California Regional Water Quality Control Board
North Coast Region

CLEANUP AND ABATEMENT ORDER NO. R1-2004-0050

FOR

ROYAL PETROLEUM COMPANY
SHAHRAM SHAHNAZI, and
KAMBIZ KAFAI

ALLIANCE SERVICE STATION
720 South Main Street
Sebastopol, California

Sonoma County

The California Regional Water Quality Control Board, North Coast Region, (hereinafter Regional Water Board) finds that:

1. Royal Petroleum Company owned a service station at 720 South Main Street in Sebastopol, California **(Attachment A)** from approximately 1985 to August 2003. The service station, including the property (hereinafter the Site), were sold on August 11, 2003 to Shahram Shahnazi and Kambiz Kafai. Royal Petroleum, Shahram Shahnazi, and Kambiz Kafai are hereinafter referred to as the Dischargers.

2. In November of 1985, four petroleum underground storage tanks (USTs) originally installed in 1960 were in use at the Site. In November of 1985, the USTs were tested for leaks, and a 7,500 gallon regular leaded gasoline tank and the 5,000 gallon unleaded gasoline tank failed the leak test. In 1986, all four single-walled tanks were removed from the Site and replaced by three 8,000 gallon double-walled steel tanks. The results of analyses of two soil samples collected during the UST removal activity revealed that a discharge of petroleum hydrocarbons as gasoline to soil had occurred at the Site.

3. Releases of petroleum hydrocarbons at the Site have affected groundwater. Groundwater monitoring wells have been installed on or near the Site to characterize the contamination. The results of analyses of groundwater samples collected from the monitoring wells reveal that groundwater is contaminated with gasoline, benzene, toluene, xylene, ethylbenzene, 1,2-dichloroethane (1,2-DCA), and methyl tertiary butyl ether (MtBE). Non-aqueous phase liquid (NAPL) or free phase product was also found at the Site. The free-phase product released at the Site was found to contain gasoline, organic lead, 1,2-DCA and MtBE.

4. The depth to groundwater at the Site varies seasonally and is approximately 53 feet to 63 feet below ground surface (bgs). The soils underlying the Site generally consist of interbedded sands and gravels. In the Sebastopol area, the interbedded sands and gravels are underlain by sandstones of the Wilson-Grove Formation, previously known as the Merced formation. These deposits provide an abundant source of groundwater as domestic supply. A municipal water supply well for the City of Sebastopol (Well No. 4) is located within 200 feet of the Site. The total depth of Well No. 4 is approximately 530 feet. During construction of Well No. 4, the static groundwater level was observed at 37 feet

bgs, and yellow sand was described between 35 and 135 feet bgs. The well was sealed to 135 feet, sand packed below this depth, with perforations between 237 and 468 feet. During pumping, the groundwater level is about 76 feet bgs. The regional groundwater flow direction is generally from the west to the east, and is locally affected by pumping wells. During routine use of Well No. 4, the well is pumped between six and thirteen hours per day at an average pump rate of 840 gallons per minute (gpm). Groundwater contamination surrounding Well No. 4 is likely being drawn to the well.

5. In 1985, the City of Sebastopol began sampling Well No. 4 for halogenated volatile organic compounds in compliance with the California Health and Safety Code. In 1989, the contaminant 1,2-DCA was detected in water samples collected from Well No. 4. The highest recorded concentrations vary approximately from 0.51 to 0.60 ug/l. The sporadic detection of 1,2-DCA in Well No. 4 may be a result of dilution of the chemical in the water column because of the large amount of water pumped and the long screen interval of Well No. 4 (approximately 231 feet). The maximum contaminant level (MCL) of 1,2-DCA, established by the State Department of Health Services is 0.5 ug/l. Well No. 4 was taken out of service for several months due to contamination by 1,2-DCA. Well No. 4 is currently operating and the Dischargers conduct weekly sampling for the contaminant. Well No. 4 is periodically shut down when the concentration of 1,2-DCA is 0.4 ug/l or higher. The well is kept out of service until resampling shows no detectable levels of 1,2-DCA. The detection limit for 1,2-DCA is 0.25 ug/l.

6. 1,2-DCA is known to resist or does not readily biologically degrade, soluble in water at 8300 mg/l (or 8,300,000 ug/l) at 25ºC and has a density of 1.2351 g/cc. Since 1,2-DCA is heavier than water, it behaves differently in groundwater than other gasoline constituents. 1,2-DCA is mobile in the environment and spreads laterally and vertically through groundwater. 1,2-DCA is classified as a probable human carcinogen by the U.S. Environmental Protection Agency. The chemical was used as a lead scavenger in leaded gasoline.

7. Regional Water Board staff have conducted several investigations to determine the source and threat of contamination of groundwater in Well No. 4. The staff investigations include a passive soil gas survey to determine whether other sources exist and whether the pathways for 1,2-DCA to reach City Well No. 4 exist; an historical record search of facilities surrounding City Well #4 that may have stored or used leaded gasoline or 1,2-DCA; and a review of all sites in the area where releases have occurred. The investigations concluded that the service station Site is the only site to detect 1,2-DCA through monitoring. The service station wells located on and adjacent to the station have contained up to 310 ug/l of 1,2-DCA dissolved in groundwater, and up to 78,000 ug/l in the leaded gasoline free-phase product. The Site is located within the radius of influence of Well No. 4.

8. On December 14, 1994, the Executive Officer issued Cleanup and Abatement Order (CAO) No. 94-142. CAO No. 94-142 was revised and replaced on December 11, 2000, by CAO No. R1-2000-92. CAO No. R1-2000-92 requires Royal Petroleum to submit a corrective action plan, a feasibility study, monthly progress reports, a health and ecological risk

assessment, and a time schedule to complete the necessary corrective or remedial actions. The Corrective Action Plan must include the necessary abatement activities to restore the beneficial use of the City of Sebastopol Well No. 4 through the provision of alternative water supply or other similar measures such as well head treatment. Royal Petroleum has not fully complied with CAO No. R1-2000-92. This revised CAO No. R1-2004-0050 replaces CAO No. R1-2000-92. However, Royal Petroleum remains liable for violations of the CAO Nos. R1-2000-92, and 94-142.

9. Royal Petroleum has exceeded the time schedules submitted in accordance with CAO No. R1-2000-92 requiring Site cleanup and abatement activities associated with City Well #4. The construction and start-up of the well head treatment system and the on-site groundwater treatment system should have been completed and placed in operation in 2001. At this time, designs have not been approved nor has construction begun nor operation commenced for either well head treatment or groundwater remediation.

10. The Dischargers are proposing to install a well head treatment system to abate the discharge of 1,2-dichloroethane to the City of Sebastopol's Municipal Well No. 4. The proposed well head treatment system design is described in the preliminary engineering report dated April 27, 2004 prepared by Barghausen Engineering. The Dischargers have revised the engineering plans to include a surge tank for the backflushing of the carbon units as requested by the City of Sebastopol.

11. The Dischargers are proposing to install a vapor extraction/air sparging system to clean up contaminated groundwater at the Site. Preliminary details of the vapor extraction/air sparging system are described in the report titled "Petroleum Hydrocabon Concentration Trends in Groundwater and Workplan to Implement Corrective Action Plan," "Amendment to Workplan to Implement On-Site Corrective Action Plan," and as further amended in a letter dated February 6, 2004.

12. Funding for cleanup activities is available to Royal Petroleum through insurance coverage and a currently eligible claim with the State Water Resources Control Board, Petroleum Underground Storage Tank Cleanup Fund (USTCF). However, compliance with the California Underground Storage Tank Regulations (Title 23, Division 3, Chapter 16, Article 11) is an eligibility requirement and noncompliance jeopardizes funding assistance from the USTCF.

13. The Dischargers are obligated to comply with CAO No. R1-2004-0050 in the absence of insurance coverage, ineligibility with the USTCF due to noncompliance with this Order, and/or exceedance of the $1.5 million USTCF maximum claim amount.

14. The beneficial uses of shallow areal groundwater include municipal and domestic water supply, agricultural supply, and industrial process supply.

15. The beneficial uses of the Laguna de Santa Rosa, a tributary to the Russian River, include:

a) municipal and domestic supply
b) agricultural supply
c) industrial process supply
d) groundwater recharge
e) navigation
f) hydropower generation
g) water contact recreation
h) non-contact water recreation
i) commercial and sport fishing
j) warm freshwater habitat
k) cold freshwater habitat
l) wildlife habitat
m) migration of aquatic organisms
n) spawning, reproduction, and/or early development of fish

16. The Dischargers named in this Order have caused or permitted, cause or permit, or threaten to cause or permit waste to be discharged where it is, or probably will be, discharged into waters of the State and creates, or threatens to create, a condition of pollution or nuisance. The discharge and threatened discharge of contaminants has unreasonably affected water quality in that the discharge or threatened discharge is deleterious to the above described beneficial uses of State waters, and has impaired water quality to a degree which creates a threat to public health and public resources and therefore, constitutes a condition of pollution or nuisance. These conditions threaten to continue unless the discharge or threatened discharge is permanently cleaned up and abated.

17. The California Water Code, and regulations and policies developed thereunder, require cleanup and abatement of discharges, and threatened discharges of waste to the extent feasible. Cleanup to background levels is the presumptive standard. Alternative cleanup levels greater than background concentrations shall be permitted only if the Dischargers demonstrate that: it is not feasible to attain background levels; the alternative cleanup levels are consistent with the maximum benefit to the people of the State; alternative cleanup levels will not unreasonably affect present and anticipated beneficial uses of such water; and they will not result in water quality less than prescribed in the Basin Plan and Policies adopted by the State and Regional Water Board. Any proposed alternative that will not achieve cleanup to background levels, must be supported with evidence that it is technologically or economically infeasible to achieve background levels, and that the pollutant will not pose a substantial present or potential hazard to human health or the environment for the duration of the exceedence of background levels (SWRCB Res. Nos. 68-16 and 92-49, Title 23, California Code of Regulations Section 2550.4, subds. (c), and (d)).

18. Water quality objectives exist to ensure the protection of beneficial uses of water. Several beneficial uses of water exist, and the most stringent objective for protection of all beneficial uses is selected as protective for water quality. A listing of the water quality

objectives for waters of the State impacted by discharges from the Site is included as **Attachment B** to this Order.

19. Discharge prohibitions contained in the Basin Plan apply to this Site. State Water Resources Control Board Resolution 68-16 (Non-Degradation Policy) applies to this Site. State Water Resources Control Board Resolution 92-49 applies to this Site and sets out the "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Section 13304 of the California Water Code."

20. Reasonable costs incurred by Regional Water Board staff in overseeing cleanup or abatement activities are reimbursable under Section 13304(c)(1) of the California Water Code.

21. The workplans and reports required by this Order are necessary to ensure that the prior harm and future threat to water quality created by the discharges described above are properly abated and controlled. More detailed information is available in the Regional Water Board's public file on this matter.

22. The Regional Water Board will ensure adequate public participation at key steps in the remedial action process, and shall ensure that concurrence with a remedy for cleanup and abatement of the discharges at the Site shall comply with the California Environmental Quality Act [Public Resources Code Section 21000 et seq. (CEQA)].

23. This CAO in no way limits the authority of this Regional Board to institute additional enforcement actions or to require additional investigation and cleanup at the facility consistent with California Water Code. This CAO may be revised by the Executive Officer as additional information becomes available.

24. The issuance of this Cleanup and Abatement Order is an enforcement action being taken for the protection of the environment and, therefore, is exempt from the provisions of CEQA in accordance with Title 14, California Code of Regulations, Sections 15308, and 15321.

25. Failure to comply with the terms of this Order may result in enforcement under the California Water Code. Any person failing to provide technical reports containing information required by this Order by the required date(s) or falsifying any information in the technical reports is, pursuant to Water Code Section 13268, guilty of a misdemeanor and may be subject to administrative civil liabilities of up to one thousand dollars ($1,000.00) for each day in which the violation occurs. Any person failing to cleanup or abate threatened or actual discharges as required by this Order is, pursuant to Water Code Section 13350(e), subject to administrative civil liabilities of no less than five hundred dollars ($500.00) for each day the violation occurs and up to five thousand dollars ($5,000.00) per day for each day the violation occurs; or ten dollars ($10) per gallon of waste discharged.

26. Any person affected by this action of the Regional Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Section 13320 of the California Water Code and Title 23, California Code of Regulations, Section 2050. The State Water Board must receive the petition within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request. In addition to filing a petition with the State Water Board, any person affected by this Order may request the Regional Water Board to reconsider this Order. To be timely, such requests must be made within 30 days of the date of this Order. Note that even if reconsideration by the Regional Water Board is sought, filing a petition with the State Water Board within the 30-day period is necessary to preserve the petitioner's legal rights.

THEREFORE, IT IS HEREBY ORDERED that, except for the purposes of enforcement of past violations, Cleanup and Abatement Order Nos. 94-142 and R1-2000-92 are hereby rescinded, and pursuant to California Water Code Sections 13267(b) and 13304, the Dischargers shall cleanup and abate the discharge and threatened discharge of the pollutants described above forthwith and shall comply with the following provisions of this Order:

1. All work performed at this Site shall be conducted in accordance with all local ordinances and under the direction of a California Registered Geologist or Registered Civil Engineer experienced in petroleum hydrocarbon and chlorinated solvent pollution investigation and cleanups. All necessary permits shall be obtained.

2. The Dischargers shall comply with Monitoring and Reporting Program No. R1-2004-0050 and any amendments to the Order.

3. The Dischargers shall be liable, pursuant to California Water Code Section 13304, to the Regional Water Board for all reasonable costs actually incurred by the Regional Water Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes raised by the Dischargers over reimbursement amounts or methods used in that program shall be processed according to the dispute resolution procedures for that program. Failure to remit timely payment of invoices for Regional Water Board oversight costs is a violation of this Order.

Well Head Treatment

4. The Dischargers shall submit[1] within 15 days of the date of this Order the final engineering plans and specifications prepared by Barghausen, as amended to include a permanent surge tank, for the proposed City Well No. 4 well head treatment system, and the associated fees

[1] The term "submit" means that the materials in question must be *actually received* by the Regional Water Board on or before the applicable deadline date.

to process the engineering plans to the Regional Water Board, City of Sebastopol, and Caltrans.

5. The Dischargers shall distribute the well head treatment system engineering plans package of information to advertise and procure contractor bids within 7 days of the date of approval of the well head treatment system final engineering plans from the City of Sebastopol. A distribution list providing verification that the engineering plans package of information was sent to eligible contractors and the date of distribution shall be submitted to the Executive Officer within this time frame.

6. Within 60 days following the date of distribution of the bid package as required by No. 5 above, the Dischargers shall complete the bidding process and select a contractor. Within 5 business days of the completion of the bidding process, the Dischargers shall submit written notification of compliance with this task to the Executive Officer.

7. The Dischargers shall ensure that, within 30 days of selecting a contractor as required by No. 6 above, the contractor has obtained all necessary permits and has commenced construction of the well head treatment system. Within 5 business days after the commencement of construction, the Dischargers shall submit written notification of compliance with this task to the Executive Officer.

8. The Dischargers shall complete construction of the well head treatment system and the system shall be operating within 120 days following the date of commencement of construction. At the completion of construction, the system shall be fully operational and turned on to treat water from Municipal Well No. 4. Within 5 business days after the date the well head treatment system begins operating, the Dischargers shall submit written notification of compliance with this task to the Executive Officer.

On-site Corrective Action Plan

9. Within 30 days of the date of this Order, the Dischargers shall submit for Executive Officer concurrence the design plans for the air sparging/vapor extraction system as specified in the workplan titled “Petroleum Hydrocarbon Concentration Trends in Groundwater and Workplan to Implement Corrective Action Plan” prepared by E2CR and dated October 25, 2002, the “Amendment to Workplan to Implement On-Site Corrective Action Plan” dated May 30, 2003, and as further amended in a letter dated February 6, 2004.

10. Within 7 days following Executive Officer concurrence with the design plan referred to in No. 9 above, the Dischargers shall initiate the permitting process, as needed, to implement the on-site treatment system and shall submit written verification of compliance (consisting of copies of all letters, permit applications, and other documentation) to the Executive Officer. The Dischargers shall notify and submit copies of all permits to the Executive Officer within 7 days of receipt of all necessary permits.

11. Construction of the corrective action facilities shall commence no later than 30 days following receipt of required permits. Written notification of compliance with this task

shall be submitted to the Executive Officer within 7 days of commencement of construction activities.

12. The Dischargers shall complete construction of the on-site air sparging/vapor extraction system so that it is fully operational and turned on within 60 days following implementation of corrective action. Written notification of compliance with this task shall be submitted to the Executive Officer within this time frame.

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13. Reasonable costs incurred by Regional Water Board staff in overseeing cleanup or abatement activities are reimbursable under Section 13304(c)(1) of the California Water Code. The Dischargers shall promptly pay in accordance with the invoicing instructions all invoices for Regional Water Board oversight.

14. If, for any reason, the Dischargers are unable to perform any activity or submit any documentation in compliance with the work schedule contained in this Order or submitted pursuant to this Order and approved by the Executive Officer, the Dischargers may request in writing, an extension of time as specified. The extension request must be submitted 5 business days in advance of the due date sought to be extended and shall include justification for the delay including the good faith effort performed to achieve compliance with the due date. The extension request shall also include a proposed time schedule with new performance dates for the due date in question and all subsequent dates dependent on the extension. A written extension may be granted for good cause, in which case the Order will be revised accordingly.

Ordered by _____
Catherine E. Kuhlman
Executive Officer

June 17, 2004