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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

April 12, 1988

Mr. Rich Gossett
Unocal Corporation
P.O. Box 7600
San Diego, California 92138

Dear Mr. Gossett:

CLEANUP AND ABATEMENT ORDER NO. 88-52

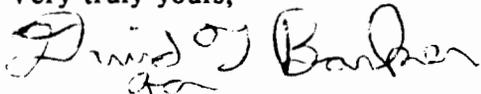
Enclosed is Cleanup and Abatement Order No. 88-52. This Cleanup and Abatement Order is being issued to Unocal Corporation under the authority of California Water Code Section 13304 in response to the unauthorized fuel release from the underground storage tank system at Unocal service station No. 4869 located at 8626 Jamacha Road, Spring Valley in San Diego County. The unauthorized fuel release has caused a "pollution" of the underlying ground water as defined in California Water Code Section 13050.

Basically, the Cleanup and Abatement Order directs Unocal Corporation to clean up the contamination resulting from the unauthorized petroleum hydrocarbon release. The Order requires Unocal Corporation to submit quarterly progress reports to this office until, in the opinion of the Executive Officer, the cleanup can be considered complete. The first quarterly progress report is due no later than July 31, 1988. A copy of these progress report should also be sent to the San Diego County Department of Health, Hazardous Materials Management Division.

The issuance of Cleanup and Abatement Order No. 88-52 will be discussed at the April 25, 1988, Regional Board meeting. This meeting is open to public participation and you are welcome to attend. It is scheduled for 9:00 a.m. at State Office Building, Room B109 Auditorium, 1350 Front Street, San Diego.

If you have any questions please call Mr. Scott Hugenberger at the above number.

Very truly yours,



LADIN H. DELANEY
Executive Officer

cc: Ms. Victoria Gallagher
Hazardous Materials Management Division
County of San Diego Department of Health Services
P. O. Box 85261
San Diego, California 92138-5261

REGIONAL
UGT

EXECUTIVE OFFICER SUMMARY REPORT
April 25, 1988

State of California
Regional Water Quality Control Board
San Diego Region

Item: 21 (c)

Subject: ENFORCEMENT
CLEANUP AND ABATEMENT ORDER NO. 88-52
UNOCAL CORPORATION, UNOCAL SERVICE STATION NO.
4869, 8626 JAMACHA ROAD, SPRING VALLEY,
SAN DIEGO COUNTY

Discussion: Unocal Corporation owns and operates the Unocal service station No. 4869 at 8626 Jamacha Road in Spring Valley, San Diego County. In August, 1984 Unocal Corporation informed this office of the presence of gasoline contamination in the soil and ground water which was discovered during the excavation of the fuel storage tanks at the service station. The leaky storage tank system resulted in the pollution of the underlying ground water.

On April 11, 1988, the Executive Officer issued Cleanup and Abatement Order No. 88-52 to Unocal Corporation in response to the presence of the soil and ground water contamination at the Unocal service station no. 4869. The Cleanup and Abatement Order contained in today's agenda directs Unocal Corporation to clean up the petroleum hydrocarbon contamination resulting from the underground fuel leak and to submit progress reports to this office on a quarterly basis for the remainder of the cleanup program.

Issue: Does Unocal Corporation have any objections to the issuance of Cleanup and Abatement Order No. 88-52?

Recommendation: Staff will make a brief presentation on this item if necessary.

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

CLEANUP AND ABATEMENT ORDER NO. 88-52

**UNOCAL CORPORATION
UNOCAL SERVICE STATION NO. 4869
8626 JAMACHA ROAD, SPRING VALLEY
SAN DIEGO COUNTY**

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

1. Unocal Corporation owns and operates the Unocal service station No. 4869 at 8626 Jamacha Road, Spring Valley in San Diego County. The site lies in the Middle Sweetwater Hydrographic Subunit of the Sweetwater Hydrographic Unit. The site is located 180 feet north of Spring Valley Creek.
2. On August 24, 1984, Regional Board staff was informed of a leak at the Unocal service station No. 4869. A new tank excavation was left open overnight and one to two inches of free fuel product was found floating on the ground water in the morning.
3. A letter dated September 20, 1984, from Unocal Corporation included the following information:
 - a) Approximately 600 gallons of free product and water were pumped from the excavation on August 24, 1984.
 - b) The amount of free product lost is unknown, but it has been estimated to be 950 gallons.
 - c) An analysis of the free product indicated that it was very weathered super leaded gasoline which suggests that it has been in place for several years.
4. In response to a January 18, 1988 request by Regional Board staff, Unocal Corporation submitted a report to the Regional Board office dated February 29, 1988, and prepared by Leighton and Associates. According to the report, a petroleum hydrocarbon sheen was observed on the ground water in one monitoring well and gasoline odors were detected in both monitoring wells. Ground water samples collected from two of the monitoring wells were analyzed and found to contain the following:

<u>Constituent</u>	<u>MW Auto Skim</u>	<u>MW4</u>
Benzene	6900 ppb	2200 ppb
Toluene	190 ppb	2500 ppb
Total xylenes	3150 ppb	7400 ppb
Ethylbenzene	2200 ppb	1500 ppb

5. 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; and August 27, 1984. The 1978, 1981, 1983 and 1984 updates were subsequently approved by the State Board.
6. The Basin Plan established the following uses as the potential and existing beneficial uses for the ground water in the Middle Sweetwater Hydrographic Subunit:
 - a. Municipal and domestic supply
 - b. Agricultural supply
 - c. Industrial service supply
 - d. Ground water recharge
7. The Basin Plan established the following uses as the potential and existing beneficial uses for the surface waters in the Middle Sweetwater Hydrographic Subunit:
 - a. Municipal and domestic supply
 - b. Agricultural supply
 - c. Industrial service supply
 - d. Industrial process supply
 - e. Water contact recreation
 - f. Non-contact water recreation
 - g. Warm fresh-water habitat
 - h. Wildlife habitat
8. Section 13050 of the California Water Code defines "pollution" as follows:

"Pollution means an alteration of the quality of the waters of the State by waste to a degree which unreasonably affects (1) such waters for beneficial uses, or (2) facilities which serve such beneficial uses."
9. To protect the beneficial uses listed in Finding 6, it is necessary that the ground water aquifer underlying the Unocal service station No. 4869 not contain constituents in concentrations exceeding the following State Department of Health Services (DOHS) Action levels for volatile hydrocarbons and the United States Environmental Agency (U.S. EPA) recommended maximum contaminant level for lead:

<u>Constituent</u>	<u>Maximum Allowable Concentration</u>
Benzene	0.7 µg/l
Toluene	100 µg/l
Total xylenes	620 µg/l
Ethylbenzene	680 µg/l
Total lead	50 µg/l

10. The presence of petroleum hydrocarbons in the ground water underlying the Unocal service station No. 4869 constitutes a "pollution" of the State's waters as defined in Finding 8 in accordance with the following rationale: The concentrations of

petroleum hydrocarbons in the underlying ground water resulting from the unauthorized release, listed in Finding 4, exceed the DOHS drinking water action levels listed in Finding 9 and therefore impair the ground water for any possible future municipal beneficial use.

11. The quality of the ground water underlying the Unocal service station No. 4869 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*. Under the terms and conditions of Resolution No. 68-16, the existing (pre-discharge) ground water quality of the Middle Sweetwater Hydrographic Subunit must be maintained unless it is demonstrated that a decrease in water quality
 - (a) will be consistent with maximum benefit to the people of the state,
 - (b) will not unreasonably affect beneficial uses, and
 - (c) will not result in water quality less than prescribed in the Basin Plan or other adopted policies.

12. 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 Administrative Code.

IT IS HEREBY ORDERED, That pursuant to Section 13304 of the California Water Code, Unocal Corporation (hereinafter the discharger) shall comply with the following directives:

1. The discharger shall take effective remedial action to:
 - a. Immobilize the free product plume, if any, and the dissolved product plume of petroleum hydrocarbon contaminated ground water.
 - b. Protect the beneficial uses of the ground water of the Middle Sweetwater Hydrographic Subunit and all hydraulically connected surface waters.
 - c. Clean up the petroleum hydrocarbon contaminated ground water and soil to the satisfaction of the Regional Board Executive Officer.

2. The discharger shall submit a report to this office no later than April 29, 1988 describing the remediation actions that have been taken and will be taken to obtain compliance with Directive 1 above.

3. The discharger shall submit a report to this office no later than June 27, 1988 characterizing the vertical and horizontal extent of the petroleum hydrocarbon contamination resulting from the unauthorized release from the underground storage tank systems at the Unocal service station No. 4869. The report shall contain the following information:

- a. A site map showing the location of all borings and monitoring wells, the locations of the excavated tanks, and any underground utilities that might act as conduits along which the petroleum hydrocarbons could migrate.
 - b. The water levels and product thicknesses, if any, in all of the wells. Boring logs and monitoring well construction details should be included.
 - c. A site map showing the hydrologic contours and the boundary of the free product and dissolved product plumes.
 - d. Soil and ground water samples should be collected and analysed for:
 - (1) Benzene
 - (2) Toluene
 - (3) Total xylenes
 - (4) Ethylbenzene
 - (5) Total petroleum hydrocarbons
 - (6) Organic lead
 - e. A remedial action strategy that has been or will be implemented to clean up the effects of the unauthorized release from the excavated underground storage tank system at the Unocal service station No. 4869. The strategy should address the removal and/or treatment of the free product plume (if any), the dissolved product ground water plume, and the soil contamination zone.
4. The discharger shall submit monitoring reports to this office on a quarterly basis until, in the opinion of the Regional Board Executive Officer, the site has been cleaned up. The monitoring reports shall describe the progress made in the cleanup operations and shall demonstrate that the petroleum hydrocarbon waste released from the underground tank system has been and remains immobilized. The quarterly monitoring reports shall include, but not be limited to, the following information:
- a. Quantity of petroleum hydrocarbon product recovered for the quarter and the total to date.
 - b. Quantity of ground water extracted for the quarter, the total to date, and its ultimate disposal point.
 - c. The water levels and product thicknesses in all of the wells.
 - d. Any information necessary to demonstrate that the petroleum hydrocarbon contamination resulting from the unauthorized release from the underground tank system at the site is fully contained and immobilized or shrinking.
 - e. A map of the site with hydrologic contours showing the ground water flow pattern and the locations of all of the wells.

- f. A map of the site showing the boundary of the free petroleum hydrocarbon product plume and also of the dissolved product ground water plume.
- g. All ground water samples should be analyzed for:
 - (1) Benzene
 - (2) Toluene
 - (3) Total xylenes
 - (4) Ethylbenzene
 - (5) Total petroleum hydrocarbons
 - (6) Chlorinated hydrocarbons, if these constituents were contained in the discharge
 - (7) Total lead, if lead was contained in the discharge.
- h. A description of the remedial actions employed by the discharger.

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

<u>Reporting Period</u>	<u>Date Due</u>
January, February, March	April 30
April, May, June	July 31
July, August, September	October 31
October, November, December	January 31

- 5. The discharger shall submit a report to this office by November 28, 1988 identifying and developing a range of remedial action alternatives for the final phase of the cleanup program. The report shall examine and determine the cost of a cleanup strategy capable of achieving each of the following potential final cleanup levels in the affected ground water zone:
 - a. Treatment and/or removal of the polluted ground water to attain the naturally occurring background concentrations for the following constituents in the underlying ground water aquifer:
 - (1) Benzene
 - (2) Toluene
 - (3) Total xylenes
 - (4) Ethylbenzene
 - (5) Total lead

This cleanup alternative represents basically complete cleanup of pollution resulting from the petroleum hydrocarbon discharge. If the discharger wishes to implement this cleanup alternative, the discharger will not be required to develop cleanup strategies corresponding to alternatives 5(b) and 5(c).

- b. A remedial action alternative proposing the attainment of petroleum hydrocarbon concentrations less stringent than those specified in (a). It will be necessary to establish, that the petroleum hydrocarbon concentrations being proposed by the discharger under this alternative would comply with the following criteria in accordance with Resolution No. 68-16:
 - (1) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water pollution zone would not unreasonably affect the beneficial uses of the ground water listed in Finding 6 or of any hydraulically connected surface waters.
 - (2) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water pollution zone will be consistent with the maximum benefit to the people of the State.
 - (3) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water pollution zone will not result in water quality less than prescribed in the Basin Plan or other adopted policies.
- c. Treatment and/or removal of the polluted ground water to attain the following DOHS Action Levels and the U.S. EPA recommended maximum contaminant level in the underlying ground water aquifer:

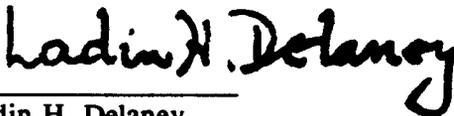
<u>Constituent</u>	<u>Maximum Concentration</u>
Benzene	0.7 µg/l
Toluene	100 µg/l
Total xylenes	620 µg/l
Ethylbenzene	680 µg/l
Lead	50 µg/l

All free petroleum hydrocarbon product must be removed under all three alternatives. The report should include a table summarizing the cleanup level versus cost information.

- 6. The cleanup alternatives required under Directive 5 of this Order will be evaluated in detail by Regional Board staff. This evaluation will include technical considerations, estimated costs, and anticipated water quality impacts associated with each alternative. Based on this evaluation a specific set of final cleanup levels will be selected by the Regional Board. Upon notification by the Executive Officer, the discharger shall implement a cleanup strategy capable of achieving the final cleanup levels selected by the Regional Board.
- 7. The discharger shall remove and/or treat all soil containing total extractable petroleum hydrocarbons in concentrations exceeding 100 mg/kg, unless the discharger can demonstrate:

- (a) to the Regional Board staff's satisfaction that higher soil concentrations will not result, under ambient environmental conditions at the site, in waste constituents being released at concentrations which could degrade the quality of the underlying ground water; and
 - (b) to the San Diego County Department of Health's satisfaction that higher soil concentrations will not present a threat to the public or environmental health.
8. The discharger shall dispose of all ground water and/or soil polluted with petroleum hydrocarbons in accordance with all applicable local, state and federal regulations.
9. No later than September 30, 1989, the discharger must demonstrate to the Regional Board Executive Officer's satisfaction that the final cleanup levels, as determined by the Regional Board under Directives 5, 6 and 7, have been achieved throughout the soil and ground water contamination zones. The discharger shall continue to monitor the ground water and submit quarterly monitoring reports in accordance with Directive 4 of this Order for a period of one year. If at any time during this post-cleanup monitoring the data indicate that the final cleanup levels have not been maintained, the discharger shall immediately resume appropriate remedial cleanup actions. If the data indicate that the soil is not contributing petroleum hydrocarbon constituents to the ground water and the final cleanup levels have not been exceeded for the year of monitoring, then no further monitoring shall be required.

Ordered by



Ladin H. Delaney
Executive Officer

Dated: April 11, 1988

LL

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 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. 2. Restricted Delivery
†(Extra charge)† †(Extra charge)†

3. Article Addressed to: Mr. Rich Gossett Unocal Corporation P.O. Box 7600 San Diego, CA 92138	4. Article Number P 787 009 138 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X <i>Rich Wellman</i>	
7. Date of Delivery 4-13-88	

PS Form 3811, Mar. 1987 * U.S.G.P.O. 1987-178-268 DOMESTIC RETURN RECEIPT

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C&A Order No. 88-52

P 787 009 138	RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED NOT FOR INTERNATIONAL MAIL (See Reverse)	
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Street and No.	Unocal Corporation
P.O. State and ZIP Code	P.O. Box 7600 San Diego, CA 92138
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	4-12-88

PS Form 3800, June 1985