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California Regional Water Quality Control Board
North Coast Region

CLEANUP AND ABATEMENT ORDER NO. R1-2000-27

FOR

EQUILON ENTERPRISES

2005 GUERNEVILLE ROAD
SANTA ROSA

Sonoma County

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

1. Equilon Enterprises (formerly Shell Oil Company) owns property and operates a Shell branded retail gasoline station at 2005 Guerneville Road (hereinafter the site).

2. The site is located at the northwest corner of Marlow and Guerneville Roads in Santa Rosa, California. The site is bordered on the north by residential property, on the east by Marlow Road and a Chevron branded retail gasoline station, on the south by Guerneville Road and a shopping center, and on the west by residential property (Attachment A).

3. The site has been occupied by a Shell branded retail gasoline station since the early 1960s. The first generation underground storage tanks (USTs), located in the center of the western half of the property, were removed in approximately 1982. Fuel currently is dispensed from three, (3) 10,000-gallon double walled fiberglass USTs located at the northeast corner of the property.

4. On March 2, 1994, Regional Water Board staff collected soil and groundwater samples during convenience store construction and UST system piping upgrade activities. Total Petroleum Hydrocarbons as gasoline (TPHg) were detected at up to 2,600 parts per million (ppm) in soil beneath the dispensers. Total Petroleum Hydrocarbons as diesel (TPHd) were detected in groundwater collected from a tank backfill observation well at up to 570 parts per billion (ppb). The data documents a discharge of petroleum products to the environment, and Equilon Enterprises is hereinafter referred to as the discharger.

5. The discharger has conducted site investigative work including: drilling of eight soil borings and installation of three groundwater monitoring wells in October 1994, installation of three groundwater monitoring wells and one soil vapor extraction well in June 1996, and installation of two groundwater monitoring wells in April 1998.

6. Quarterly groundwater sampling has been conducted since October 1994. Cumulative groundwater results show maximum concentrations at 116,000 ppb for TPHg, 7,100 ppb for TPHd, 4,800 ppb for benzene, 24,000 ppb for toluene, 4,600 ppb for ethylbenzene, 26,000 ppb for xylenes and 260,000 ppb for Methyl tert Butyl Ether (MTBE).

7. On February 4, 1999 a significant increase in MTBE concentrations was reported in monitoring well S-4 from 159 ppb to 183,000 ppb. The increase was confirmed in August 1999 at 260,000 ppb using EPA Method 8260.

8. On June 9, 1999, Regional Water Board staff requested the submittal of a Corrective Action Plan (CAP) by July 30, 1999. The CAP was submitted on September 1, 1999 and included a proposal to conduct plume migration control at the north property boundary. The proposal did not include a plan to remediate contamination at the site and did not address the full extent of the plume. The vertical and lateral extent of MTBE has not been defined. Regional Water Board staff requested a revised CAP on November 16, 1999.

9. Three domestic water supply wells are located on two adjacent properties to the north at 2053 and 2049 Marlow Road. Additional water supply wells are located in close proximity to the site. On March 13, 2000, Regional Water Board staff was notified of the presence of MTBE in a drinking water supply well located at 2053 Marlow Road. The analytical results show the presence of MTBE at up to 7.6 ppb using EPA Method 8260. The water quality objective for MTBE is 5.0 ug/l.

10. Water quality objectives exist to ensure protection of the beneficial uses of water. Several beneficial uses of water exist, and 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 need to be considered 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 protective water quality criteria levels. The following water quality objectives apply to this site:

Constituent of Concern	Background Level ug/l	Water Quality Objective ug/l	Reference for Objective
Total Petroleum Hydrocarbons as gasoline (TPH-g)	$\leq$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
Total Petroleum Hydrocarbons as diesel (TPH-d)	$\leq$50.0	56.0	USEPA health advisory of September 4, 1992, Suggested No Adverse Response Level of 56 ug/l is applied to narrative TOXICITY 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
Total Petroleum Hydrocarbons as motor oil	≤50.0	50.0	U.S. EPA National Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, May 1, 1986. SNARL of 0.1 ug/l to 1.0 ug/l is applied to the narrative TOXICITY objective in the Basin Plan and Oil and Grease objective of the Basin Plan, but detection limit is 50 ug/l and is controlling
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 is 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
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 is 29 ug/l, 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, Federal Register 54(97):22064-22138 is 17 ug/l; 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
Tertiary Butyl Alcohol	<10.0	12	Department of Health Services Interim Action Level.
Methyl-tertiary butyl ether (MTBE)	<0.5	5	Department of Health Services Secondary Maximum Contaminant Level 22CCR Section 64449.
Polynuclear aromatic hydrocarbons (PAH)	≤0.031	0.031[1]	U.S. EPA Human Health Protection for Other Waters (aquatic organism consumption only) is applied to the narrative TOXICITY objective in the Basin Plan for domestic supply
Polynuclear aromatic hydrocarbons (PAH)	≤0.0028	0.0028[1]	U.S. EPA Human Health Protection for Sources of Drinking Water is applied to the narrative TOXICITY objective in the Basin Plan for domestic supply

13. Existing and potential beneficial uses of areal groundwater include domestic, agricultural, industrial and municipal water supply.

14. The discharger has caused or permitted, causes or permits, or threatens to cause or permit waste to be discharged or deposited where it is, or probably will be, discharged into waters of the state and create, or threaten to create, a condition of pollution or nuisance. The discharge and threatened discharge of waste is deleterious to the beneficial uses of water and is creating and threatens to create a condition of pollution and nuisance which threatens to continue unless the discharge and threatened discharge is permanently abated.

15. This enforcement action is being taken for the protection of the environment and, therefore, is exempt from 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.

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 waste by complying with the following tasks:

A. Provide the owners of 2053 and 2049 Marlow Road with an alternative potable water supply forthwith.

[1] For sum of acenaphthylene, anthracene, benz(a)anthracene, benzo(a)anthracene, benzo(b) fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, chrysene, dibenz(a,h)anthracene, fluorene, indeno(1,2,3-c,d)pyrene, phenanthrene, and pyrene

B. Conduct a sensitive receptor survey by May 5, 2000. The survey must include a door to door water supply well survey.

C. Submit a revised Corrective Action Plan (CAP) according to the requirements of the California Code of Regulations (Title 23, Division 3, Chapter 16, Article 11, Section 2725) by May 5, 2000. The CAP must include a proposal to define the lateral and vertical extent of groundwater contamination, and include a conceptual model for site contaminants.

D. Implement the CAP and plume definition work plan within 45 days of Regional Water Board Executive Officer concurrence with the CAP.

E. Submit a report of completed work, with a work plan and schedule for Executive Officer concurrence for any needed additional effort to define the extent of contamination, within 60 days of work plan implementation.

F. Complete additional work tasks in accordance with the final plan and schedule described in E, above, within 45 days of Regional Water Board Executive officer concurrence with the plan and schedule.

G. Comply with Monitoring and Reporting Program No. R1-2000-28.

H. If, for any reason, the discharger is unable to perform any activity or submit any documentation in compliance with the work schedule set forth herein or in compliance with any schedule submitted pursuant to the Order and approved by the Executive Officer, the discharger may request, in writing, a time extension. The extension request must be submitted at least five days in advance of the due date 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 upon the extension. An extension may be granted for good cause, in which case this Order will be accordingly revised.

Ordered by _____
Lee A. Michlin
Executive Officer

April 5, 2000

(shellcao)