California Regional Water Quality Control Board
North Coast Region

CLEANUP AND ABATEMENT ORDER NO. R1-2001-89

FOR

SEBASTOPOL, LLC
JERRY AND QUINN THOMPSON
THOMPSON-COSTA CLEANERS
HERBERT C. AND CLAUDINE HILLIARD
DONALD F. AND LUCILLE L. SMOTHERS
ERIK AND BODIL HANSEN
TALMADGE WOOD AND
TALMADGE WOOD TRUST

Sonoma County

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

1. Soil and groundwater beneath the property located at 250 South Main Street is contaminated with volatile organic compounds and petroleum hydrocarbons. The property is bordered on the west by a parking lot, on the south by commercial businesses and residential housing, on the east by South Main Street, and on the north by a vacant lot and commercial businesses. The current buildings on the site include a restaurant, automobile repair garage, laundry business, and a gasoline service station. All current and former businesses on the site are within 875 feet of Municipal Well No. 5, which is located east and slightly south of the site and serves drinking water for the City of Sebastopol.

2. A dry cleaning business formerly was located at 250 South Main Street, Sebastopol, California (A.P. No. 20-203-23) within 875 feet of Municipal Well No. 5. The business was in operation from approximately 1948 to 1979.

3. In 1947, Albert and Martha Helwig purchased the property at 250 South Main Street (hereinafter site). On July 28, 1959 Albert and Martha Helwig transferred ownership of the site to Helwig Investments, Inc. On December 31, 1971 Helwig Investments merged with Palm Drive Hospital, and title to the site was transferred to Palm Drive Hospital. On July 17, 1973 Palm Drive Hospital sold the site to Herbert C. and Claudine Hilliard and Donald F. and Lucille L. Smothers. The site was sold on April 30, 1975 to Talmadge Wood. Talmadge Wood transferred ownership of the site to the Talmadge Wood Trust on January 4, 1989. The Talmadge Wood Trust is the current property owner of the site.

4. Palm Drive Hospital, a subsidiary of Hospital Corporation of America (HCA), merged in 1978 with Sebastopol Hospital Corporation (SHC), which became the surviving corporate subsidiary of HCA. In 1987, HCA spun off SHC into HealthTrust, Inc. In April 1995, HealthTrust, Inc. merged with Columbia/HCA Healthcare Corporation, and SHC became a subsidiary of Columbia/HCA. On April 23, 1999 SHC merged into Sebastopol, LLC, a Delaware limited liability company, with Sebastopol, LLC, as the surviving entity.

5. Albert and Martha Helwig leased the building on the site to John B. and Evelyn Costa (Costas) and Quinn and Jerry Thompson (Thompsons). The Costas and Thompsons operated a dry cleaning business at the site, known as Thompson-Costa Cleaners from 1948 to 1976. Thompson-Costa Cleaners was sold to Erik and Bodil Hansen (Hansens) in 1976, and the Hansens operated the business until 1979.

6. The building that housed the Thompson-Costa Cleaners was renovated in 1979, and the current restaurant business was established in the renovated building.

7. John B. and Evelyn Costa, operators of the Thompson-Costa Cleaners, are deceased and, therefore, are not named in this Board Order.

8. Al and Martha Helwig of Helwig Investments, Inc. are deceased. Helwig Investments merged with Palm Drive Hospital and Palm Drive Hospital assumed all obligations of Helwig Investments, Inc. Accordingly, on October 18, 1994 Helwig Investments was removed as a responsible party for this site by the Regional Water Board Executive Officer.

9. Sebastopol, LLC, Jerry and Quinn Thompson, Thompson-Costa Cleaners, Herbert C. and Claudine Hilliard, Donald F. and Lucille L. Smothers, Erik and Bodil Hansen, Talmadge Wood and Talmadge Wood Trust are hereinafter referred to as the dischargers.

10. In 1985, the City of Sebastopol sampled the City's municipal water supply wells in compliance with the California Health and Safety Code. The City of Sebastopol's Municipal Well No. 5 was found to contain 25 ug/l or parts per billion (ppb) of tetrachloroethylene [also known as perchloroethylene or tetrachloroethene (PCE)]. The maximum contaminant level (MCL) for PCE is 5 ppb. As a result of the contamination, Well No. 5 was removed from service.

11. PCE is commonly used in the dry cleaning industry as a cleaning solvent. PCE is a potential carcinogen, and is listed by the State of California pursuant to the Safe Drinking Water and Toxic Enforcement Act of 1986 as a chemical known to the State to cause cancer.

12. The Central Valley Regional Water Quality Control Board conducted a research study of wastes from dry cleaners as part of the State Water Resources Control Board Well Investigation Program. Sampling and analysis of condensates and cooling water was conducted. The chemical PCE was present in condensate fluids. The concentration of PCE in condensate was up to 30 percent pure solvent, with an average concentration of dissolved PCE at about 151,800 ppb. Cooling water discharges contained PCE concentrations in a range of 3 to 4,000 ppb. The study conducted by the Central Valley Regional Water Quality Control Board evaluated dry cleaning processes which included the type of processes used at the Thompson-Costa Cleaners.

13. In 1986, the Regional Water Board staff began an investigation of the source of contamination of Sebastopol Well No. 5 as part of the State Water Resources Control Board Well Investigation Program. The Regional Water Board staff assessed the available hydrogeologic information, construction details of Well No. 5, and existing and historical land uses in the vicinity of Well No. 5.

14. In 1989 and 1992, Regional Water Board staff conducted soil gas surveys under the Well Investigation Program to locate the source(s) of the PCE found in Well No. 5. The results of the survey indicated high PCE ion counts originating from the former dry cleaners at the site and present east and south of the site.

15. In 1994, the Regional Water Board staff, under a grant from the United States Environmental Protection Agency, sampled soil and groundwater upgradient of the dry cleaning business, on the property of the former dry cleaning business, and downgradient of the dry cleaning business. PCE was detected in soil up to 1400 ppb, and in groundwater up to 39 ppb near the former dry cleaning building.

16. Additional research of historical records of the Sebastopol area indicates that the old dry cleaners site had a discharge of condensate to Calder Creek, and a discharge is evident in an aerial photograph dated 1966. No controls were in place at the site to prevent discharges of condensate during the period of dry cleaning operations at the site.

17. Well No. 5 is constructed of 14-inch casing and is screened from 138 feet to 308 feet below ground surface (bgs) and from 348 feet to 528 feet bgs. There is a gravel pack in the annulus from 128 feet to 528 feet. The primary groundwater recharge area of Well No. 5 is from the west. When in use, Well No. 5 was typically pumped at a rate of 900 gallons per minute, and served approximately 500 service connections.

18. The site is located within the pumping radius and recharge area of Well No. 5. It is in an area identified by the State of California, Department of Health Services (*City of Sebastopol Demonstration Project, Drinking Water Source Assessment and Protection Program, November 1998*), as a Well Head Protection Zone A, with a projected 2-year time of travel to Well No. 5.

19. Investigations conducted at and around the site have documented the presence of volatile organic compounds and petroleum hydrocarbons in the groundwater beneath the site. Groundwater concentrations of total volatile organic compounds, including PCE, TCE and other similar compounds, vary across the site and have been as high as 2,100 ppb. Groundwater contamination has migrated off-site and has impacted the City of Sebastopol's Municipal Supply Well No. 5. The contaminants emanating from the site have affected and threaten to continue to affect the beneficial uses of waters of the state.

20. A gasoline service station is located near the former dry cleaners building. A release of petroleum hydrocarbons, benzene, toluene, xylene, ethylbenzene, and methyl tertiary-butyl ether (MtBE) to soil and groundwater from the gasoline service station has been documented. Contaminated groundwater from the gasoline service station and from the former dry cleaning business appears to be commingled.

21. On December 2, 1993, the Executive Officer issued Cleanup and Abatement Order No. 93-122. The Order requires the dischargers to define the vertical and horizontal extent of contamination at the site. Considerable work has occurred since issuance of Order No. 93-122, but additional effort is necessary to determine the full extent of contamination. A final remedial action plan is needed to clean up and abate the discharges and threatened discharges to groundwater.

22. The dischargers have caused or permitted, cause or permit, or threaten to cause or permit waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance. Continuing discharges are in violation of the Porter-Cologne Water Quality Control Act and provisions of the Water Quality Control Plan for the North Coast Region (Basin Plan).

23. Beneficial uses of areal groundwater include domestic, irrigation, and industrial supply. Beneficial uses of Calder Creek, a tributary to the Laguna de Santa Rosa and the Russian River are:

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

24. The Sebastopol area overlies the Wilson-Grove formation, previously known as the Merced formation, and consists of interbedded sands and gravels underlain by sandstones. These deposits allow abundant use of groundwater as domestic supply.

25. Discharge prohibitions contained in the Basin Plan apply to this site. State Water Resources Control Board Resolution 68-16, *Statement of Policy With Respect to Maintaining High Quality Waters in California*, and Resolution 92-49, *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Section 13304 of the California Water Code* apply to this site.

25. Water quality objectives exist to ensure protection of the beneficial uses of water. Where multiple beneficial uses of water exist, the most stringent water quality objectives for protection of all beneficial uses are selected as the protective water quality criteria. Alternative cleanup and abatement actions that evaluate the feasibility of, at a minimum: (1) cleanup to background levels, (2) cleanup to levels attainable through application of best practicable technology, and (3) cleanup to protect water quality objectives, need to be considered. The following table sets out the water quality objectives for surface and groundwaters at the site:

Constituent of Concern	Background Level ug/l	Water Quality Objective ug/l	Reference for Objective
Benzene	<0.5	1.0	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is 1.0 ug/l for domestic supply; USEPA health advisory for cancer risk is 0.7 ug/l; applied to the narrative TOXICITY objective in the Basin Plan
Toluene	<0.5	42	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is 150 ug/l for domestic supply; USEPA taste and odor threshold of 42 ug/l, Federal Register 54(97):22064-22138; applied to the TASTE AND ODOR water quality objective for domestic supply in the Basin Plan

Constituent of Concern	Background Level ug/l	Water Quality Objective ug/l	Reference for Objective
Ethylbenzene	<0.5	29	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is 700 ug/l; USEPA taste and odor threshold of 29, Federal Register 54(97):22064-22138; applied to the TASTE AND ODOR water quality objective for domestic supply in the Basin Plan
Xylene	<0.5	17	California DHS MCL, Title 22 of the California Code of Regulations, § 64444 is 1750 ug/l for domestic supply; USEPA taste and odor threshold of 17, Federal Register 54(97):22064-22138; applied to the TASTE AND ODOR water quality objective for domestic supply in the Basin Plan
Trichloroethene (TCE)	<0.5	5	for protection of domestic supply, Title 22 § 64444.5
Tetrachloroethene (PCE)	<0.5	5	for protection of domestic supply, Title 22 § 64444.5
Cis-1,2-Dichloroethene	<0.5	6	For protection of domestic supply, Title 22 § 64444.5
Trans-1,2-Dichloroethene	<0.5	10	for protection of domestic supply, Title 22 § 64444.5
Vinyl Chloride	<0.5	0.5	for protection of domestic supply, Title 22 § 64444.5
Methyl-tertiary butyl ether (MtBE)	<5	5	California DHS Secondary MCL, Title 22 of the California Code of Regulations, 5.0 ug/l drinking water standard.
1,2-Dichloroethane	<0.5	0.5	for protection of domestic supply, Title 22 § 64444.5
Total Petroleum Hydrocarbons as gasoline (TPH-g)	<50.0	50.0	Published literature provides a taste and odor threshold of 5 ug/l which is applied to the narrative TASTE and ODOR objective of the Basin Plan for domestic supply, but detection limit is 50 ug/l and is controlling

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

28. 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.

29. 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 the California Environmental Quality Act (Public Resources Code, Section 21000 et. seq.) in accordance with Section 15308 and 15321, Chapter 3, Title 14 of the California Code of Regulations.

THEREFORE, IT IS HEREBY ORDERED that, pursuant to California Water Code Sections 13267(b) and 13304, the dischargers shall cleanup and abate the discharge and threatened discharge of volatile organic compounds forthwith and shall comply with the following provisions of this Order:

1. Conduct all work under the direction of a California registered civil engineer or geologist experienced in volatile organic compound soil and groundwater remediation.

2. Comply with all provisions of the Monitoring and Reporting Program No. 98-121 and subsequent revisions thereof.

3. Submit by August 15, 2001 the design of the vapor extraction/air sparging interim remedial measure.

4. Commence implementation of the vapor extraction/air sparging IRM within 10 days following concurrence of the design by the Regional Water Board Executive Officer.

5. Submit within 90 days following implementation of the vapor extraction/air sparging system, a report of Interim Remedial Measures conducted under Provisions 3 and 4, above.

6. Submit within 160 days of the date of this Order a workplan to fully characterize the release and define the horizontal and vertical extent of onsite and offsite soil and groundwater contamination. The workplan shall also describe abatement activities necessary to restore the beneficial use of municipal supply to Sebastopol Well No. 5 through the provision of alternative water supplies or other similar measures. The workplan shall also include a schedule and commitment by the dischargers for implementation of the workplan.

7. Commence implementation of the workplan submitted under Provision 6, above, within 10 days following concurrence by the Executive Officer.

8. Submit, for the Executive Officer's concurrence, a report of implementation of the workplan within 90 days of implementation pursuant to Provision 7, above. The report shall include recommendations and a scope of work for any additional characterization, a site conceptual model, and a time schedule and associated costs for additional deliverables including, but not limited to, a health and ecological risk assessment which will assess off-site as well as onsite exposure potential, a treatability study, a feasibility study, and a draft Remedial Action Plan for final cleanup and abatement of discharges at and from the site. The schedule shall include submittal of a complete draft Remedial Action Plan within 120 days of No. 8 above, development of remedial design documents within 120 days of approval of the Remedial Action Plan by the Executive Officer, and implementation of final remedial action within 120 days of approval of the remedial design by the Executive Officer.

9. Provide monthly progress reports describing all actions taken to comply with this Order. Reports shall contain sufficient detail to determine progress and interactions/coordination between the public, agencies, and other interested parties.

10. Comprehensively assess all interim and final remedial actions annually for effectiveness. An annual report containing the findings from the assessment shall be submitted by January 15, of the following year.

11. Provide copies of all correspondence and documents relating to this investigation and cleanup simultaneously to the Regional Water Board, and the City of Sebastopol.

12. Promptly pay, in accordance with the invoicing instructions, all invoices for Regional Water Board oversight, including associated oversight costs for the Office of Environmental Health Hazard Assessment review of necessary documents including the ecological and human health risk assessment.

13. 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 five days in advance of the due date and shall include justification for this 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 _____
Susan A. Warner
Executive Officer

August 14, 2001

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