KAPREALIAN ENGINEERING
INCORPORATED

STD
1039

October 29, 1996

Bay Area Air Quality Management District
Permit Services Division
939 Ellis Street
San Francisco, CA 94109

Attention: Mr. Robert E. Cave, Air Quality Engineer II

RE: Abatement Device Change
Application Number 25153
2225 Telegraph Avenue
Oakland, California

Dear Mr. Cave:

As shown on the attached sheet, the sample laboratory results demonstrate that the system influent concentrations are below 1,000 ppmv. Therefore, Kaprealian Engineering, Inc. (KEI), on behalf of Texaco, will be changing the system's abatement device from the catalyst to two 2,000 pound carbon canisters connected in series.

The permit conditions state that the carbon system is to be monitored on a daily basis with a FID or a PID. However, as the calculations on the second attached sheet indicate, saturation of the first canister is calculated to take place after 177-days of operation, based on very conservative values. Therefore, it appears that daily monitoring of the system with a PID is not necessary. KEI requests to monitor the system once every two weeks. Please let me know in writing, as required by our permit, if this requested is acceptable.

If you have any questions, please do not hesitate to call me at (510) 602-5106.

Sincerely,

Kaprealian Engineering, Inc.

Sarkis A. Soghomonian
Project Engineer

SAS:jad\REC1029

Attachments

cc: Ms. Karen E. Petryna, Texaco
Mr. Michael Faber, Exxon
Mr. Dale Klettke, ACHCS ✓

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel: 510.602.5100 Fax: 510.687.0602

2225 Telegraph Avenue, Oakland, CA

VAPOR EXTRACTION SYSTEM
INFLUENT CONCENTRATIONS

DATE	SAMPLE	TPH-G	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES
10/10/96	Influent	160	1.5	2.0	0.34	1.9
	Effluent	16	<0.2	0.65	<0.2	0.78
9/26/96	Influent	13	<0.2	<0.2	<0.2	<0.4
	Effluent	<10	<0.2	<0.2	<0.2	<0.4
9/11/96	Influent	160	1.6	2.1	0.37	1.7
	Effluent	<10	<0.2	0.56	<0.2	<0.4
8/22/96	Influent	64	1.2	2.7	0.48	2.3
	Effluent	<10	<0.2	<0.2	<0.2	<0.4
8/6/96	Influent	89	1.1	1.0	0.53	2.2
	Effluent	18	<0.2	0.4	<0.2	0.73
7/17/96	Influent	540	5.5	30	3.5	16
	Effluent	12	<0.2	<0.2	<0.2	0.71
7/2/96	Influent	110	0.59	0.76	<0.2	0.84
	Effluent	<10	<0.2	<0.2	<0.2	<0.2
6/19/96	Influent	240	2.4	3.9	0.63	3.1
	Effluent	<10	<0.2	<0.2	<0.2	0.43
6/5/96	Influent	160	0.65	1	<0.4	1.2
	Effluent	19	<0.2	<0.2	<0.2	0.53
5/22/96	Influent	170	1.4	1.8	0.30	1.9
	Effluent	<10	<0.2	<0.2	<0.2	0.48
5/7/96	Influent	74	12	4.6	3.5	11
	Effluent	<10	<0.2	<0.2	<0.2	<0.2
4/25/96	Influent	110	2.0	2.1	0.32	2.0
	Effluent	<10	<0.2	0.62	<0.2	1.1
4/9/96	Influent	940	12	3.0	1.7	3.6
	Effluent	<10	<0.2	<0.2	<0.2	<0.2
1/24/96	Influent	1900	37	13	6.3	16
	Effluent	<10	<0.2	0.28	<0.2	1.2

All sample results are in mg/M^3.

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Average influent TPH-G concentration (6/5/96 - 10/10/96) = 341.3 mg/M^3.

Average extraction flow rate (6/5/96 - 10/10/96) = 73.7 cfm.

Assume 2,000-pound vapor phase canister can adsorb 400-pounds of hydrocarbons.
(Vapor phase carbon typically can adsorb 20% hydrocarbons by weight.)

Daily hydrocarbon extraction rate = (341.3 mg/M^3) x (73.7 ft^3/min) x c = 2.26 pounds/day.
Saturation of one canister would take = (400-pounds) / (2.26 pounds/day) = **177 days.**