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Chevron

May 10, 1994

Chevron U.S.A. Products Company
2410 Camino Ramon
San Ramon, CA 94583
P.O. Box 5004
San Ramon, CA 94583-0804

Marketing Department
Phone 510 842 9500

Mr. Scott Seery
Alameda County Environmental Health
80 Swan Way, Rm. 200
Oakland, CA 94621

Re: Chevron Service Station No. 9-2013
15002 Hesperian Blvd., San Leandro, California

Dear Mr. Seery :

At the request of Chevron U.S.A. Products Co., Groundwater Technology obtained several groundwater samples from monitoring wells (MW-2, MW-3, MW-6, MW-8). These samples were subsequently analyzed and fingerprinted by Chevron Research & Technology Co. (CRTC) in Richmond, California.

Results from CRTC's analysis suggest UNOCAL's plume migrated to our site. Several compounds found in coker gasoline were detected. UNOCAL refineries in Rodeo and Santa Maria, CA were reported to have cokers. Since Chevron's Richmond Refinery does not have a coker, it suggests that these wells contain traces of UNOCAL's plume.

In light of this information, Chevron would like to cease the additional investigation that you requested in your letter dated August 18, 1993. It is Chevron's opinion based on CRTC's summary and Law Environmental's Phase II Site Assessment Report dated November 14, 1990 that this investigation should be part of UNOCAL's responsibility.

Please respond to our request in writing. For additional information, refer to the enclosed project summary from CRTC dated May 5, 1994. If you have any questions or comments, please feel free to contact me at (510) 842-8752.

Sincerely,

Chevron U.S.A. Products Co.

Kenneth Kan
Engineer

LKAN/MacFile 9-2013R14

Enclosure

cc: Mr. Lester Feldman, RWQCB-San Francisco Bay Region
2101 Webster Str., Ste. 500, Oakland, CA 94612

Mr. Steve Willer, Chevron U.S.A. Products Co.

MAY 9 '94 J.M.M.

CHEVRON RESEARCH AND TECHNOLOGY COMPANY
ANALYTICAL SCIENCES UNIT PROJECT SUMMARY

Project No.	5767	**Requested by**	K. L. Kan
Date Initiated	4/7/94	**Location**	CUSA Products Co.
Date Completed	5/5/94		P.O. Box 5004
CRTC Charge Code	TT15267		San Ramon, CA 94583
		Phone	842-8752

Project Description: Analyze four water samples, labeled MW-2, MW-3, MW-6, and MW-8, taken from Chevron service station number 9-2013 at 15002 Hesperian Blvd., San Leandro, CA. Determine if Unocal's plume has reached Chevron's facility. A site plan shows MW-3 to be upgradient towards the Unocal site. MW-6 is located on Chevron property. MW-2 is located cross-gradient to MW-6. MW-8's location is not shown.

Results: All of the wells contain some gasoline. Blank-corrected concentrations are shown in the following table.

Well	mg/L (ppm) gasoline, duplicate
MW-2	1.6, 3.5
MW-3	2.4, 1.9
MW-6	0.6, 0.4
MW-8	0.04, 4.7

The gasoline in the wells appears to be present as entrained material (microscopic bubbles, coated dust particles) rather than dissolved hydrocarbon. This observation is supported by the dramatic changes in concentration between duplicates, especially for MW-8. The lack of prominent BTEX peaks also suggests entrainment, although it could also be attributed to preferential biodegradation of aromatics.

Fingerprints from wells MW-2, MW-3 and MW-8 have an identical pattern, with prominent peaks in the C_9 to C_{12} region. A few of these peaks appear to be the aromatic compounds generically typical of gasolines. Many of the peaks cannot be identified without GC/MS analysis. The MW-6 fingerprints contain these same compounds, but not always in the same ratios.

There are no compounds in the gasolines that definitively link them with Unocal. However, there are four compounds that occur in all of the sample gasolines that are present in moderate to high concentrations in coker gasoline and not typically present in other gasoline blending stocks. Tentative identifications for two of these peaks are 1-nonene and 1-undecene. Unocal refineries at Rodeo, CA and Santa Maria, CA both have cokers. Chevron's Richmond refinery does not currently have a coker. This suggests that all four wells contain traces of a Unocal plume.

Analytical Approach: The samples were extracted with carbon disulfide and analyzed by gas chromatography using a flame ionization detector to determine the hydrocarbon composition. Total extractable petroleum hydrocarbon was quantified by an ethylcyclohexane internal standard.

Analyzed by: N. Berkowitz
Reported by: E. A. Harvey EAH
Reviewed by: J. Kimberlin J.K.

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