

ALAMEDA COUNTY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS



PFIZER PIGMENTS INC.

A subsidiary of Pfizer Inc.

4650 SHELLMOUND ST., P.O. BOX 8215 • EMERYVILLE, CA 94662-0905
415 / 653-6151

August 14, 1989

Alameda County Health
Care Services Agency
Department of Environmental Health
Division of Hazardous Materials
80 Swan Way, Room 200
Oakland, CA 94621

Attention: Gilbert Wistar, Hazardous Materials Specialist

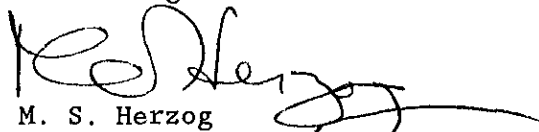
Tank Site Monitoring

Enclosed is our quarterly groundwater monitoring report associated with the removed waste oil/solvent tank site.

The results show a further reduction in MIBK at the RW-4 location. The down-gradient wells, RW-2 and 3, again show "not detected" solvent levels indicating no migration from the tank site. No oil and grease was detected in any of the samples.

We also submitted the three well samples for biologic activity determination. The RW-4 sample showed significantly higher biologic activity. We believe the reduction in solvent level in RW-4 is the result of biodegradation and that this action will continue.

Given the steady reduction in solvent level in the groundwater and the clear indication that no migration is taking place, we respectfully request that the quarterly monitoring requirements be modified to annual monitoring.


M. S. Herzog
Manager, Process Engineering

MSH/jm
\wp\m\msh334

CONSULTING GROUND-WATER
GEOLOGISTS AND ENGINEERS

ROUX ASSOCIATES

1430 WILLOW PASS ROAD
SUITE 140
CONCORD, CALIFORNIA 94520 415 685-8742



RECEIVED

AUG 14 1989

EMERYVILLE, CALIF.

August 7, 1989

Mr. Michael Herzog
Pfizer Pigments, Inc.
P.O. Box 8215
4650 Shellmound Street
Emeryville, CA 94662-0905

QUARTERLY GROUND-WATER MONITORING
PFIZER PLANT, EMERYVILLE, CA

Dear Mike:

This letter report presents the results of the second quarterly ground-water monitoring at the Pfizer Plant, 4650 Shellmound Street, in Emeryville, California (Figure 1). A site investigation to assess soil and ground-water contamination from a removed underground waste oil tank was completed in August, 1988. The results of the site investigation are contained within a report prepared by Roux Associates on August 12, 1988 entitled "Underground Storage Tank Site Investigation". Based on the findings of the site investigation, ground-water monitoring of wells RW-2, RW-3, and RW-4 for solvents was recommended. The Alameda County Department of Environmental Health approved quarterly ground-water monitoring of these three wells for solvents and total oil and grease in correspondence dated April 3, 1989.

The first set of quarterly ground-water samples were collected from the three monitoring wells on April 18, 1989. This second set of ground-water monitoring as collected on July 7, 1989. Prior to sampling, five casing volumes of water were purged from each well to remove stagnant water from the well casing. Water samples were collected in a stainless steel bailer and transferred into 500 ml amber glass bottles and 40 ml VOA vials provided by the laboratory. The samples were immediately placed in an ice chest and transported to the laboratory. A chain-of-custody was maintained from sample collection through delivery to the laboratory. The chain-of-custody form is included in Attachment A.

Ground-water samples were analyzed by Curtis and Tompkins Laboratory for volatile organic compounds by EPA Method 624 and for total oil and grease by Method SMWW 503 E. A standard bacteria plate count was also performed on ground water from this second quarterly sampling. Water analyses from the previous samplings and this most recent quarterly

TABLE 1 WATER ANALYSES

Well	Date Sampled	Oil and Grease SMWW503E (ppm)	Volatile Organic EPA 624 (ppb)	Standard Plate Count (per ml at 35c)
RW-2	3-9-88	ND	-	-
RW-2	3-28-88	-	ND	-
RW-2	4-18-89	ND	ND	-
RW-2	7-7-89	ND	ND	11,000
RW-3	3-9-88	ND	ND	-
RW-3	3-28-88	-	ND	-
RW-3	6-6-88	ND	-	-
RW-3	4-18-89	ND	ND	-
RW-3	7-7-89	ND	ND	5,300
RW-4	3-9-88	ND	C=6,800 D=8,220 E=44,240	
RW-4	4-18-89	ND	E=4,100	
RW-4	7-7-89	ND	E=3,300 F=10	23,000

- = Not Analyzed

ND = None Detected

A = Naphthalene

B = 2-methylnaphthalene

C = Acetone *water soluble*

D = 2-butanone, (MEK) - *density: 0.8 ; water soluble*

E = 4-methyl-2-pentanone, (MIBK) *density 0.79 ; not water soluble*

F = Total xylenes

sampling are presented on Table 1 and laboratory reports are included in Attachment A.

DISCUSSION OF RESULTS

Solvents were not detected in ground-water samples collected from the two downgradient monitoring wells RW-2 and RW-3 (Figure 2). Well RW-2 is southwest of the former tank pit and well RW-3 is west northwest of the former tank pit. Ground water from well RW-4, the monitoring well within the former tank pit, contained 4-methyl-2-pentanone at a concentration of 3,300 ppb. No other solvents were detected in monitoring well RW-4. Trace levels of 1,2-dichloroethane, toluene, and ethylbenzene were reported for ground water from RW-4 (Appendix A). Total xylenes were detected at 10 ppb in RW-4. The California Department of Health Services Applied Action Level for total xylenes is 620 ppb. Oil and grease was not detected in all three monitoring wells.

The absence of detectable levels of volatile organic compounds in the downgradient monitoring wells indicates that solvents are not migrating from the former tank pit at significant concentrations. As shown by monitoring results from well RW-4 (Table 1), the concentrations of solvents in ground-water within the former tank pit continue to decrease. Acetone and MEK are below detection limits in the ground water. MIBK (4-methyl-2-pentanone) has decreased from 44,240 ppb on 3/9/88 to 4,100 ppb on 4/18/89 to 3,300 ppb on 7/7/89.

We believe that biodegradation has caused the decrease in concentrations of acetone and ketones in ground water within the former tank pit. A standard plate count was run to measure biologic activity in the ground water. Well RW-4 had a significantly higher plate count than the two downgradient wells (Table 1). Biodegradation can be expected to continue to degrade the MIBK remaining within ground water but the rate of degradation may be decreasing. We recommend that ground-water monitoring continue but the period of monitoring should be increased from quarterly to semi-annual or annual.

Should you have any questions or comments on these results, please contact me at (415) 685-8742.

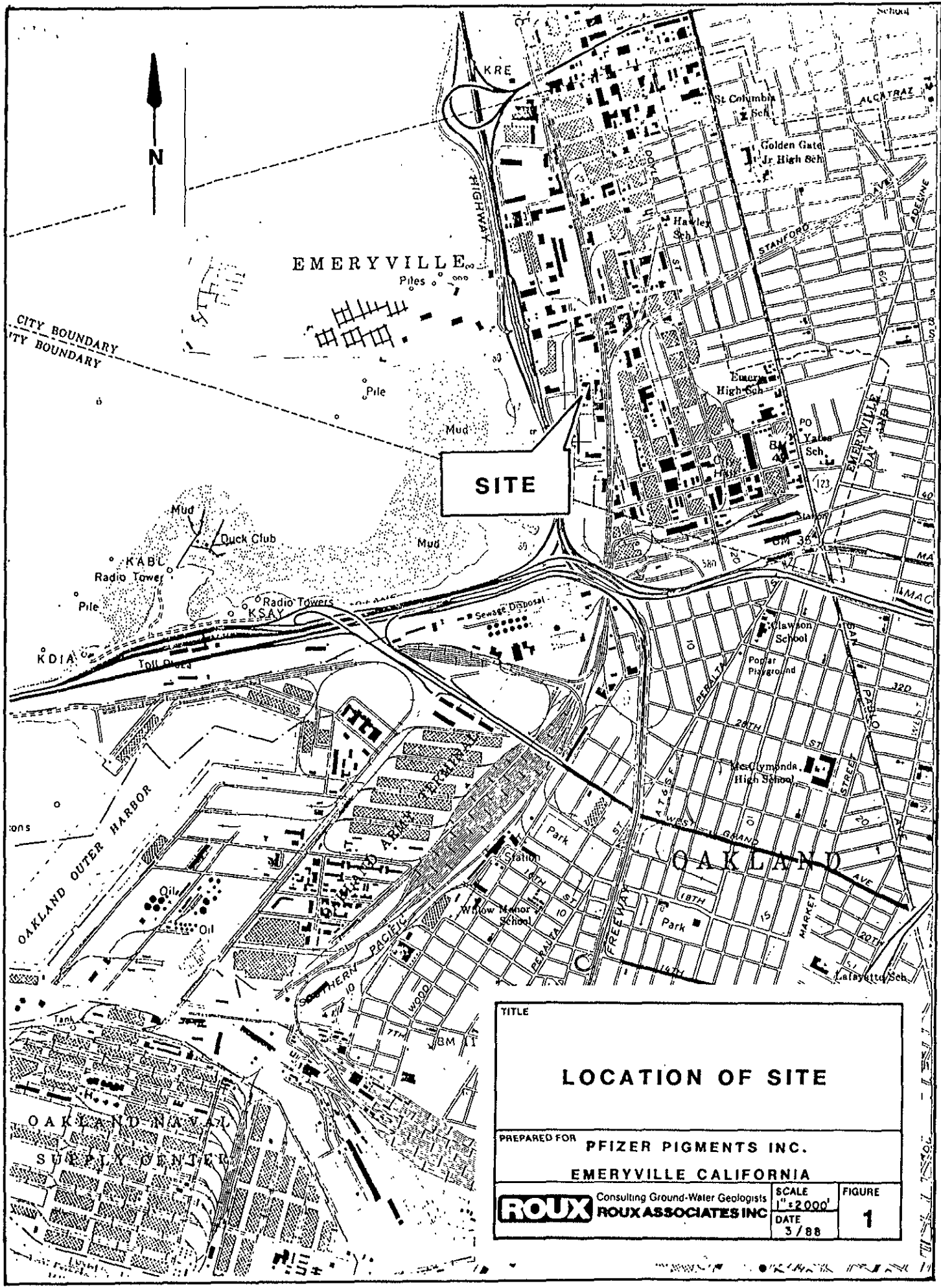
Sincerely,
ROUX ASSOCIATES WEST, INC.



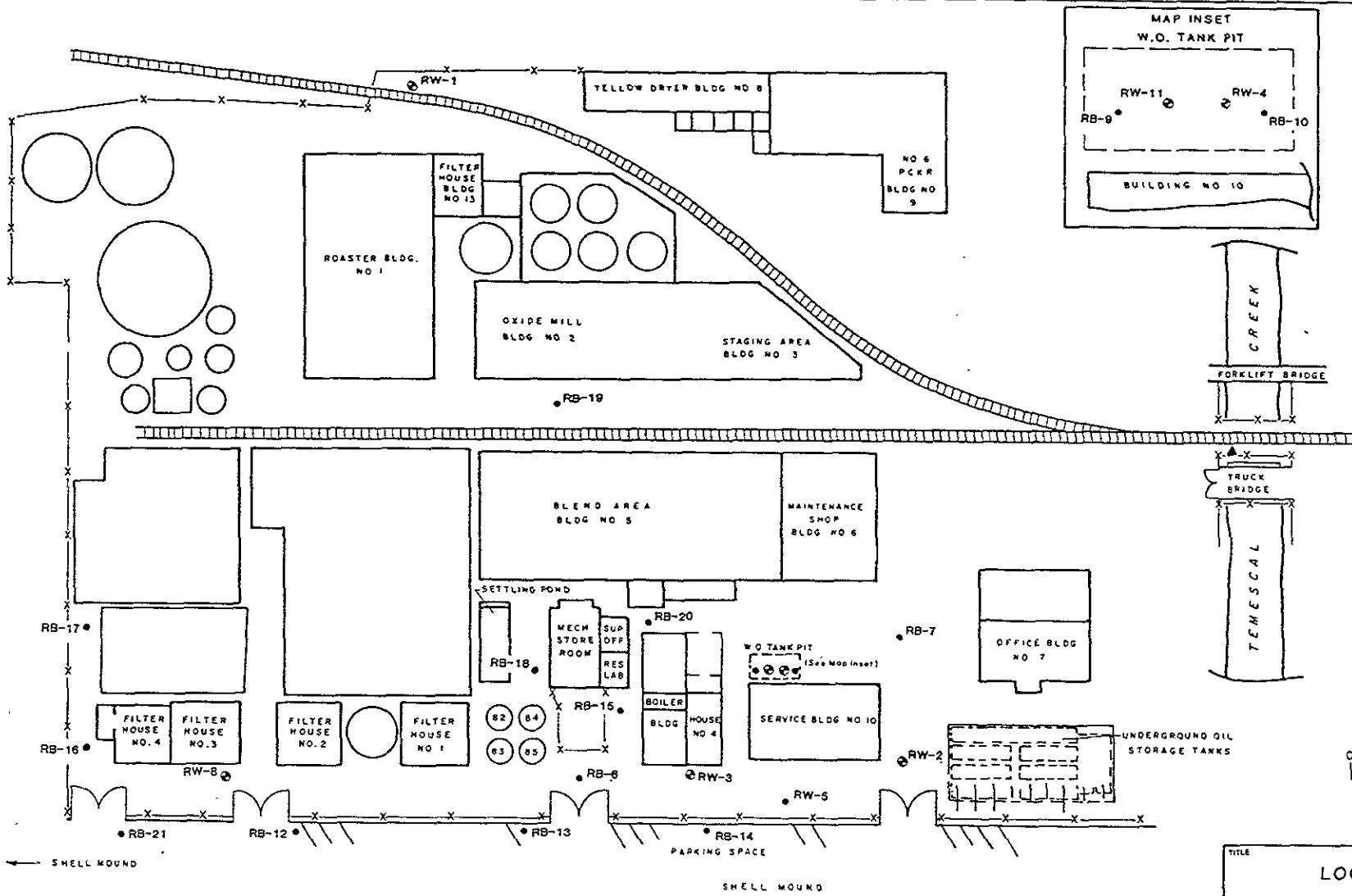
Jerry T. Wickham
CA Reg. Geologist No. 3766
CA CEG 1177

CC: Wayne McCoy

ROUX ASSOCIATES



TITLE	
LOCATION OF SITE	
PREPARED FOR PFIZER PIGMENTS INC.	
EMERYVILLE CALIFORNIA	
ROUX Consulting Ground-Water Geologists	SCALE 1" = 2,000'
	DATE 3/88
ROUX ASSOCIATES INC	FIGURE 1



- LEGEND
- ⊙ MONITORING WELL
 - SOIL BORING
 - ▲ SURFACE WATER MEASURING POINT

TITLE		
LOCATION OF SOIL BORINGS AND MONITORING WELLS		
PREPARED FOR		
PFIZER PIGMENTS, INC. EMERYVILLE, CALIFORNIA		
ROUX	SCALE	FIGURE
	SHOWN	2
DATE		
6/78		

ATTACHMENT A



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710. Phone (415) 486-0900

DATE RECEIVED: 07/07/89

DATE REPORTED: 07/19/89

PAGE 1 OF 6

LAB NUMBER: 17790

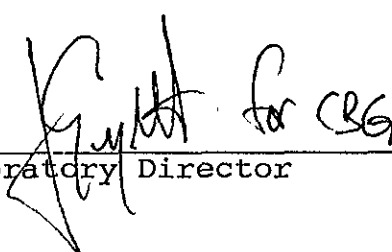
CLIENT: ROUX ASSOCIATES

REPORT ON: THREE WATER SAMPLES

JOB #: 04728

LOCATION: PFIZER, EMERYVILLE

RESULTS: SEE ATTACHED



Laboratory Director

LABORATORY NUMBER: 17790-1
 CLIENT: ROUX ASSOCIATES
 JOB #: 04728 - PFIZER, EMERYVILLE
 SAMPLE ID: R-2

DATE RECEIVED: 07/07/89
 DATE ANALYZED: 07/12/89
 DATE REPORTED: 07/19/89
 PAGE 2 OF 6

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
chloromethane	ND	10
bromomethane	ND	10
vinyl chloride	ND	10
chloroethane	ND	10
methylene chloride	ND	5
trichlorofluoromethane	ND	5
1,1-dichloroethene	ND	5
1,1-dichloroethane	ND	5
trans-1,2-dichloroethene	ND	5
chloroform	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
carbon tetrachloride	ND	5
bromodichloromethane	ND	5
1,2-dichloropropane	ND	5
cis-1,3-dichloropropene	ND	5
trichloroethylene	ND	5
dibromochloromethane	ND	5
1,1,2-trichloroethane	ND	5
benzene	ND	5
trans-1,3-dichloropropene	ND	5
2-chloroethylvinyl ether	ND	10
bromoform	ND	5
1,1,2,2-tetrachloroethane	ND	5
tetrachloroethene	ND	5
toluene	ND	5
chlorobenzene	ND	5
ethyl benzene	ND	5

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	10
carbon disulfide	ND	5
2-butanone	ND	10
vinyl acetate	ND	10
2-hexanone	ND	10
4-methyl-2-pentanone	ND	10
styrene	ND	5
total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2-Dichloroethane-d4	92%
Toluene-d8	102%
Bromofluorobenzene	101%

LABORATORY NUMBER: 17790-2
 CLIENT: ROUX ASSOCIATES
 JOB #: 04728 - PFIZER, EMERYVILLE
 SAMPLE ID: R-3

DATE RECEIVED: 07/07/89
 DATE ANALYZED: 07/12/89
 DATE REPORTED: 07/19/89
 PAGE 3 OF 6

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
chloromethane	ND	10
bromomethane	ND	10
vinyl chloride	ND	10
chloroethane	ND	10
methylene chloride	ND	5
trichlorofluoromethane	ND	5
1,1-dichloroethene	ND	5
1,1-dichloroethane	ND	5
trans-1,2-dichloroethene	ND	5
chloroform	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
carbon tetrachloride	ND	5
bromodichloromethane	ND	5
1,2-dichloropropane	ND	5
cis-1,3-dichloropropene	ND	5
trichloroethylene	ND	5
dibromochloromethane	ND	5
1,1,2-trichloroethane	ND	5
benzene	ND	5
trans-1,3-dichloropropene	ND	5
2-chloroethylvinyl ether	ND	10
bromoform	ND	5
1,1,2,2-tetrachloroethane	ND	5
tetrachloroethene	ND	5
toluene	ND	5
chlorobenzene	ND	5
ethyl benzene	ND	5

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	10
carbon disulfide	ND	5
2-butanone	ND	10
vinyl acetate	ND	10
2-hexanone	ND	10
4-methyl-2-pentanone	ND	10
styrene	ND	5
total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2-Dichloroethane-d4	102%
Toluene-d8	100%
Bromofluorobenzene	101%

LABORATORY NUMBER: 17790-3
 CLIENT: ROUX ASSOCIATES
 JOB #: 04728 - PFIZER, EMERYVILLE
 SAMPLE ID: R-4

DATE RECEIVED: 07/07/89
 DATE ANALYZED: 07/12/89
 DATE REPORTED: 07/19/89
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EPA METHOD 624: VOLATILE ORGANICS IN WATER

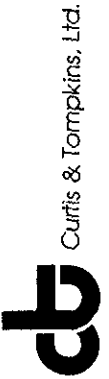
COMPOUND	Result ug/L	Detection Limit ug/L
chloromethane	ND	10
bromomethane	ND	10
vinyl chloride	ND	10
chloroethane	ND	10
methylene chloride	ND	5
trichlorofluoromethane	ND	5
1,1-dichloroethene	ND	5
1,1-dichloroethane	ND	5
1,2-dichloroethene (total)	TRACE	5
chloroform	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
carbon tetrachloride	ND	5
bromodichloromethane	ND	5
1,2-dichloropropane	ND	5
cis-1,3-dichloropropene	ND	5
trichloroethylene	ND	5
dibromochloromethane	ND	5
1,1,2-trichloroethane	ND	5
benzene	ND	5
trans-1,3-dichloropropene	ND	5
2-chloroethylvinyl ether	ND	10
bromoform	ND	5
1,1,2,2-tetrachloroethane	ND	5
tetrachloroethene	ND	5
toluene	TRACE	5
chlorobenzene	ND	5
ethyl benzene	TRACE	5

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	10
carbon disulfide	ND	5
2-butanone	ND	10
vinyl acetate	ND	10
2-hexanone	ND	10
4-methyl-2-pentanone	3,300	10
styrene	ND	5
total xylenes	10	5

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2-Dichloroethane-d4	98%
Toluene-d8	104%
Bromofluorobenzene	102%



Curtis & Tompkins, Ltd.

LAB NUMBER: 17790
 CLIENT: ROUX ASSOCIATES
 PROJECT # : 04728

DATE RECEIVED: 07/07/89
 DATE ANALYZED: 07/10/89
 DATE REPORTED: 07/19/89
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ANALYSIS: OIL AND GREASE
 METHOD: SMWW 503E

LAB ID	SAMPLE ID	RESULT	UNITS	DETECTION LIMIT
17790-1	R-2	ND	mg/L	20
17790-2	R-3	ND	mg/L	20
17790-3	R-4	ND	mg/L	20

QA/QC SUMMARY

=====

RECOVERY, %	95
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=====

LABORATORY NUMBER: 17790
CLIENT: ROUX ASSOCIATES
PROJECT #: 04728
LOCATION: PFIZER, EMERYVILLE

DATE RECEIVED: 07/07/89
DATE ANALYZED: 7/17/89
DATE REPORTED: 7/19/89
PAGE 6 OF 6

=====
ANALYSIS: STANDARD PLATE COUNT
=====

LAB ID	SAMPLE ID	per ml at 35C
17790-1	R-2	11,000
17790-2	R-3	5,300
17790-3	R-4	23,000

ROUX ASSOCIATES

CHAIN OF CUSTODY RECORD

Project No. 04728

Project Title Pfizer, Emeryville, CA. Quarterly Monitoring

Sample Source Monitoring wells

Collectors Name Paul Supple / *Paul Supple*
print signature

Field Information _____

Method Of Shipping _____

Relinquished By:
 sign *Paul Supple*
 for ROUX ASSOCIATES
 Date/Time 7-7-89 12:35

Received By:
 sign *Nancy Weber*
 for Curtis Tompkins
 Date/Time 7/7/89 12:35

Sample Designation	Sample Location	Date	Time	Analyte	No. Of Containers
R-2	Pfizer, Emeryville	7-7-89	10.30	VOC's by EPA 624 O+G by 503E	3 1
				Bacteria by Standard Plate Count	1
R-3	Pfizer, Emeryville	7-7-89	11.15	VOC's by EPA 624 O+G by 503E	3 1
				Bacteria by Standard Plate Count	1
R-4	Pfizer, Emeryville	7-7-89	12.00	VOC's by EPA 624 O+G by 503E	3 1
				Bacteria by Standard plate count	1

Comments: