efficiency of whole extraction system and determine if the monthly well skimming should continue.
4. The dischargers shall submit monitoring reports to this office, in accordance with the schedules in Directive No. 1 above, which describe the progress made in the cleanup of the free phase hydrocarbon and shall demonstrate that the dissolved petroleum hydrocarbons have not migrated and remain immobilized. The reports shall include, but not be limited to, the following information:
  - a. The amount of petroleum hydrocarbon recovered for the month, cumulative totals, and operational details pertinent to the extraction system.
  - b. Monthly water levels and product thickness in all wells (to the nearest 0.01 foot). These data shall be included in the quarterly, semi-annual, and annual reports.
  - c. A site map depicting hydrologic contours showing ground-water flow patterns.
  - d. A site map depicting the boundary of the free product and dissolved phase plumes.
  - e. Any and all additional monitoring data results not specifically directed by this Order.

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

<u>Sampling Period</u>	<u>Report Due Date</u>
January - March	April 30
April - June	July 30
July - September	October 30
October - December	January 30

Semi-annual monitoring reports shall be submitted to this office in accordance with the following schedule:

<u>Sampling Period</u>	<u>Report Due Date</u>
January - June	July 30
July - December	January 30

Annual monitoring reports shall be submitted to this office by January 30 of each year.

5. If, through ground-water monitoring, the dissolved phase hydrocarbon is shown to be significantly migrating, then ground-water remediation may become necessary.
6. The dischargers shall dispose of all ground water polluted with petroleum hydrocarbons in accordance with all applicable local, state, or federal laws and regulations.
7. After the dischargers demonstrate to the Regional Board Executive Officer's satisfaction that the technically recoverable free product has been removed, the dischargers shall continue to monitor the ground water and submit ~~semi-annual~~ monitoring reports in accordance with Directive No. 2 of this Order for a period of five years. If at any time during this post-cleanup monitoring the data indicate that the free product has not been mitigated, the discharger shall immediately resume appropriate remedial cleanup actions.
8. Upon adoption of this order, the ground-water remediation directives herein shall supersede the ground-water directives in Cleanup and Abatement Order Nos. 89-48, 89-49, 89-50, and 89-51 and addenda. Other than the ground-water remediation directives, these previously issued orders remain in effect until rescinded by the Regional Board.
9. Any necessary soil remediation shall be in accordance with the directives in each responsible parties respective Cleanup and Abatement Order.

Ordered by: 

ARTHUR L. COE  
Executive Officer

Date: MAY 13, 1991

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

1711 Clairemont Mesa Blvd., Ste. B  
San Diego, California 92124-1331  
Telephone (619) 265-5114

*Copied Wilmoth*  
*7-29-91*  
*TLC-S.DIEGO*  
*(Carry)*



CERTIFIED MAIL - RETURN RECEIPT REQUESTED

K.M. RIES

JUL 29 1991

July 26, 1991

To: DISTRIBUTION LIST (ATTACHED)

RE: ISSUANCE OF ADDENDUM NO. 1 TO CLEANUP AND ABATEMENT (C&A)  
ORDER NO. 91-45 FOR THE MARINA REDEVELOPMENT PROJECT, SAN  
DIEGO

Enclosed is a copy of Addendum No. 1 to C&A Order No. 91-45. This Addendum is being issued jointly to the Redevelopment Agency of the City of San Diego (RACSD); Shell Oil Company and G.T.F. Properties; UNOCAL Corporation and Golden West Hotel; Greyhound Lines, Inc. and Transportation Leasing Company under the authority of California Water Code section 13304 in response to the presence of petroleum hydrocarbon contamination in the soil and ground water beneath the Marina Redevelopment Project area, San Diego.

A meeting was held on June 13, 1991 at the Regional Board office with Messrs. David Allsbrook, Stephen Erb, Steve Landuyt, (representing the responsible parties) and Regional Board staff. As a result of that meeting, Regional Board staff and the responsible parties mutually agreed to certain changes in the designated wells to be monitored and the monitoring frequency. By letter dated June 25, 1991, CCDC requested some minor changes to the language of Finding Nos. 4 and 5 in order to clarify CCDC's position with respect to the responsible parties and the consultant retained by the responsible parties.

For easy review, the following changes have been incorporated into Addendum No. 1 (additions=bold and underlined; deletion=strikeout):

4. These sites are within the Marina Redevelopment Project area which is located 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.~~ Centre City Development Corporation (CCDC) is a nonprofit corporation established by the City of San Diego to administer the downtown redevelopment projects program, which includes the Marina Redevelopment Project. CCDC has been selected by the responsible parties to coordinate the cleanup efforts under this order between the responsible parties and the Regional Board.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

DISTRIBUTION LIST  
FOR LETTER DATED JULY 26, 1991

RE: ISSUANCE OF ADDENDUM NO. 1 TO  
CLEANUP AND ABATEMENT ORDER NO. 91-45 FOR  
THE MARINA REDEVELOPMENT PROJECT

CENTRE CITY DEVELOPMENT CORPORATION PROPERTY (303 Market Street)  
Parcel No. 535-000-00-00; Block 94, Lots A & B

Mr. Jack McGrory, Executive Director  
Redevelopment Agency of the City of San Diego  
City Manager's Office  
202 "C" Street  
San Diego, California 92101  
P 669 828 971

FROST PROPERTY (148 Market Street)  
Parcel No. 535-065-06-00; Block 91, Lots G & H

Mr. Gordon T. Frost, Jr.  
G.T.F. Properties  
P.O. Box 15  
San Diego, California 92112-0015  
P 669 828 972

Mr. Frank Fossati  
Shell Oil Company  
P.O. Box 4848  
Anaheim, California 92803  
P 669 828 973

Mr. Stephen Landuyt (Attorney for Shell)  
Harrigan, Ruff, Ryder & Sbardellati  
1855 First Avenue, Suite 200  
San Diego, California 92101-2614  
P 669 828 974

GOLDEN WEST HOTEL PROPERTY (235 Market Street)  
Parcel No. 535-073-11-00; Block 93, Lots A, B, K, & L

Mr. Stephen T. Erb  
Attorney at Law  
350 West B Street, Suite 230  
San Diego, California 92101  
P 669 828 975

Mr. John E. Trytek, Attorney  
Unocal Refining & Marketing Division  
Unocal Corporation  
P.O. Box 7600  
Los Angeles, CA. 90051  
P 669 828 976



July 26, 1991

- e- f. Any and all additional monitoring data results generated which are not specifically directed by this Order.

~~Quarterly monitoring reports shall be submitted to this office in accordance with the following schedule:~~

<u>Sampling Period</u>	<u>Report Due Date</u>
<del>January - March</del>	<del>April 30</del>
<del>April - June</del>	<del>July 30</del>
<del>July - September</del>	<del>October 30</del>
<del>October - December</del>	<del>January 30</del>

You are hereby notified that you have the right to a public hearing before the Regional Board concerning Addendum No. 1 to C&A Order No. 91-45. If you desire to have a public hearing at the Regional Board's next meeting on September 23, 1991, you must notify this office of your request in writing by August 26, 1991. If no written request is received, then a public hearing will not be scheduled. The meeting is scheduled for 9:00 a.m. at the Neighborhood Center, 200 East Main, El Cajon.

I strongly urge a prompt and complete response to each directive of Cleanup and Abatement Order No. 91-45 and Addendum No. 1. My staff will be happy to work with you toward achieving compliance with the Cleanup and Abatement Order.

If you have any questions, please contact Mr. John Anderson at (619) 265-5114.

  
ARTHUR L. COE  
Executive Officer

JPA:c&atrans.ltr

Enclosure

cc: Ms. Sheila Vassey, Senior Staff Counsel, Office of Chief Counsel, State Water Resources Control Board, Sacramento.

Mr. Kevin Heaton, Hazardous Materials Management Division, County of San Diego Department of Health Services, San Diego.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

ADDENDUM NO. 1  
TO

CLEANUP AND ABATEMENT ORDER NO. 91-45

AN ADDENDUM MODIFYING GROUND-WATER MONITORING  
REQUIREMENTS AND WELL DESIGNATION

FOR  
PETROLEUM HYDROCARBON CONTAMINATION OF GROUND WATER  
IN THE DOWNTOWN SAN DIEGO AREA  
SAN DIEGO COUNTY

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

1. On May 13, 1991, the Regional Board Executive Officer issued Cleanup and Abatement Order No. 91-45 to the Redevelopment Agency of the City of San Diego (RACSD); Shell Oil Company and G.T.F. Properties; UNOCAL Corporation and Golden West Hotel; Greyhound Lines, Inc. and Transportation Leasing Company for violation of Section 13304(a) of the California Water Code for discharges of petroleum hydrocarbons to the vadose zone and underlying ground water.
2. By letter dated June 17, 1991, Mr. Anthony D. Daus, Vice President of Geomatrix Consultants, Inc. (consultant for the responsible parties) submitted a request to modify the frequency of ground-water monitoring and to change the target wells to be sampled.
3. By letter dated June 25, CCDC submitted a request for a change in the language of Finding Nos. 4 and 5 to clarify CCDC's position with respect to the responsible parties and the consultant retained by the responsible parties.
4. By letter dated July 2, 1991, Mr. Anthony D. Daus, Vice President of Geomatrix Consultants, Inc. (consultant for the responsible parties) submitted a request to replace site maps depicting the boundary of the free product and dissolved fuel hydrocarbons with graphs depicting hydrocarbon thickness' versus time and dissolved product concentrations versus time (respectively) for selected monitoring wells.
5. After due consideration, Regional Board staff concurs with the proposed changes and modifications to Cleanup and Abatement Order No. 91-45.

July 26, 1991

They also plan to conduct a ground-water monitoring program."

2. Directives 1.b. and 1.c. shall read as follows:

"1.b. On a semi-annual basis, for the first year of implementation, the dischargers shall sample the following ground-water monitoring wells and analyze them using EPA Methods 8015 (modified for gasoline and diesel), and 8020 (aromatic hydrocarbons):

GE-2, GE-3, RMP-2, CC-9, CC-18, CC-19, and any additional well(s) specifically approved by the Regional Board Executive Officer. Total lead (EPA Method 7421) analyses shall only be conducted during the first round sampling event."

"1.c. On an annual basis, following the first year, the dischargers shall sample all wells listed under Directive 1.b., above, and the following ground-water monitoring wells and analyze the samples using EPA Methods 8015 (modified for gasoline and diesel), and 8020 (aromatic hydrocarbons):

BW-13, CC-4, OMW-4, and any additional well(s) specifically approved by the Regional Board Executive Officer."

3. Directive 4.d. shall read as follows:

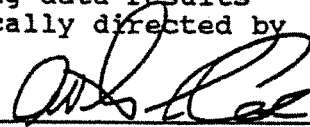
"4.d. A graph depicting dissolved product concentrations versus time for each monitoring well listed in 1.b. and 1.c."

4. Directive No. 4.e. is added and reads as follows:

"4.e. A graph depicting hydrocarbon thickness versus time for monitoring wells: OMW-1, OMW-15, CC-17, IT-W, GH-7, and BW-19."

5. Directive 4.e. is replaced by 4.f. and reads as follows:

"4.f. Any and all additional monitoring data results generated which are not specifically directed by this Order."

Ordered by: 

ARTHUR L. COE  
Executive Officer

Date: July 26, 1991

LLLLL  
LLLLL  
LLLLL  
LLLLL  
LLLLL  
LLLLL

Centre City  
Development  
Corporation

FAX 619/458-0943

DATE: AUGUST 28, 1995

TO: MARK SHERWIN - OGDEN ENVIRONMENTAL

FROM: DAVID ALLSBROOK

SUBJECT: REVISED CAO

NO. OF PAGES (INCLUDING COVER) 7

Centre City  
Development  
Corporation

August 18, 1995

Stephen T. Erb, Esq.  
501 West Broadway  
Suite 1730  
San Diego, CA 92101

SUBJECT: REVISED CAO

Dear Steve:

Enclosed is Draft Addendum No. 2 to CAO #91-45. Tony's cover letter to me explains the background and speaks for itself. Since this issue has dragged on so long, I would appreciate any comments you may have on this draft be communicated to Tony by Friday, September 1, 1995. By copy of this letter to Tony, I am instructing him to finalize and submit the Draft CAO if he has not received your comments. Of course, if there are any significant suggested changes, those changes will be shared with all parties before submission.

Sincerely,



DAVID ALLSBROOK  
Manager, Contracting and Acquisitions

cc: Tony Daus

/mc

20201 S.W. Birch Street, Suite 150  
Newport Beach, California 92660  
(714) 474-8181 • FAX (714) 474-8084



August 15, 1995  
S1710.04

Mr. David Allsbrook  
Centre City Development Corporation  
225 Broadway  
Suite 1100  
San Diego, CA 92101-5704

**SUBJECT: REVISED CAO**

Dear Dave:

Enclosed is the revised language for the CAO. The revisions are redlined for ease on review. Pursuant to your request, we called and discussed the revised language with John Odermatt at the California Regional Water Quality Control Board, San Diego Region (the Board). John had the following comments:

- He agreed with the reduced monitoring frequency.
- Monitoring of groundwater levels and product thickness should continue to be a joint effort and a single report should be submitted.
- Individual remedial actions can be implemented by PRPs and individual progress reports should be submitted to the Board.

John indicated that the dissolved phase groundwater contamination was still a group issue. He is concerned that dewatering at the convention center during its expansion will cause the dissolved phase to migrate. Therefore, he wants the group to continue monitoring groundwater.

We have modified the attached draft CAO to reflect our conversation with John. We recommend after review and approval by the PRP Group that the CAO be transmitted to John Odermatt. John indicated he would make the necessary arrangements to present the amendment to the Board. Please call me if you have any questions concerning the draft order.

Best regards,  
**GEOMATRIX CONSULTANTS, INC.**

*Anthony D. Daus*  
Anthony D. Daus  
Vice President and  
Principal Hydrogeologist

CENTRE CITY  
DEVELOPMENT  
CORPORATION

AUG 17 1995

Orig. To: *DAUS*  
Copy To: \_\_\_\_\_

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**Geomatrix Consultants, Inc.**  
Engineers, Geologists, and Environmental Scientists

**DRAFT**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**ADDENDUM NO. 2**

**TO**

**CLEANUP AND ABATEMENT ORDER NO. 91-45**

**FOR**

**PETROLEUM HYDROCARBON CONTAMINATION OF GROUND WATER  
IN THE DOWNTOWN SAN DIEGO AREA  
SAN DIEGO COUNTY**

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

1. On May 13, 1991 the Regional Board Executive Officer issued Cleanup and Abatement Order No. 91-45 to the Redevelopment Agency of the City of San Diego (RACSD); Shell Oil Company and G.T.F. Properties; UNOCAL Corporation and Golden West Hotel; Greyhound Lines, Inc. and Transportation Leasing Company (hereinafter dischargers) for discharges of petroleum hydrocarbons to the vadose zone and underlying ground water.
2. On July 26, 1991 the Regional Board Executive Officer issued Addendum No. 1 to Cleanup and Abatement Order No. 91-45.
3. By letter dated August 20, 1990, a Remedial Action Plan (RAP) was submitted by the Centre City Redevelopment Corporation, on behalf of all the responsible parties named in the cleanup and abatement order to address the floating free product on the ground water in the Marina redevelopment area. The RAP proposed that product skimming be utilized to reduce the total mass of hydrocarbons in the subsurface. A reduction in the mass of hydrocarbons through skimming was thought to reduce the likelihood that the floating hydrocarbons would migrate.
4. The plan was implemented by the responsible parties pursuant to Directive 1 of Cleanup and Abatement Order 91-45 and Addendum No.1. Product extraction by manual skimming was initiated in June, 1991. A pilot fixed (automated) skimming program was also initiated at the end of September, 1991 at three locations. By letter dated May 26, 1992 the consultants for the dischargers, Geomatrix, reported that as of April 1992, only 365 gallons of free product had been removed from the ground water by skimming. This removal rate was considered too low for timely removal of hydrocarbons from the subsurface given the published estimates of hydrocarbons in the subsurface.
5. In early 1992 the dischargers elected to undertake a bioventing/soil vapor extraction pilot study to evaluate the efficacy of this technology for removing hydrocarbons in the

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Addendum No. 2 to  
Cleanup and Abatement  
Order No. 91-45  
Page 2

subsurface area. Geomatrix reports that the methodology tested involves removal of volatile fuel hydrocarbons by drawing hydrocarbon vapors from the subsurface and consuming them in an internal combustion engine, thermal oxidizer, and catalytic converter. The system tested consists of vapor extraction of the gasoline fraction and continued skimming of the diesel fraction. The system also enhances the ability of microorganisms to biodegrade gasoline and diesel fuel. Soil vapor extraction circulates air through the subsurface, replenishing the oxygen supply and sustaining the biodegradation rate. Reduction of the hydrocarbon mass by biodegradation will be greater in the soil zone than in the floating product zone because more surface area and oxygen are available to support biologic activity in the soil zone.

6. Two day vacuum extraction tests were conducted by Geomatrix at two locations; one where the product was primarily gasoline (the Shell site) and the other location where the product is primarily diesel fuel (the Greyhound site). The test results contained in a Geomatrix report dated June 5, 1992 demonstrated that bioventing/vacuum extraction would remove significantly more fuel hydrocarbons than could be accomplished through free product skimming. Approximately 135 to 145 equivalent gallons of fuel product were removed at the Shell site and approximately 65 to 75 equivalent gallons of fuel product were removed from the Greyhound site during the two day pilot study.
7. By letter to the Regional Board dated December 23, 1992 Anthony D. Daus, Vice President and Principal Hydrogeologist, Geomatrix Consultants, Inc., summarized the results of free product skimming, ground water monitoring and Dr. David Huntley's evaluation of the distribution and mobility of hydrocarbons in the subsurface at the Greyhound site. Most of the fuel hydrocarbons were found to be held in the soil column above the water table and are thus relatively immobile with respect to migration within the capillary fringe of the water table. Product skimming was found to not remove significant volumes of fuel hydrocarbons. Bioventing/vapor extraction was found to remove significantly more mass of fuel hydrocarbons through volatilization of a portion of the gasoline and bioremediation of the diesel and gasoline than product skimming.
8. The December 23, 1993 Geomatrix letter also requested that the Cleanup and Abatement Order be modified to:
  - a) not require continued skimming of the monitoring wells containing floating hydrocarbons;
  - b) change the Remedial Action Program from an area wide free product extraction program to a site specific cleanup objective and methodology; and



**DRAFT**



Addendum No. 2 to  
Cleanup and Abatement  
Order No. 91-45  
Page 3

- c) modify the frequency of area wide ground water level and product thickness monitoring program measurements described in Directive 1.a from every month to every other month
- 9. Recent data presented by Geomatrix indicate that a quarterly groundwater and product thickness monitoring program is sufficient.
- 10. The Regional Board understands that the dischargers named in the cleanup and abatement order plan to implement individual remediation programs some of which may be similar to the bioventing/vapor extraction methodology described in Finding 5 of this Addendum.
- 11. 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 the dischargers shall comply with the following directive:

- 1. The dischargers shall submit Site Specific Remedial Action Plans ~~in 1995~~ describing the proposed actions for implementation of their respective remediation programs, and proposed schedules for their individual completions. The dischargers shall modify the Remedial Action Plans as directed by the Regional Board Executive Officer. In the interest of minimizing environmental contamination and promoting prompt cleanup, the dischargers may begin implementation of the actions proposed within the individual Remedial Action Plans after the Remedial Action Plans have been submitted and before they have received Regional Board Executive Officer concurrence. Implementation of the individual Remedial Action Plans shall begin after sixty (60) calendar days after written concurrence by the Regional Board Executive Officer, unless the dischargers are directed otherwise by the Regional Board Executive Officer. Before beginning the activities described in the Remedial Action Plans the Dischargers shall:
  - a) Notify the Regional Board Executive Officer in writing by registered mail of the intent to initiate the proposed actions included in the Remedial Action Plan submitted; and
  - b) Comply with any conditions set by the Regional Board Executive Officer including mitigation of adverse consequences from cleanup activities.

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Addendum No. 2 to  
Cleanup and Abatement  
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Page 4

2. The dischargers shall, unless otherwise agreed upon by the Regional Board Staff.
  - a) On a quarterly basis measure the free product and water levels in all monitoring wells. ~~A single groundwater monitoring report will be prepared and submitted to the Board semi-annually.~~
  - b) Continue the sampling required under Directives 1.b and 1.c of Cleanup and Abatement Order 91-45 as modified by Addendum No. 1.
  - c) Continue implementation of the remedial actions required in the August 20, 1990 Remedial Action Plan until the such time as the revised Remedial Action Plan described in Directive 1 of this Addendum is implemented.

**PROVISIONS**

1. Directive No. 1.a of Cleanup and Abatement Order 91-45 is rescinded.

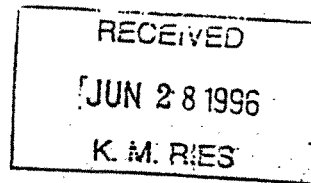
Ordered by: \_\_\_\_\_

Arthur L. Coe  
Executive Officer

Issuance Date:

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

771 CLAIREMONT MESA BOULEVARD, SUITE A  
SAN DIEGO, CA 92124-1331  
TELEPHONE: (619) 467-2952  
FAX: (619) 571-6972



June 25, 1996

To: Interested Parties (see Attached Mailing List)

RE: Addendum No. 3 to Cleanup and Abatement (C&amp;A) Order No. 91-45.

Enclosed with this letter is Addendum No. 3 to Cleanup and Abatement Order No. 91-45. The C&A Order is issued under the authority of the California Water Code Section 13304 in response to the presence of petroleum hydrocarbon contamination in the ground water beneath the following sites:

1. 148 Market Street (G.T.F. Properties and Shell Oil Company),
2. 539 First Street, San Diego (Greyhound Lines Inc. and Transportation Leasing Company),
3. 303 Market Street, San Diego (Redevelopment Agency of the City of San Diego), and
4. 235 Market Street (Golden West Hotel and Unocal Corporation).

This addendum directs the following changes in the existing C&amp;A Order:

1. Directs the dischargers to provide Corrective Action Plans (CAPs) as required by 23 CCR, Chapter 16, Article 11 for the sites listed above.
2. Modifies the frequency of manual recovery of free petroleum product from wells from a monthly to quarterly schedule.
3. Modifies the post-remedial monitoring period from 5 years to a monitoring frequency and duration approved by the Executive Officer.

This addendum was affirmed by the Regional Water Quality Control Board on June 13, 1996. The addendum is in effect as of June 14, 1996 and shall be enforced accordingly. If you have any questions or comments, please call John Odermatt of my staff at (619) 637-5595.

Sincerely,

JOHN P. ANDERSON, Senior Engineering Geologist  
Site Mitigation and Cleanup Unit

Addendum No. 3, Cleanup and  
Abatement Order No. 91-45

2

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Enclosures: "Addendum No. 3 to Cleanup and Abatement Order No. 91-45, An Addendum  
Modifying Free Product Recovery and Post-Remediation Ground Water Monitoring  
Requirements for Petroleum Hydrocarbon Contamination of Ground Water in the  
Downtown San Diego Area, San Diego County"

cc: with Enclosures

Mailing List for Addendum No. 3: Cleanup and Abatement Order 91-45

1. Centre City Development Corporation, 225 Broadway, Suite 1100, San Diego,  
CA 92101-5074  
Attn: Mr. David Allsbrook (P-143-887-428)
2. Shell Oil Company, P.O. Box 4848, Anaheim, CA 90802  
Attn: Mr. Frank Fossati (P-143-887-427)  
Ms. Karen Haynes (P-143-887-425)
3. Unocal Corporation, P.O. Box 76, Brea, CA 92621  
Attn: Mr. Richard Williams (P-143-887-426)
4. Transportation Leasing Company, 1850 North Central Avenue, Phoenix,  
AZ 85077  
Attn: Mr. Ken Ries (P-143-887-424)
5. Stephen Thomas Erb, A.P.C. (P-143-887-423)  
11440 West Bernardo Court, Suite 204  
San Diego, CA 92127-1643
6. Kent H. Foster, Esq. (P-143-887-422)  
Glenn, Wright, Jacobs and Shell  
101 West Broadway, Suite 1300  
San Diego, CA 92101
7. John M. Sorich, Esq. (P-143-887-421)  
Alavardo, Smith, Zamora & Wolff  
4695 MacArthur Court, Suite 800  
Newport Beach, CA 92660
8. Carl V. Down, Esq. (P-143-887-420)  
Chevron USA Products Company  
Law Department  
6001 Bollinger Canyon Road  
San Ramon, CA 94583-0944

CAO 91-45 Mailing List (*continued*)

9. Stephen T. Landuyt, Esq. (*P-143-887-419*)  
Harrigan, Ruff, et. al.  
101 Broadway, Suite 1600  
San Diego, CA 92101
10. Barak S. Platt, Esq. (*P-143-887-418*)  
Skadden, Arps, Slate, Meagher and Flom  
300 S. Grand Avenue  
Los Angeles, CA 90071-3144
11. Robert Wilmoth, Esq. (Retired) (*P-143-887-417*)  
Associate General Counsel  
The Dial Corporation  
1850 North Central Avenue, 22 Floor  
Phoenix, AZ 85077
12. Linda Hoover, Esq. (*P-143-887-429*)  
McKenna and Cuneo, L.L.P.  
750 B Street, Suite 3200  
San Diego, CA 92101

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

ADDENDUM NO. 3 TO

CLEANUP AND ABATEMENT ORDER NO. 91-45

AN ADDENDUM MODIFYING THE FREE PRODUCT RECOVERY AND  
POST-REMEDIATION GROUND WATER MONITORING REQUIREMENTS  
FOR  
PETROLEUM HYDROCARBON CONTAMINATION OF GROUND WATER  
IN THE DOWNTOWN SAN DIEGO AREA  
SAN DIEGO COUNTY

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

1. On May 13, 1991 the RWQCB Executive Officer issued Cleanup and Abatement Order (CAO) No. 91-45 to the Redevelopment Agency of the City of San Diego (RACSD), Shell Oil Company and GTF Properties; Unocal Corporation and Golden West Hotel; Greyhound Lines, Inc. and Transportation Leasing Company (hereinafter the dischargers). CAO No. 91-45 consolidated some remedial activities and ground water monitoring previously required under CAOs 89-48 (*GTF Properties and Shell Oil Company*), 89-49 (*Greyhound Lines Inc.*), 89-50 (*Redevelopment Agency for the City of San Diego*), and 89-51 (*Golden West Hotel and Unocal Corporation*).
2. In a letter dated December 23, 1993, the consultant (Anthony D. Daus of Geomatrix Consultants, Inc.) summarized the results of free product skimming, ground water monitoring and Dr. David Huntley's evaluation of the distribution and mobility of hydrocarbons located beneath the Greyhound site. In the opinion of the consultant, most of the fuel hydrocarbons are immobilized in the soil column above the water table. The results of this evaluation formed the basis for their conclusion that product skimming does not remove significant volumes of fuel hydrocarbons. The consultant proposed that implementation of bioventing/soil vapor extraction would remove significantly more mass from the site than product skimming alone.
3. The December 23, 1993 letter from Geomatrix also requested that the Cleanup and Abatement Order be modified to:
  - a) not require continued skimming of the monitoring wells containing free petroleum product;

- b) change the Remedial Action Program from an area wide free product extraction program to a site specific cleanup objective and methodology; and
  - c) modify the frequency of area wide ground water level and product thickness monitoring program measurements described in Directive 1(a) from every month to every other month.
- 4. Under the requirements of the California Code of Regulations, Title 23, Chapter 16, Articles 5 (Section 2655) and 11 (Section 2722), free product removal is required as part of the corrective action process at leaking underground storage tank sites. Free product shall be removed in a manner that minimizes the spread of contamination into previously uncontaminated zones by using recovery and disposal techniques appropriate for the hydrogeological conditions at the site. Further, the removal of free product shall be to the maximum extent practicable as determined by the local agency (ARTICLE 11, Section 2655).
- 5. The RWQCB understands that the dischargers wish to implement individual remediation programs at the four sites identified in CAO 91-45. This request is consistent with the corrective action requirements of 23 CCR, Article 11.
- 6. The RWQCB has received and approved work plans for the implementation of remedial work at the Greyhound/Transportation Leasing Company site (at 539 First Street) and the GTF/Shell Site at (148 Market Street), the Golden West/Unocal site (235 Market Street), and the RACSD site (at 303 Market Street).
- 7. The ground water monitoring data reported to the RWQCB Executive Officer from 1987 to 1995 indicate that free petroleum product continues to be present in a number of wells associated with the sites included in CAO 91-45. Historical ground water monitoring data indicate that the plume conditions identified in Findings 4 and 5 (as modified by Addendum No. 1 of CAO 91-45) are still true.
- 8. The free product recovery data, for the time period June 1991 to December 1995, provided by the dischargers indicate that a total of 768.3 gallons of free petroleum product was recovered from ground water monitoring wells associated with these sites. Approximately 365 gallons of this total was collected using manual skimming techniques. This is an average recovery rate of approximately 8 gallons per month.

9. The *Water Quality Control Plan for the San Diego Region (9)* (Basin Plan) was adopted by the RWQCB on September 8, 1994; approved by the State Water Resources Control Board (SWRCB) on December 13, 1994, and approved by the Office of Administrative Law on April 26, 1995.
10. The RWQCB must include requirements of State Water Resources Control Board (SWRCB) Resolution Nos. 68-16 (*Statement with Respect to Maintaining High Quality Waters in California*) and 92-49 (*Policies and Procedures for Investigation and Cleanup and Abatement of Dischargers Under Water Code Section 13304*) in the enforcement of the California Water Code. Under these SWRCB requirements, the RWQCB is required to ensure that dischargers are required to clean up and abate the effects of discharges in a manner that promotes the attainment of background water quality, or the highest water quality which is reasonable if background levels can not be restored, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible; any alternative levels less stringent than background shall:
  - a) be consistent with the maximum benefit to the people of the state;
  - b) not unreasonably affect the present and anticipated beneficial use of such water; and
  - c) not result in water quality less than that prescribed in the Water Quality Control Plans and Policies adopted by the State and Regional Water Boards.
11. State Water Resources Control Board (SWRCB) Resolution No. 92-49 (Section III(G)) requires the RWQCB to consider the conditions set forth in CHAPTER 15 (23 CCR, Division 3, CHAPTER 15, Article 5, Section 2550.4) in approving any alternative cleanup levels less stringent than background concentrations of contaminants.
12. SWRCB regulations governing the site investigation and corrective action at underground storage tank unauthorized release sites are contained in CCR, Title 23, Division 3, Chapter 16. In particular, ARTICLE 11, commencing with Section 2720 is applicable to this cleanup and abatement order.
13. 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, the dischargers shall comply with the following Directives:

INTERIM REMEDIAL ACTION

1. The dischargers shall continue to implement interim remedial measures as necessary to:
  - a.) remove free petroleum product from the water table at each of their respective sites as required by the California Code of Regulations (CCR), Title 23, Division 3, Chapter 16, Article 5 (Section 2655) and Article 11 (Section 2722(b)); and
  - b.) abate or correct the actual or potential effects of the unauthorized release.

CORRECTIVE ACTION PLAN

2. Pursuant to the requirements of the CCR Title 23, Division 3, Chapter 16, Article 11 (ARTICLE 11); the dischargers shall each submit a Corrective Action Plan (CAP) for their respective sites identified in CAO 91-45. The CAPs must contain all the elements specified in Article 11 (Section 2725) including:
  - a.) an assessment of impacts in accordance with ARTICLE 11, Section 2725(e),
  - b.) a feasibility study to evaluate site remediation and mitigation alternatives in accordance with ARTICLE 11, Section 2725(f),
  - c.) cleanup levels in accordance with the requirements of ARTICLE 11, Section 2725(g) and which comply with the requirements listed in ARTICLE 11, Section 2721(b), SWRCB Resolution No. 92-49, and Directive No. 7 of this Order,
  - d.) proposed method(s) and schedule for monitoring and reporting the progress of remediation at their respective sites. These results should be used by the discharger to evaluate the effectiveness of the approved corrective action alternative implemented by the discharger to remediate the soil and ground water contamination from the unauthorized release at their respective sites. The results and the technical evaluation must be reported to the RWQCB Executive Officer for review and comment.

The CAP for each individual site included in CAO 91-45 must be submitted to the RWQCB Executive Officer on or before September 30, 1996.

3. The feasibility study described in Directive 2b of this order shall contain an evaluation of alternatives for cleanup of soil and ground water. The evaluation shall be consistent with the requirements of CCR Title 23, Division 3, Chapter 16, ARTICLE 11, Section 2725(f) and include the following elements:
  - a.) An evaluation of the effectiveness, feasibility and cost of at least one alternative to mitigate nuisance conditions and risk of fire or explosion.
  - b.) An evaluation of methods to control the spread of the dissolved contaminant plumes off the individual properties.
  - c.) A comprehensive description of the cleanup and abatement activities associated with each recommended alternative.
  - d.) A proposed time schedule, including interim milestone dates, for completion of each recommended alternative.
  - e.) The dischargers shall remove and/or treat all fuel contaminated soils to a level which will not cause the generation of free petroleum product on the ground water at their respective sites.
  - f.) The dischargers shall propose ground water cleanup levels for any residual dissolved fuel constituents from their respective sites. The proposed cleanup levels must be consistent with the requirements of the RWQCB Basin Plan (1994), ARTICLE 11 (Section 2725(g)(2)), and be protective of human health and the environment. The dischargers shall present sound technical rationale to support the proposed ground water cleanup levels in the CAP.
4. The dischargers shall modify their respective CAPs as directed by the RWQCB Executive Officer. Implementation of the CAP may begin within 60 calendar days after submittal, unless the dischargers are otherwise directed in writing by the RWQCB Executive Officer. Before implementing the proposed corrective action alternative, the dischargers shall:
  - a.) notify the RWQCB Executive Officer of their intention to begin cleanup;  
and

- b.) comply with any conditions set by the RWQCB Executive Officer, including the mitigation of adverse consequences from cleanup activities.
- c.) The dischargers shall modify or suspend cleanup activities when directed to do so by the RWQCB Executive Officer.

#### VERIFICATION SAMPLING AND MONITORING

5. Upon completion of corrective action, the dischargers shall perform soil sampling and ground water monitoring which is necessary to verify: a) the effectiveness of the selected remedial alternative(s) identified in their respective Corrective Action Plans and/or b) other interim remedial action(s) implemented at their respective sites. The dischargers shall prepare a site-specific work plan for verification sampling and monitoring in compliance with Section 2727 of ARTICLE 11.

The work plan for verification sampling and monitoring of the completed corrective action plan (Directive Number 2) must be submitted to the RWQCB for review and approval within 60 days of full implementation of the CAP. The dischargers shall modify the proposed work plan as required by the RWQCB Executive Officer.

The results from the verification and monitoring work plan must be submitted to the RWQCB Executive Officer within 90 days of approval of the verification and monitoring work plan by the RWQCB. The dischargers may propose in writing an alternative deadline to the RWQCB Executive Officer for review and approval.

6. The dischargers shall manage all petroleum hydrocarbon contaminated ground water and/or soil, generated as a result of any corrective action work at their respective sites, in accordance with all applicable local, state and federal regulations and requirements.
7. Based upon review of each individual Corrective Action Plan (CAP), interim remedial action work plan and/or verification sampling and monitoring results, the RWQCB Executive Officer may amend this cleanup and abatement order to identify the target ground water and soil cleanup levels to be attained at the particular site or sites. If this Order is not amended by the RWQCB Executive Officer, then:
- a.) The mitigation of free petroleum product is the minimum water quality protection standard to be implemented for ground water at each site.

- b.) Residual fuel contaminant concentrations in soils at each site must be low enough so as not to yield free petroleum product to the ground water. The dischargers shall propose to the RWQCB Executive Officer a range of site-specific soil cleanup levels based upon a technical evaluation of residual saturation concentrations in fuel contaminated soils at each site. The proposed soil cleanup levels must also be protective of human health and the environment, and comply with the water quality protection requirements of CCR Title 23, Article 11; SWRCB Resolution No. 92-49; and the RWQCB Basin Plan (1994).

The dischargers shall implement their Corrective Action Plans in accordance with a time schedule proposed by the dischargers and approved by the RWQCB Executive Officer. The dischargers shall modify their proposed CAPs as required by the RWQCB Executive Officer.

#### GROUND WATER MONITORING

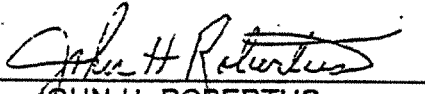
- 8. The dischargers shall continue to implement a coordinated ground water monitoring program for the Marina Sub Area of the Centre City Redevelopment Project. The dischargers shall, unless these requirements are modified by the RWQCB:
  - a.) Measure and remove free petroleum product from ground water monitoring wells on a quarterly schedule. This requirement modifies the previous schedule for free product removal and measurements of water levels required by Directive No. 1(a) in CAO No. 91-45 and Directive No. 2(a) of Addendum No. 2 of this Order.
  - b.) Continue monitoring and reporting of results from ground water wells as required by Directive Nos. 1(b) and 1(c) of CAO 91-45 as modified by Directives Nos. 2 through 5 of Addendum No. 1 to this Order.
  - c.) Continue implementation of the remedial actions required in the August 20, 1990 Remedial Action Plan until such time as Corrective Action Plans (CAP) are approved by the RWQCB Executive Officer as required in Directive 1 of this Addendum.
- 9. Directive No. 7 of Cleanup and Abatement Order No. 91-45 is amended to read: "After the dischargers demonstrate to the Regional Board Executive Officer's satisfaction that free product has been removed to the extent practicable, the dischargers shall continue to monitor the ground water and submit semi-annual ground water monitoring reports in accordance with the

requirements of Directives Nos. 1.b and 1.c of Cleanup and Abatement Order No. 91-45 as modified by Addendum No. 1. Modifications to the required ground water monitoring program may be proposed by the dischargers for review and approval by the RWQCB Executive Officer."

#### PROVISIONS

10. Directive No. 2(a) of Addendum No. 2 to Cleanup and Abatement Order No. 91-45 is hereby replaced by Directive No. 8(a) of this addendum.

Ordered by:

  
\_\_\_\_\_  
JOHN H. ROBERTUS  
Executive Officer

Date: June 14, 1996

As Amended by Errata on June 13, 1996

ADDENDUM NO. 3 TO  
CLEANUP AND ABATEMENT ORDER NO. 91-45  
PETROLEUM HYDROCARBON CONTAMINATION OF GROUND WATER  
IN THE DOWNTOWN SAN DIEGO AREA  
SAN DIEGO COUNTY

**TABLE 1: SCHEDULE OF COMPLIANCE FOR DIRECTIVES IN  
ADDENDUM NO. 3 TO RWQCB CLEANUP AND ABATEMENT ORDER No. 91-45**

C&A DIRECTIVE	SUBMITTAL	DUE DATE
2	Submit a Corrective Action Plan (CAP) to RWQCB.	September 30, 1996
5	Submit a work plan for verification sampling and monitoring to the RWQCB.	Within 60 days after full implementation of an approved CAP.
5	Submit the results from the verification and monitoring phase of corrective action.	Within 90 days after approval of a verification and monitoring sampling work plan.



# California Regional Water Quality Control Board

## San Diego Region

Ernest H. Hickox  
Secretary for  
Environmental  
Protection

Internet Address: <http://www.swrcb.ca.gov/rwqcb9/>  
9771 Clairemont Mesa Boulevard, Suite A, San Diego, California 92124-1324  
Phone (858) 467-2952 • FAX (858) 571-6972



April 23, 2003

Mr. Ken Reis  
Viad Corporation  
1850 North Central Avenue  
Phoenix, Arizona, 85077

In Reply Refer to:  
UST:50-1561.05:sjp

Dear Mr. Reis:

**RE: NO FURTHER ACTION**  
**Greyhound Maintenance Garage, 539 First Avenue, San Diego, California**

This letter confirms the completion of a site investigation and remedial action for the underground storage tank(s) formerly located at the above described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks are greatly appreciated.

Based on the information in the above referenced file and with the provisions that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in section 2721 (e) of Title 23 of the California Code of Regulations.

Please contact Ms. Sue Pease of my staff at 858-637-5596 if you have any questions regarding this matter.

Sincerely,

John H. Robertus  
Executive Officer

JHR:jac:sjp  
Attachment

C:\greyhound\closureltr.doc

cc(with attachment): Mr. Chuck Pryatel  
AMEC Earth & Environmental, Inc.,  
5510 Morehouse Drive  
San Diego, CA 92121

***California Environmental Protection Agency***

*Recycled Paper*

Mr. Reis

- 2 -

April 23, 2003

Mr. Richard Oppen  
Foley & Lardner  
402 W. Broadway, 23<sup>rd</sup> Floor  
San Diego, CA 92101-8105

***California Environmental Protection Agency***

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*Recycled Paper*



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

ORDER NO. R9-2003-0169

AN ORDER RESCINDING

CLEANUP AND ABATEMENT ORDER NO. 89-49 ISSUED TO GREYHOUND  
LINES, INCORPORATED, AND TRANSPORTATION LEASING COMPANY,  
GREYHOUND MAINTENANCE CENTER 539 FIRST AVENUE,  
SAN DIEGO, PARCEL NO. 535-072-03-00BLOCK 92,  
LOTS C THRU J, SAN DIEGO COUNTY

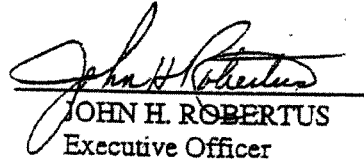
The California Regional Water Quality Control Board, San Diego (hereinafter Regional Board) finds that:

1. The Regional Board issued Cleanup and Abatement Order (CAO) No. 89-49 to Greyhound Lines, Inc. and Transportation Leasing Company (hereinafter Discharger) for the site located at 539 First Avenue, San Diego.
2. CAO No. 89-49 established requirements for cleanup of pollution caused by gasoline, diesel, motor oil and waste oil.
3. The ground-water remediation directives of CAO No. 89-49, consisting of Directives 2 through 7, were superseded by the ground-water remediation directives of CAO No. 91-45 pursuant to Directive 8 of CAO No. 91-45.
4. The Discharger has complied with Directive 1 of CAO No. 89-49, the only directive not superseded by CAO No. 91-45.
5. The Discharger's compliance with the ground-water remediation directives in CAO No. 91-45 is documented in the staff report titled *Greyhound Lines, Incorporated, and Transportation Leasing Company Compliance with Interim Remedial Action, Corrective Action, and Verification Sampling and Monitoring Directives of Cleanup and Abatement Order No. 91-45*, dated April 23, 2003.
6. Greyhound has completed the corrective action required by CAO No. 91-45 for the property at 539 1<sup>st</sup> Ave. No further action is required at this time. However, CAO No. 91-45 will not be rescinded until the other Dischargers named in the Order complete corrective action at their respective properties.
7. This enforcement action is exempt from the provisions of the California Environmental Quality Act (Public Resource Code, section 21000 et seq.) in accordance with section 15321, Chapter 3, Title 14, California Code of Regulations.

April 23, 2003

8. A public notice of this rescission order will be printed in the Notifications section of the May 14, 2003 Regional Board meeting agenda to allow the public an opportunity to comment on this action.
9. The current property owner, Redevelopment Agency of the City of San Diego, has been notified of this action in accordance with section 25299.37.2 of the Health and Safety Code.

**IT IS HEREBY ORDERED** that Cleanup and Abatement Order No. 89-49, issued to Greyhound Lines, Inc. and Transportation Leasing Company, San Diego County, is hereby rescinded.

  
JOHN H. ROBERTUS  
Executive Officer

Date: April 23, 2003

## Case Closure Summary

UNDERGROUND STORAGE TANK (UST) PROGRAM

### I. CASE INFORMATION

DATE: April 23, 2003

Site Name: Greyhound Lines, Inc. and Transportation Leasing Co. (Greyhound)		
Site Address: 539 1 <sup>st</sup> Ave., San Diego, CA		
Responsible Party Name: Viad Corporation		RP Phone Number: 602-207-5722
Responsible Party Address: 1850 North Central Ave., Phoenix, AZ 85077		
Current Land Use: condominium, shops, parking garage		
RWQCB File Number: 50-1561	Local Case Number:	RWQCB Staff: SJP
Basin Number: 8.20	Basin Uses: Ground water – nonbeneficial      Surface water – IND, REC 1, REC 2, COMM, BIOL, WILD, RARE, MAR, MIGR, SHELL	

### II. RELEASE AND SITE CHARACTERIZATION INFORMATION

Description of the unauthorized release (cause, release date, source[s]): An unauthorized release of diesel, gasoline, waste oil and lube oil was discovered when six UST's were removed in 1989. The unauthorized release was most likely from the UST's. It is unknown when the unauthorized release occurred. Free product, 3-4 feet thick initially, has been reduced to 1.24 feet, measured in November 1998.	
Contaminant[s] identified and amount leaked: Leaded and unleaded gasoline, diesel, waste oil, lube oil, heating oil; total amount estimated to range from 19,000 to 39,000 gallons, based on a 1992 study by Robert Hawk and David Huntley of San Diego State University.	
Description of the soil/geology: Subsurface soils are composed of alluvial and terrace deposits of Bay Point Formation, consisting mostly of fine to very fine sands, with intervals of medium sand.	
Is soil contamination completely delineated (to what levels)? Yes, to 27 feet below ground surface.	
Areal extent? Yes, across entire site.	
Vertical extent? Yes, to 27 feet below ground surface.	
Est. Volume of contaminated soil left on site and concentration: Approximately 15,500 cubic yards of TPH impacted soil is on site with a maximum concentration of 11,900 mg/kg TPH as diesel, and 6,900 TPH as gasoline.	
Is groundwater contamination completely delineated (to what levels)? The extent of the free product plume has been completely delineated. The extent of the dissolved plume has been completely delineated by non-detectable measurements (Oct. 1998) of TPH in two downgradient monitoring wells.	
Monitoring wells installed, properly permitted? Yes	Number of monitoring wells: 36
Depth to groundwater: 20 feet	Seasonal or tidal fluctuation: No
Groundwater flow direction: Southwest	Gradient: 0.01 feet/foot
Is groundwater or surface water impacted? Yes, groundwater.	
Is groundwater contamination contained on site? No. Downgradient ground water impacts have been documented in monitoring wells CC-9 and CC-10, located west of the site. However, recent analysis of CC-9 and CC-10 are non-detect for TPH.	

arest receptor (Inland Surface Water, Bay, Drinking Water Wells, etc.): San Diego Bay located approximately 1,200 feet west of the site.

### III. MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATION

Contaminant	Soil (mg/kg) initial	Soil (mg/kg) current	Water (ug/l) initial	Water (ug/l) current
TRPH	35,000	< 35,000*	not analyzed	not analyze
TPH gasoline	44,000	6,900	400,000	99,200
TPH diesel	not analyzed	11,900	not analyzed	103,000
Benzene	12	<12*	15,000	11,700
Toluene	27	<27*	20,000	3,760
Ethylbenzene	15	<15*	2,800	1,840
Xylenes	71	<71*	18,000	10,500

\* Remedial soil excavation was performed in the area corresponding to the initial soil concentration, however, verification soil sampling was not performed for these constituents.

### IV. TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (include units)	Action (treatment or disposal)	Concentration	Date
Soil	1,260 yd <sup>3</sup>	Disposed at Casmalia	TRPH = 66,000 mg/kg TPHd = 30,000 mg/kg	Oct. 1989
	7,200 yd <sup>3</sup>	Onsite reuse	TPHd < 14,600 mg/kg TPHg < 7,500 mg/kg	Sept. – Nov. 2000
	11,960 yd <sup>3</sup>	Treatment/recycling at Soil Wash	TPHd < 14,600 mg/kg TPHg < 7,500 mg/kg	Sept. – Nov. 2000
	4,285 yd <sup>3</sup>	Disposed at Casmalia	TPH = 44,000	Sept. – Nov. 2000
Groundwater	825 gallons	Disposed at Demenno/Kerdoon	TPHd = 146,000 ug/L TPHg = 97,200 ug/L	July 1998
	1,700 gallons	Disposed at Crosby & Overton	contains free product	Sept.-Oct 1998
Free Product	148 gallons	Disposed at Demenno/Kerdoon and Crosby & Overton	free product	July 1998 October 1998

Tank(s)	2 x 10,000 gallon gasoline/diesel	Disposed at Pacific Steel	N/A	Sept. 198
	1 x 8,000 gallon lube oil	"		"
	2 x 550 gallon waste oil	"		"
	1 x 550 gallon heating oil	"		Oct. 1989
	1 x 12,000 gallon diesel	Disposed at All Ways Recycling		May 1999
	2 above ground tank (lube/waste oil)	"		"
Piping	Approximately 450 feet	Disposed at Pacific Steel		Sept. 198

#### V. CLOSURE

**Does completed corrective action protect beneficial uses per the RWQCB Basin Plan? Yes - See attached staff report.**

**Should corrective action be reviewed if land use changes? Yes**

**Monitoring wells decommissioned? Yes**      **Number decommissioned: 36**      **Number retained: 0**

**Enforcement actions taken: Cleanup and Abatement Orders No. 89-49, and 91-45\***

**Enforcement actions rescinded: CAO 89-49 Rescinded by Order No. R9-2003-0169**

\*Greyhound has completed the corrective action required by CAO No. 91-45 for the property at 539 1<sup>st</sup> Ave. No further action is required at this time. However, CAO No. 91-45 will not be rescinded until the other Dischargers named in the Order complete corrective action at their respective properties.

#### VI. Signature of Reviewer

Susan Pless      4/23/03      Date  
(Staff Name)

#### VII. Signature of Senior Staff

Julie Chen      4/23/03      Date  
(Senior Staff Name)

## STAFF REPORT

### **Greyhound Lines, Incorporated, and Transportation Leasing Company Compliance with Interim Remedial Action, Corrective Action, and Verification Sampling and Monitoring Directives of Cleanup and Abatement Order No. 91-45**

April 23, 2003

Cleanup and Abatement Order No. 91-45 (Order) was issued to multiple dischargers for the cleanup of petroleum hydrocarbon contaminated soil and free phase petroleum hydrocarbon product (free product) on ground water at four separate properties in an area of San Diego known as the Marina Sub Area of the Centre City Redevelopment Project. The ground water remediation directives of the Order required Greyhound Lines, Incorporated, and Transportation Leasing Company (Greyhound) to take interim remedial action, corrective action and verification sampling and monitoring action to clean up its property located at 539 First Avenue. Similarly, the other dischargers were directed to take similar actions on their respective properties. The Order also required the dischargers as a group to implement a coordinated ground water monitoring program. This report discusses Greyhound's compliance with the ground water remediation directives of the Order.

1. The Order directed the Greyhound to:
  - a) Remove technically recoverable free product on the ground water (Directive 2), and similarly, remove free product from the water table at 539 First Avenue as required by the California Code of Regulations (CCR), Title 23, Chapter 16, section 2655 (Addendum No. 3, Directive 1.b).
  - b) Submit and implement a Corrective Action Plan pursuant to the requirements of CCR, Title 23, Chapter 16.
  - c) Perform soil sampling and ground-water monitoring necessary to verify the effectiveness of the remedial alternative and/or the interim remedial actions implemented
2. The ground water and soil cleanup levels for the site, specified in the Order, are as follows:
  - a) Mitigation of free petroleum product is the minimum water quality protection standard to be implemented for groundwater. According to CCR, Title 23, section 2655, free product is to be removed to the maximum extent practicable.
  - b) Residual fuel contaminant concentrations in soils at the site must be low enough so as not to yield free petroleum product to the ground water and be protective of human health and the environment.
3. The Dischargers removed free product as part of an area-wide removal for the downtown co-mingled hydrocarbon plume. As a result, measurable free product in

the Greyhound onsite monitoring wells decreased from an initial thickness of 3 to 4 feet in 1990 to 1.24 feet thick in November 1998. The November 1998 measurement of free product thickness occurred before source removal by excavation of contaminated soil. Measurements of free product thickness were not possible after excavation due to removal of all ground-water monitoring wells at the site. Thus, a verification monitoring workplan was never prepared, as required by Addendum No. 3, Directive 5, and verification monitoring of groundwater was not performed.

4. Because there was free product on the water table beneath the site during the last monitoring event, and because verification groundwater monitoring was never performed, the Regional Board cannot find that the Discharger mitigated the free petroleum product, or removed all of the contaminated soil capable of yielding free product to the ground water as required by the Order. However, if data show that the cleanup was successful in protecting the beneficial uses of waters threatened by the contamination, and if the residual free product in soil or on ground water at the site does not pose a human health risk or risk to the environment, there is no need for further corrective action.
5. The site is located in the Lower San Diego Mesa Hydrologic Sub-Area (HSA 8.20) which has beneficial uses for San Diego Bay, but no designated beneficial uses for ground water.
6. Beneficial uses of San Diego Bay are protected if the cleanup was successful in immobilizing the free phase and dissolved phase petroleum hydrocarbon plumes so that the plumes could not migrate to and pollute San Diego Bay.
7. Ground water monitoring from 1991 to 1998 of two offsite downgradient wells located between the site and San Diego Bay (CC-9 and CC-10) indicates that the free product plume is immobile. Free product has never been detected in these two offsite downgradient monitoring wells.
8. The Dischargers analyzed the ground water for four calendar quarters between September 1997 and October 1998 to demonstrate that offsite migration of dissolved petroleum hydrocarbons was not occurring and that the onsite dissolved petroleum plume was immobile. Three onsite monitoring wells (OMW-5, CC-8, and MW-12) and two offsite downgradient wells (CC-9 and CC-10) were monitored for dissolved petroleum constituents (benzene, toluene, ethylbenzene and xylenes, collectively designated as BTEX). The results demonstrated that the dissolved petroleum plume was stable and immobile before the removal of contaminated soil in 2000-2001.
9. Since removal of contaminated soil from the Greyhound site, dissolved BTEX levels in groundwater have been non-detectable in the two offsite downgradient monitoring wells located between the site and San Diego Bay. Therefore, the dissolved phase petroleum hydrocarbon plume in groundwater has been immobilized, and the level of free product cleanup achieved at the site has protected beneficial uses of San Diego Bay.

10. The Dischargers removed approximately 5,545 cubic yards (yd<sup>3</sup>) of contaminated soil to Casmalia for disposal and 11,960 yd<sup>3</sup> to Soil Wash for treatment/recycling.
11. Soil cleanup levels were determined based on the amount of Total Petroleum Hydrocarbon (TPH) residual saturation concentration that would not yield free product to ground water. After removal of soil, verification soil samples from the bottom and sidewalls of the excavations were taken. The sampling results demonstrated that the maximum levels of TPH in soil remaining on the site (6,900 mg/kg TPH gas and 11,900 TPH diesel) were below site-specific cleanup levels (7,200 mg/kg TPH gas and 14,600 mg/kg TPH diesel). Thus, verification sampling demonstrated that the soil cleanup levels were achieved at the site.
12. Residual contamination in the soil left on site and free product that may be present on the ground water at the site is not a threat to human health based on a human health risk assessment performed by the Discharger (Ogden 2000). The risk assessment analyzed the risk to children in the parking garage, and a security guard working in the parking garage exposed to benzene volatilized from the free product and residual soil contamination. In all scenarios the excess human lifetime carcinogenic risk exposure from benzene is less than a regulatory threshold of  $1 \times 10^{-6}$ , and therefore is protective of human health. Other than water quality, the free product and soil contamination did not pose any risks to the environment.
13. The level of free product cleanup and soil cleanup achieved at the site are protective of beneficial uses in San Diego Bay, human health and the environment. Thus, no further action is required at the site.



E

## REMEDIATION AGREEMENT

THIS REMEDIATION AGREEMENT is entered into by and among the Redevelopment Agency of the City of San Diego (the "Agency"); Union Oil Company of California d/b/a/ Unocal ("UNOCAL"), a California corporation; Golden West Hotel ("Golden West"), a partnership doing business in California; Shell Oil Company ("Shell"), a Delaware corporation doing business in California; G.T.F. Properties ("G.T.F."), a partnership doing business in California; Greyhound Lines, Inc. ("Greyhound"), a Delaware corporation doing business in California; and Transportation Leasing Company ("TLC"), a California corporation (referred to collectively herein as the "Parties"), in consideration of the following facts:

1. The San Diego Regional Water Quality Control Board ("RWQCB") has issued four Cleanup and Abatement Orders relating to petroleum hydrocarbon pollution ("Pollution") in the Marina Redevelopment Project Area ("Project Area") in downtown San Diego, on the following dates and to the following respondents:

<u>Order No.</u>	<u>Date Issued</u>	<u>Respondent</u>
89-50	5/19/89	Agency
89-51	5/19/89	Golden West and UNOCAL
89-48	5/19/89	G.T.F. and Shell
89-49	5/19/89	Greyhound

These Orders have subsequently been amended.

2. The Orders allege that Pollution exists and may be emanating from facilities at 303 Market Street, 235 Market Street, the intersection of Second Avenue and Market Street, and 539 First Avenue in San Diego (referred to collectively herein as the "Facilities") in the Project Area, and that the Parties are associated with the Facilities as follows:

1. 303 Market Street: Agency
2. 235 Market Street: Golden West  
and  
UNOCAL

3. Second and Market: G.T.F. and  
Shell

4. 539 First Avenue: Greyhound

TLC is associated with the Greyhound facility due to past ownership. Centre City Development Corporation ("CCDC") is a California nonprofit, public benefit corporation established by the City of San Diego ("City") and acts as the Agency's agent under an operating agreement with the Agency to implement redevelopment services in the Centre City Area, which includes the Project Area.

3. The Orders require: (a) preparation of Remedial Investigation and Feasibility Studies ("RI/FS") to assess the extent of soil and groundwater contamination, and (b) implementation of cleanup. The Parties believe that the Parties associated with each Facility should independently address soil cleanup, but that a joint groundwater cleanup will be most cost-effective.

4. Without admitting or resolving liability therefor, the Parties wish to provide for joint funding and implementation of a cleanup plan with the Parties associated with each Facility together paying a pro rata per Facility share of the costs, subject to reallocation as provided herein.

Now, therefore, the Parties agree as follows:

I. Payment of Costs.

A. Until a final allocation is established pursuant to this Remediation Agreement, the Parties agree to fund Shared Costs on an interim basis pro rata per Facility, i.e., the Parties associated with each Facility shall collectively pay a share of such costs equal to the share paid collectively by the Parties associated with each other Facility.

B. If persons associated with any additional facility wish to join this Remediation Agreement, the persons associated with that facility shall collectively pay a per facility share of Past and Future Shared Costs equal to the share persons would have been obligated to pay if they had been signatories to this Remediation Agreement at the time of its original execution.

C. The Parties intend that all payments made pursuant to this interim allocation may be reallocated by

the final allocation as provided by this Remediation Agreement.

D. Shared Costs shall mean:

1. Subject to the assessment terms provided in Paragraph I.E, Future Shared Costs, which constitute: (a) the costs to fund the work plan attached as Exhibit I (the "Work"), including, but not limited to, costs for: (i) preparation and submission of a groundwater cleanup plan (the "Plan") to the RWQCB, (ii) discussions with the RWQCB to receive approval of the Plan and (iii) implementation of the Plan and any amendments to the Plan required by the RWQCB and agreed upon by vote of the Parties; and (b) the costs of (i) the common consultant provided in Paragraph II.A and/or (ii) any common counsel that the Parties may hereafter vote to engage to seek financial participation by others in the Shared Costs.

2. As provided in Paragraph I.F., Past Shared Costs, which constitute the costs incurred by the Agency in funding development of the Plan and removal of free product from the water table beneath the Project Area as specified in Exhibit II.

E. To fund Future Shared Costs, the Parties agree to establish the Marina Project Area Cleanup Trust Fund ("Trust Fund"), by promptly executing a Trust Agreement in the form attached hereto as Exhibit III. The Parties shall make initial payments into the Trust Fund of \$105,000.00 per Facility no later than thirty (30) days after the effective date of this Remediation Agreement. Thereafter, each Party shall periodically fund the Trust Fund in accordance with the formula prescribed by Paragraph I.A in accordance with assessments approved by vote of the Parties. Payment of such assessments shall be made no later than fifteen (15) days after the date of assessment, and interest shall accrue and be payable on any initial payment or assessment not paid within the period specified in this paragraph at a rate of ten (10) percent per annum.

F. The Parties acknowledge that the past costs of the Agency as specified in Exhibit II total \$180,139.00. No later than thirty (30) days after the effective date of this Remediation Agreement, the Parties agree to reimburse the Agency for such Past Shared Costs according to the formula prescribed by Paragraph I.A.

G. The Agency asserts that, in addition to the Past Shared Costs incurred by the Agency as specified in

Exhibit II, the Agency has spent approximately \$1,350,000.00 to date in efforts to study and clean up the Pollution in the Project Area. The Parties acknowledge that these additional costs are not covered by this Remediation Agreement and are not subject to the covenant not to sue set out in Paragraph X. The other Parties have also spent substantial amounts in study and cleanup efforts. The Parties acknowledge that, by entering into this Remediation Agreement, no Party releases any claims except as described in Paragraph X.

## II. Selection of a Common Consultant.

A. At the expense of the Trust Fund, Geomatrix Consultants, Inc. ("Geomatrix") shall serve as common consultant to the Parties for purposes of preparing the Plan, submitting it to the RWQCB, conducting any discussions with the RWQCB necessary to receive its approval of the Plan, and overseeing implementation of the Plan and any amendments to the Plan required by the RWQCB and agreed to by vote of the Parties. Geomatrix shall be authorized to retain additional contractors as approved by the Parties. All work performed by Geomatrix for the parties jointly shall be subject to a joint privilege waived only by agreement of the Parties; provided, however, that the Agency and CCDC may disclose any documents and information that they are required to make public because of their status as public entities, after ten days notice to the Parties, unless otherwise required by law.

B. Geomatrix may continue to render consulting services to the Agency, including privileged consulting services, except that Geomatrix shall be prohibited from testifying on behalf of the Agency in a capacity adverse to any Party or Parties; provided, however, that Geomatrix shall not be prohibited from offering testimony on behalf of the Agency before the State Water Resources Control Board or RWQCB in connection with UNOCAL's petition concerning Order No. 89-51. The Agency shall be entitled to any applicable privileges with respect to all individual services permitted by this subparagraph and shall not be required to share Geomatrix work product developed in the course of such services, unless hereafter agreed. Geomatrix shall not provide individual consulting services in connection with the Marina Redevelopment Project Area to any other Party.

III. Installation and Ownership of Product Recovery Pumps and Other Assets.

A. Installation.

The Parties associated with a Facility have the right to require that, as part of the Work, at least one product recovery pump ("Pump") be installed on their Facility. The Parties associated with a Facility have the right to have any Pump and associated piping and storage facilities that have been located at their Facility relocated, provided that those Parties pay the costs of the relocation and the relocation does not interfere with achievement of the purposes of this Remediation Agreement.

B. Ownership of Pumps.

In the event that all Parties associated with a Facility withdraw from this Remediation Agreement after assessment of any Future Shared Costs in addition to the initial payment of Future Shared Costs, those Parties have the option to take title to and possession of any Pumps installed on their Facility together with any associated piping and storage facilities located within the Facility boundaries, provided the Parties to this Remediation Agreement hold title to such Pumps, piping and storage facilities and provided none of the withdrawing Parties have been removed from this Remediation Agreement or been declared in default as provided in Paragraph VI and failed to cure such default. Notwithstanding any claims of ownership and possession of the Pumps and associated piping and storage facilities, the withdrawing Parties shall continue to act cooperatively with the remaining Parties, including allowing use of and access to the Pumps and associated piping and storage facilities.

C. Default or Removal.

No Party that has been removed or declared in default (unless such default has been cured) as provided in Paragraph VI shall be entitled to take title or possession of any assets acquired or rented to effectuate this Remediation Agreement. Notwithstanding any such removal or default, the removed or defaulting Party shall continue to act cooperatively with the remaining Parties, including allowing use of and access to the Pumps and associated piping and storage facilities.

D. Termination.

As part of the negotiations provided in Paragraph IX, the Parties shall determine the final allocation of ownership of any assets, including Pumps and associated piping and storage facilities, owned by the Parties upon termination of this Remediation Agreement.

IV. Procedures.

A. Financial Assurances. The Parties associated with each Facility collectively warrant that they presently have the ability to obtain in a timely manner sufficient funds to pay their share of all costs and payments required pursuant to this Remediation Agreement for that Facility and to make payments as and when required pursuant to the Trust Agreement and this Remediation Agreement.

B. Facility Access. The Parties associated with each Facility collectively warrant that they presently have the ability to provide Geomatrix and any other contractor approved by the Parties access to the Facility to carry out the Work and oversee and implement the Plan. The Parties agree to provide such access or evidence of right of such access as may be necessary as reasonably determined by vote of the Parties to ensure completion of the Work and implementation of the Plan as contemplated by this Remediation Agreement.

C. Cooperation. The Parties shall cooperate with each other to effectuate the purposes of this Remediation Agreement, shall attempt to make decisions by consensus, and shall attempt to resolve any disputes among them through good faith negotiation.

D. Meetings. The Parties may authorize or direct actions under this Remediation Agreement only at meetings duly held and called for such purpose, which meetings shall be called from time to time as determined necessary. Meetings of the Parties may be called for any purpose at any time by two Parties. Meetings may be held by telephone conference. The meetings shall be open to any Party.

E. Notice of Meetings. Whenever feasible, written notice of the time, place and purpose of any meeting of the Parties shall be given to each Party entitled to vote at such meeting at least five (5) days and not more than thirty (30) days before the date of such meeting either personally or by mail or by other means of written communication, charges prepaid, addressed to each Party. In the event a meeting is called on less than five (5) days

written notice, the Parties calling the meeting shall make a reasonable effort to provide notice in fact to every Party.

F. Voting. Each Party shall have a vote ("Voting Power") as follows:

1. Each Party shall have a vote weighted in accordance with the same formula as is applied to funding obligations by Paragraphs I.A and B;

2. No Party may vote unless that Party has paid all financial contributions assessed, due and owing as of the last assessment made pursuant to this Remediation Agreement or the Trust Agreement prior to such meeting. Any Party having an assessment due and owing that remains unpaid at the time of the meeting may vote only upon payment of the full assessment prior to the voting process; and

3. All issues (including decisions to incur costs under Paragraph I.D.1) shall be decided by unanimous vote of the Parties, except (a) assessments under Paragraph I.E., which shall be decided by a majority of the voting power of the Parties as defined in this Paragraph, and (b) declarations of default or removal, which shall be decided by unanimous vote of all Parties, excluding the Party or Parties to be declared in default or removed.

G. Voting by Proxy. A Party eligible to vote at a Party meeting may assign in writing, using the form attached to this Remediation Agreement, its vote to another Party eligible to vote at the meeting.

H. Withdrawal. Any Party may withdraw from participation in this Remediation Agreement upon written notice to the Parties. Any Party that withdraws shall remain liable for its share of Shared Costs including the initial payment of Future Shared Costs required by Paragraph I.E., the payment of Past Shared Costs to the Agency prescribed by Paragraph I.F., and any additional assessment of Future Shared Costs pursuant to Paragraph I.E. approved more than fifteen (15) days prior to the date of withdrawal, but shall not be responsible for any additional assessment of Future Shared Costs pursuant to Paragraph I.E. approved within fifteen (15) days prior to the date of withdrawal; provided, however, that, if the RWQCB requires any significant amendment to the Plan, a withdrawing Party may receive reimbursement of the initial payment of Future Shared Costs required by Paragraph I.E., except any portion of that assessment that was obligated more than fifteen (15)



days prior to the date of withdrawal. The date of withdrawal shall be the later of the date of the written notice of withdrawal or any date of withdrawal specified in the notice.

V. Successors and Assigns.

This Remediation Agreement shall be binding upon the successors and assigns of the Parties. No assignment or delegation of the obligation to make any payment or reimbursement hereunder will release the assigning Party without the prior written consent of the Parties.

VI. Default and Removal.

The Parties shall have the authority to declare any Party to be in default under this Remediation Agreement where said Party has failed to satisfy any obligation of this Remediation Agreement in a timely manner. If a Party declared to be in default does not cure the default within fifteen days after receipt of written notice of the default, the other parties may remove the defaulting Party from this Remediation Agreement by unanimous vote and/or bring suit against the defaulting Party to enforce this Remediation Agreement, and the prevailing Party shall be entitled to attorneys fees. The unpaid balance of any defaulting Party's share may be assessed by the Parties against the other Parties hereto (without waiving any rights such Parties may have against the defaulting Party or its successors or assigns) in the same proportion as the other Parties would have been obligated to pay if the defaulting Party had not been a signatory to this Remediation Agreement.

VII. Notice.

A. All notices, bills, invoices, reports, and other communications with a Party shall be sent to the representative designated by the Party of said Party's signature page of this Remediation Agreement. Each Party shall have the right to change its representative upon ten (10) days' written notice to the Parties.

B. Written notice shall be given by telefacsimile and mail to all Parties and the Trustee as defined in the Trust Agreement attached hereto of any vote approving a new assessment, declaring a Party in default or removing a Party and any such action shall be effective on the date such written notice is sent.