FINAL REPORT
DIESEL FUEL
SITE INVESTIGATION

PFIZER PIGMENTS PLANT
Emeryville, California

May 1, 1990

Prepared for:

Pfizer Pigments Inc.
Emeryville, California

Prepared by:

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Doc#PF04739W1.4

ROUX

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SITE INVESTIGATION AND FUEL RECOVERY

1.0 INTRODUCTION

This report presents the results of a site investigation of diesel fuel detected in the subsurface at the Pfizer Pigments plant in Emeryville, California. Roux Associates West, Inc. (Roux) has been retained by Pfizer Pigments Inc. (Pfizer) to perform the site investigation. The purpose of this work was to define the extent and nature of diesel fuel contamination that was detected in two ground-water monitoring wells at the Pfizer Pigments facility located at 4650 Shellmound Street, Emeryville, California (Figure 1). A plan describing the scope of work to be performed by Roux was submitted to the Alameda County Department of Environmental Health (DEH) on March 8, 1990. In March and April, 1990, Roux drilled and sampled seven soil borings and constructed, developed, and sampled two ground-water monitoring wells. Based on information acquired during this site investigation, recommendations for remediation are presented.

1.1 Background

Diesel fuel was detected in two ground-water monitoring wells at the site during a routine semi-annual sampling of the wells on January 22, 1990, by Roux Associates. The monitoring wells, RW-4 and RW-11, are adjacent to aboveground and underground fuel lines and two recently installed underground storage tanks (Figure 2). Following the discovery of diesel fuel in the subsurface, a pressure test was performed on the secondary containment structure

for the two recently installed tanks and lines by Diablo Tank & Equipment Company of Martinez, California on January 24, 1990. The leak detectors and annular spaces surrounding the tanks were also inspected. No leaks were detected during the pressure testing or inspection (McShane 1990). Based on the absence of subsurface leaks as determined by the tank and line pressure testing, the source of diesel fuel in the subsurface was determined to be a leak from an aboveground valve that was replaced in December, 1989. An "Underground Storage Tank Unauthorized Release (Leak) Contamination Site Report" was submitted by Pfizer to the Alameda County Department of Environmental Health on February 7, 1990, and is presented in Appendix A.

The volume of diesel fuel that was accidentally discharged is unknown. The initial thickness of diesel fuel measured in well RW-11 on January 22, 1990 was 2.57 feet. Following the repeated bail down of product from well RW-11, diesel fuel re-entered the well to a thickness of one to six inches. Currently, diesel fuel is periodically recovered from monitoring wells RW-4 and RW-11 (Figure 2). Both wells are within a former waste oil tank pit. The volume of diesel fuel purged to date is approximately 15 gallons and is being stored on site in a closed 55 gallon drum.

1.2 Site History

1.2.1 Description of Plant

The Pfizer plant is located in a predominantly industrial part of Emeryville (Figure 1). The

plant produces iron oxide pigments and has been in operation since 1925. Figure 2 is a plot plan of the Pfizer facility showing the location of plant buildings, soil borings, monitoring wells, and former and present tank locations in the area of the site investigation.

1.2.2 *Underground Storage Tanks*

Two underground storage tanks are currently in place and used at the site. A 10,000-gallon diesel tank and one 1,000-gallon gasoline tank were installed east of Service Bldg. No. 10 by Diablo Tank & Equipment in September, 1989. The tanks are double-walled fiberglass tanks with annular leak detection monitors and an alarm system. The tanks and lines were set and pressure tested by Diablo Tank & Equipment Company on September 20, 1989 (McShane 1990). A pressure test on the primary containment was performed on October 10, 1989, and a pressure test on the secondary containment performed on October 11, 1989 (McShane 1990). No leaks were detected during any of the pressure tests.

A total of 12 underground storage tanks have been removed from the Pfizer plant since 1987. An underground storage tank used for storage of waste oil and solvents was removed on December 1, 1987. The tank was a steel tank with a capacity of about 350 gallons. The tank was located within the waste oil tank pit immediately east of Service Bldg. No. 10 (Figure 2). Further description of the tank removal and site investigation are presented in the Roux Associates report titled "Underground Storage Tank Site Investigation", dated August 12, 1988.

A total of nine 10,000-gallon diesel fuel tanks and one 10,000-gallon Bunker C fuel oil tank were removed from the tank pit south of Service Bldg. No. 10 (Figure 2) on December 12th and 13th, 1989. Holes were observed in one of the diesel tanks removed on December 13, 1989. A report describing the tank removal and sampling results was submitted to Pfizer on March 8, 1990. A 1,000-gallon gasoline tank was removed from a tank pit south of Maintenance Shop Bldg. No. 6 on December 12, 1989. No gasoline was detected in soil samples from the tank pit.

1.2.3 Previous Subsurface Investigations

Two previous subsurface investigations of soil and ground-water contamination have been performed at the site. Following removal of an underground waste oil tank from the Pfizer plant on December 1, 1987, solvents were detected in soil within the former waste oil tank pit. As a result, a site investigation which included a total of 11 soil borings and 6 monitoring wells was performed during 1988 (Roux 1988). Acetone, 2-butanone, and hexone (MIBK) along with trace concentrations of naphthalene and methylnapthene were detected in ground water from monitoring well RW-4, which is within the former tank pit. Other monitoring wells at the site, including wells downgradient from the tank pit, showed not detected results for all analyses. Quarterly and semi-annual monitoring of three wells at the site indicated that the concentrations of solvents in the former tank pit were decreasing due to biodegradation and that solvents had not migrated to downgradient monitoring wells (Roux 1988).

During the 1988 site investigation, oil and grease was detected in soils beneath some areas of the plant. Further investigation of the oil and grease distribution, including an additional ten soil borings, was performed in 1989 (Roux 1989). Results of the 1988 and 1989 site investigation indicated that the oil and grease present in the soil is greater than 50 years old and resulted from contamination of tidal sediments and fill emplaced along the western portion of the Pfizer plant (Roux 1989). No oil and grease was detected in ground water.

2.0 METHODS OF INVESTIGATION

Within the area surrounding wells RW-4 and RW-11, where diesel fuel contamination was discovered, soil and ground-water samples were collected and analyzed from seven soil borings and two monitoring wells (Figure 2). An estimate of the extent of diesel fuel in the subsurface has been made from the results of this drilling, sampling, and analysis.

2.1 Soil Borings

On March 29, 1990, seven soil borings were drilled in the area surrounding wells RW-4 and RW-11 (Figure 2). Five of the borings were drilled using a truck mounted mobile B-53 hollow stem auger drill rig operated by Gregg Drilling and Testing Inc. of Concord, California. The five soil borings penetrated to depths of 6.5 to 13.5 feet. Two to five soil samples were collected from each boring. The two deepest wells, RW-22 and RW-23, were converted to monitoring wells.

A total of 16 soil samples were collected using a California split spoon sampler with brass tube liners. Samples were retrieved ahead of the auger flights by placing the sampler through the hollow stem of the augers to the bottom of the borehole and then by driving the sampler into the undisturbed sediments with a 140 lb. hammer. The sampler was withdrawn from the borehole and the inside liners were removed. Both ends of one liner were immediately covered with aluminum foil, capped with plastic end caps, and wrapped with electrical tape. The liner was then labelled and placed on ice for transport to Curtis

& Tompkins Laboratories of Berkeley, California for analysis. Soils were analyzed for Total Petroleum Hydrocarbons as Diesel (TPH-D) by the California Department of Health Services approved method (Modified USEPA Method 8015). A Chain-of-Custody was maintained for these, and all samples collected during this investigation. Chain-of-Custody reports are presented in Appendix B.

The soil in the remaining two liners was extruded, examined, and logged by the hydrogeologist. Geologic logs for all soil borings are found in Appendix C. A portion of the sample was placed in a glass jar and sealed with aluminum foil and a metal cap. The sealed jar was placed in the sun to accelerate the vaporization of volatile hydrocarbons from the soil. A photoionization meter was used to measure the relative concentration of volatile organic compounds in the headspace of the jar. The California sampler and liners were cleaned between each use by scrubbing with a brush and detergent solution and then were rinsed with de-ionized water.

Because of space constraints, it was necessary to drill the two soil borings north of Service Building No.10 using a hand auger (Figure 2). These two borings each penetrated to a depth of 3.5 feet and are designated RB-27 and RB-28. Samples in these hand auger borings were collected using a 30 lb slide hammer which was placed in the hole after the hand auger had been advanced to a desired depth. The slide hammer was mounted with a sampler and brass sleeve liner which was hammered into the soil and withdrawn from the boring. The brass liner was removed from the sampler, wrapped with aluminum foil, capped with end caps, and wrapped with electrical tape. The samples were stored on ice until

delivery to the analytical laboratory.

Cuttings from all the soil borings were stockpiled on plastic sheeting on site prior to disposal. Soil borings were backfilled with bentonite Hole Plug and the asphalt or concrete at the surface was repaired.

Due to the presence of a concrete roadway in the subsurface, a boring of sufficient size to install a 4-inch diameter monitoring well could not be drilled south of the former waste oil tank pit. However, a ground-water sample was retrieved from soil boring RB-26 before backfilling. The boring intercepted the ground-water table and extended to a depth of 10.5 feet. The boring was left open for a period of about 20 hours to allow ground water to come to equilibrium within the boring. A water column of 2.82 feet was measured in the boring on March 30, 1990. Five gallons of water was purged from the well and a sample was collected for BTEX and TPH-D analysis on March 30, 1990. Ground water sampling methods are more fully described below. Soil boring RB-26 was subsequently back-filled with bentonite.

2.2 Monitoring Wells

After two of the soil borings were advanced to 13.5 feet, they were converted to ground water monitoring wells. A ten-foot long, threaded, four-inch diameter, PVC slotted (0.010-inch slot) section and an appropriate length of blank PVC riser was placed in each hole. The screened zone extends from three feet to thirteen feet below land surface. The wells

were packed with Monterey No. 2 sand from the bottom of the hole to 2.5 feet below land surface. A one-foot thick layer of bentonite pellets was emplaced above the packed sand in each hole. The remaining annular space was filled with concrete which sealed in twelve-inch diameter traffic boxes. A well construction diagram is shown in Figure 3.

The monitoring wells were developed by pumping on April 4, 1990. Ground-water samples were collected from the two wells on April 6, 1990, after purging three casing volumes. Water from developing and purging of the wells is stored on-site in 55-gallon drums. Because no contaminants were detected in the water, the water will be used for irrigation at the plant. Water samples were collected for TPH-D in a 500 ml glass jar and for benzene, toluene, ethylbenzene, and xylenes (BTEX) by USEPA Method 8020 in two 40 ml glass VOA vials. Samples were retrieved using a stainless steel bailer. These were stored on ice until delivery to Curtis and Tompkins Labs. The elevations of wells RW-22 and RW-23 were surveyed on April 13, 1990, by Bates and Bailey of Berkeley, California. Wells were surveyed to an accuracy of .01 feet relative to the City of Emeryville datum. In addition, all monitoring wells located on-site were surveyed at this time in order to maintain internal consistency among well elevations.

3.0 HYDROGEOLOGY AND GEOLOGY

The Pfizer Emeryville plant is located along the eastern edge of San Francisco Bay at an elevation of about seven feet above mean sea level. The current bay shoreline is approximately 1,000 feet west of Pfizer's property. A 1936 aerial photograph of the plant shows a former shoreline located along the eastern edge of present day Shellmound Street.

The sediments immediately underlying the site are artificial fill, bay mud, and alluvial fan deposits. The artificial fill consists of gravel, sand, clay, and miscellaneous refuse. The thickness of the fill under the site averages about three to five feet (Roux 1989). Based on the grain size of the fill, the permeability of the fill is higher than that of the underlying bay mud.

The bay mud consists of sandy clay to clay with shells and other organic matter and underlies the artificial fill at the site. The thickness of the bay mud beneath the site appears to be about 15 feet, but may be greater in places. The permeability of the bay mud is low but may vary slightly with its composition. The bay mud has been cut in places by meandering tidal channels. The old channel cuts within the bay mud may contain coarser, more permeable material. Alluvial fan sediments of the Temescal Formation underlie the bay mud.

The regional direction of ground water movement is westward towards San Francisco Bay. Coarser lens within the bay mud beneath the site may cause local variations in the direction

of flow. Permeability differences within the bay mud also have a significant effect on the rate of ground water flow.

No active water supply wells are within one mile of the site. Industrial supply wells were used in the area several decades ago but are not longer in service (Roux 1988). Several ground-water monitoring wells are in close proximity to the site. The nearest monitoring wells are located a few feet west of the Pfizer property. An additional 15 monitoring wells are within the shopping center and vacant lot 100 to 500 feet west of the Pfizer plant (Alton Geoscience 1988).

4.0 LABORATORY RESULTS

A total of sixteen soil samples collected between depths of 0.5 feet to 5 feet below land surface were analyzed for TPH-D and five ground-water samples were analyzed for TPH-D and BTEX. Saturated soil samples collected below the water table were not analyzed. Analytical results are presented in Tables 1 and 2 and laboratory reports are presented in Appendix D.

4.1 Soil Analyses

Soil samples collected from all soil borings, with the exception of boring RB-28, contained not detectable or low concentrations of TPH-D (Table 1). Analytical results for these borings varied from not detectable to 47 mg/kg TPH-D. Both soil samples collected in boring RB-22 had not detectable results for TPH-D. Within soil borings RW-23, RB-24, RB-25, RB-26, and RB-27, the only detectable TPH-D concentrations were in the middle or lowermost soil samples collected between two and five feet below land surface. Soil boring RB-28 contained higher concentrations of TPH-D which decreased from 8,400 mg/kg at a depth of 0.5-1.0 feet to 130 mg/kg at a depth of 3-3.5 feet.

4.2 Ground-Water Analyses

Five ground-water samples were analyzed for Extractable Petroleum Hydrocarbons by the method described in the Leaking Underground Fuel Tank manual published by the

California Department of Health Services (DOHS 1989). All samples analyzed report not detectable concentrations of petroleum hydrocarbons in the kerosene and diesel ranges. The five samples analyzed also contain not detectable concentrations of benzene, toluene, ethylbenzene, and xylenes. These data are presented in Table 2.

5.0 DISCUSSION OF FINDINGS

Based on the results of this site investigation, the extent of diesel fuel in the subsurface has been defined. Significant soil contamination (>100 mg/kg TPH-D) is limited to an area that includes boring RB-28, the surface control valve, and the former waste oil tank pit. Outside this area, the level of TPH-D in soils was limited to concentrations ranging from not detectable to 47 mg/kg.

Free product is present in the former waste oil tank pit but was not detected outside the former waste oil tank pit. Ground-water analyses for all monitoring wells outside the waste oil tank pit had not detectable results for TPH-D and BTEX, indicating that ground water in these areas has not been affected by the diesel fuel release.

A concrete roadway that roughly parallels the eastern wall of Service Bldg. No. 10 is present in the subsurface between depths of about 1.5 to 2 feet below land surface. The concrete roadway, which is the former East Shore Highway, was encountered in borings RB-25 and RB-26. The roadway apparently underlies the area of the surface control valve but has been removed from the subsurface within the former waste oil tank pit. Based on the absence of diesel fuel in ground water outside the former waste oil tank pit, the waste oil tank pit appears to act as a sump for the collection of diesel fuel in the subsurface. The presence of a subsurface concrete barrier beneath the area of the surface spill may help to transport diesel fuel laterally towards the waste oil tank pit. Based on the results of this site

investigation, no additional work is necessary to further characterize the diesel fuel in the subsurface.

6.0 RECOMMENDATIONS

Based on the findings of this investigation, we recommend the following actions to remediate diesel fuel within the subsurface at the Pfizer Pigments plant. An area surrounding monitoring wells RW-4 and RW-11 should be excavated to a depth of about four feet to remove soils above the water table. The excavation should include the former waste oil tank pit and extend north to the surface control valve (Figure 4). The area surrounding boring RB-28 and extending eastward to the surface control valve should also be excavated (Figure 4). Excavation should be continued laterally until all soils containing greater than 100 mg/kg TPH-D are removed within the areas surrounding the former waste oil tank pit and RB-28. Within the area of the surface control valve, the excavation should be continued as far as possible where diesel fuel contamination is present. Due to the presence of numerous pipes and supports, it may not be possible to remove all soils containing greater than 100 mg/kg TPH-D from the pipe and framing area (Figure 4). Soil samples will be collected and analyzed for TPH-D along each side and from the base of the excavation to verify removal of contaminated soils.

Prior to excavation, monitoring wells RW-4 and RW-11 will be abandoned. The wells will be overdrilled with a truck-mounted hollow stem auger drill rig. The soil cuttings generated during abandonment will be stockpiled on site for treatment. The borings will be back-filled with bentonite.

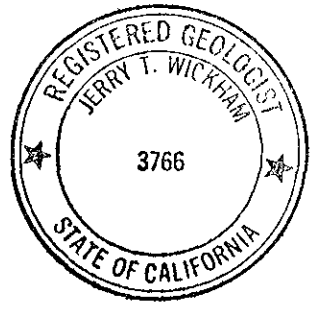
During excavation, the soils should be monitored with a photoionization detector to

determine qualitatively the amount of petroleum hydrocarbons present. Four samples should be taken for every 50 cubic yards of soil removed, composited as one sample, and analyzed for TPH-D. Soils should be stockpiled on site and treated by bioremediation, or transported to an appropriate waste disposal facility. Ground water which enters the excavation should be pumped into a holding tank and stored on site. Following analysis, the water should be disposed of in a manner consistent with the analytical results. After laboratory results have verified the removal of soils with greater than 100 mg/kg TPH-D in each area of the excavation where complete removal of significantly contaminated soils is possible, the pit should be back-filled with clean fill, compacted, and resurfaced with concrete or asphalt.

Respectfully Submitted,
ROUX ASSOCIATES WEST, INC.

Gregory Murphy
Staff Geologist

Jerry T. Wickham
California Registered Geologist No. 3766



7.0 REFERENCES

Alton Geoscience. 1988. Report on Additional Site Characterization Studies at P.I.E. Nationwide Property, 5500 Eastshore Freeway, Emeryville, California, April 28, 1988.

Department of Health Services (DOHS). 1989. Leaking Underground Fuel Tank Field Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure. Sacramento, California, October, 1989, 62pp.

McShane, Patrick. 1990. Personal communication to Jerry Wickham, Roux Associates West, Inc., February 13, 1990.

Roux Associates West, Inc. 1988. Underground Storage Tank Site Investigation, Pfizer Pigments Plant, Emeryville, California, August 12, 1988.

Roux Associates West, Inc. 1989. Site Assessment, Petroleum Hydrocarbons in Soils, Pfizer Pigments Plant, Emeryville, California, July 11, 1989.

Roux Associates West, Inc. 1990. Work Plan, Site Investigation and Fuel Recovery, Pfizer Pigments Plant, Emeryville, California, March 8, 1990.

TABLE 1. Soil Analyses
Pfizer Pigments Plant
Emeryville, California

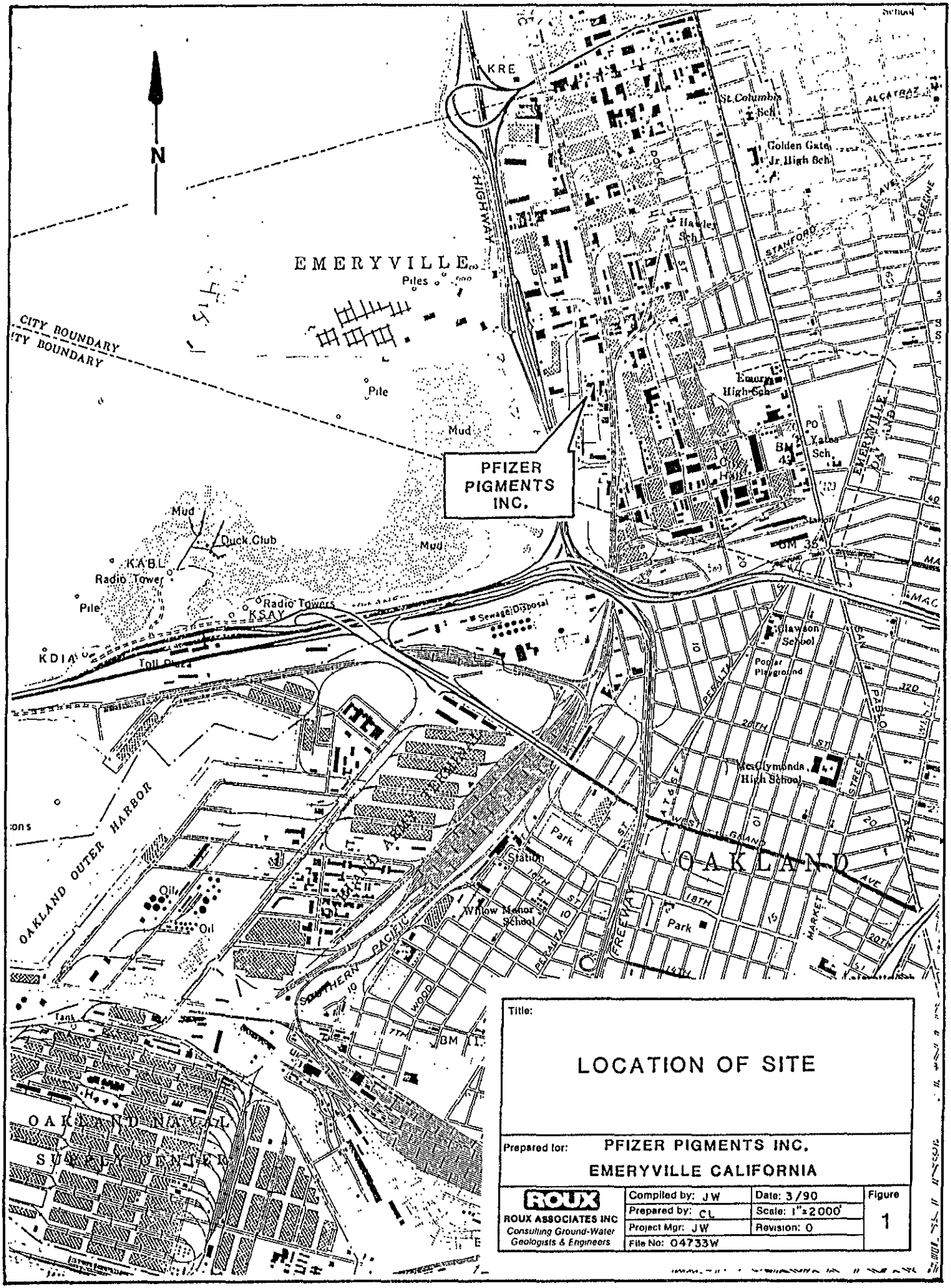
Boring Number	Depth Internal Sampled (feet)	Extractable Petroleum Hydrocarbons as Diesel California DOHS Method (mg/Kg)
RW-22	2.5-3	ND
RW-22	4-4.5	ND
RW-23	2-2.5	30
RB-24	2-2.5	ND
RB-24	3.5-4	35
RB-25	2.5-3	ND
RB-25	4-4.5	35
RB-26	2.5-3	ND
RB-26	4.5-5	36
RB-27	0.5-1.0	ND
RB-27	1.5-2	ND
RB-27	2.5-3	47
RB-27	3.25-3.75	ND
RB-28	0.5-1.0	8,400
RB-28	1.8-2.3	1,200
RW-28	3-3.5	130

ND = Not Detected

TABLE 2. Ground-Water Analyses
Pfizer Pigments Plant
Emeryville, California

Sample Number	Benzene USEPA Method 8020 (µg/L)	Toluene USEPA Method 8020 (µg/L)	Xylenes USEPA Method 8020 (µg/L)	Ethylbenzene USEPA Method 8020 (µg/L)	Extractable Petroleum Hydrocarbons as Diesel Cal. DOHS Method (mg/L)
RB-26	ND	ND	ND	ND	ND
RW-2	ND	ND	ND	ND	ND
RW-3	ND	ND	ND	ND	ND
RW-22	ND	ND	ND	ND	ND
RW-23	ND	ND	ND	ND	ND

ND = Not Detected



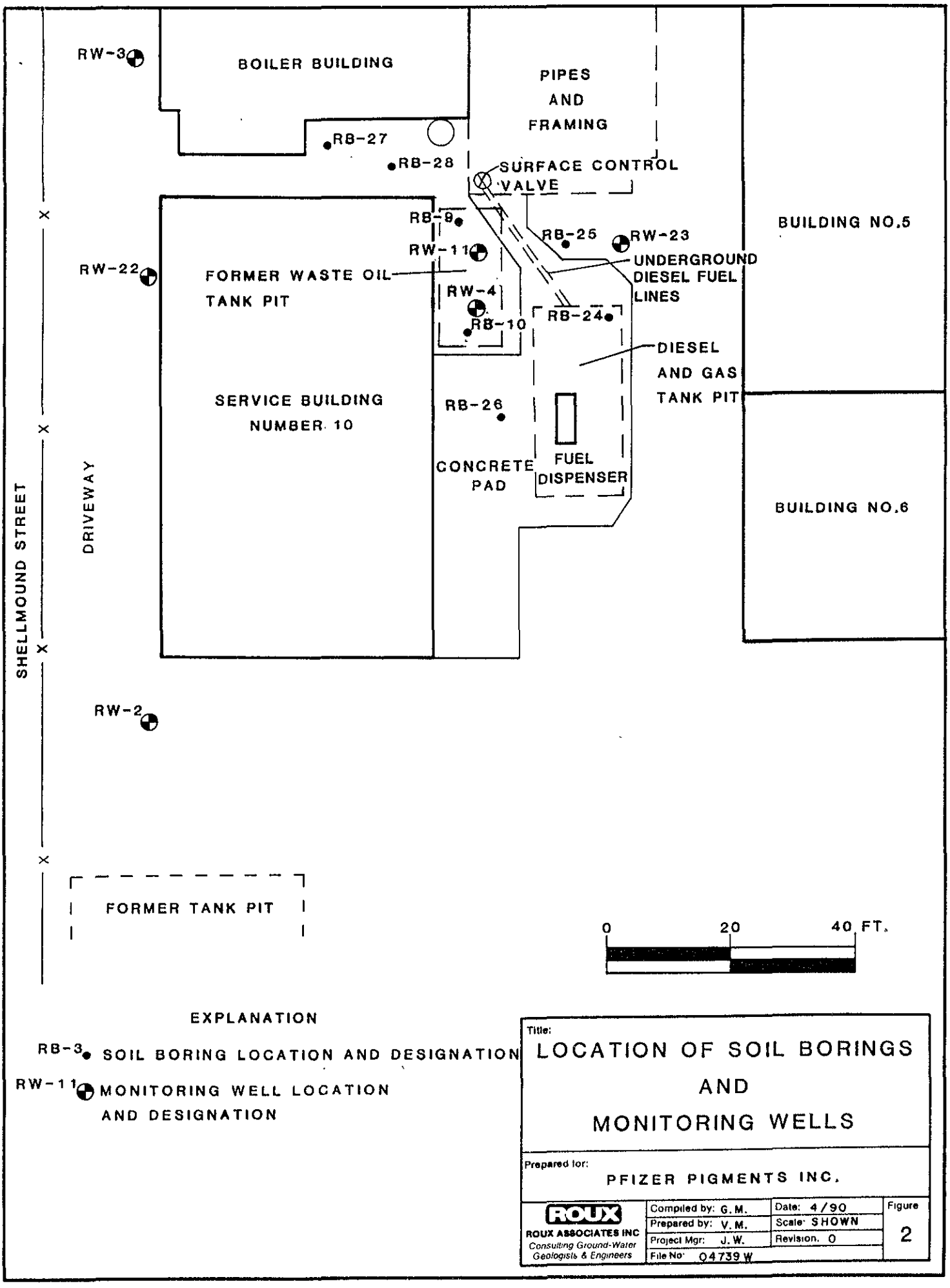
Title:

LOCATION OF SITE

Prepared for: PFIZER PIGMENTS INC.
EMERYVILLE CALIFORNIA

ROUX ASSOCIATES INC
Consulting Ground-Water Geologists & Engineers

Compiled by: JW	Date: 3/90	Figure 1
Prepared by: CL	Scale: 1"=2000'	
Project Mgr: JW	Revision: 0	
File No: 04733W		



Title:

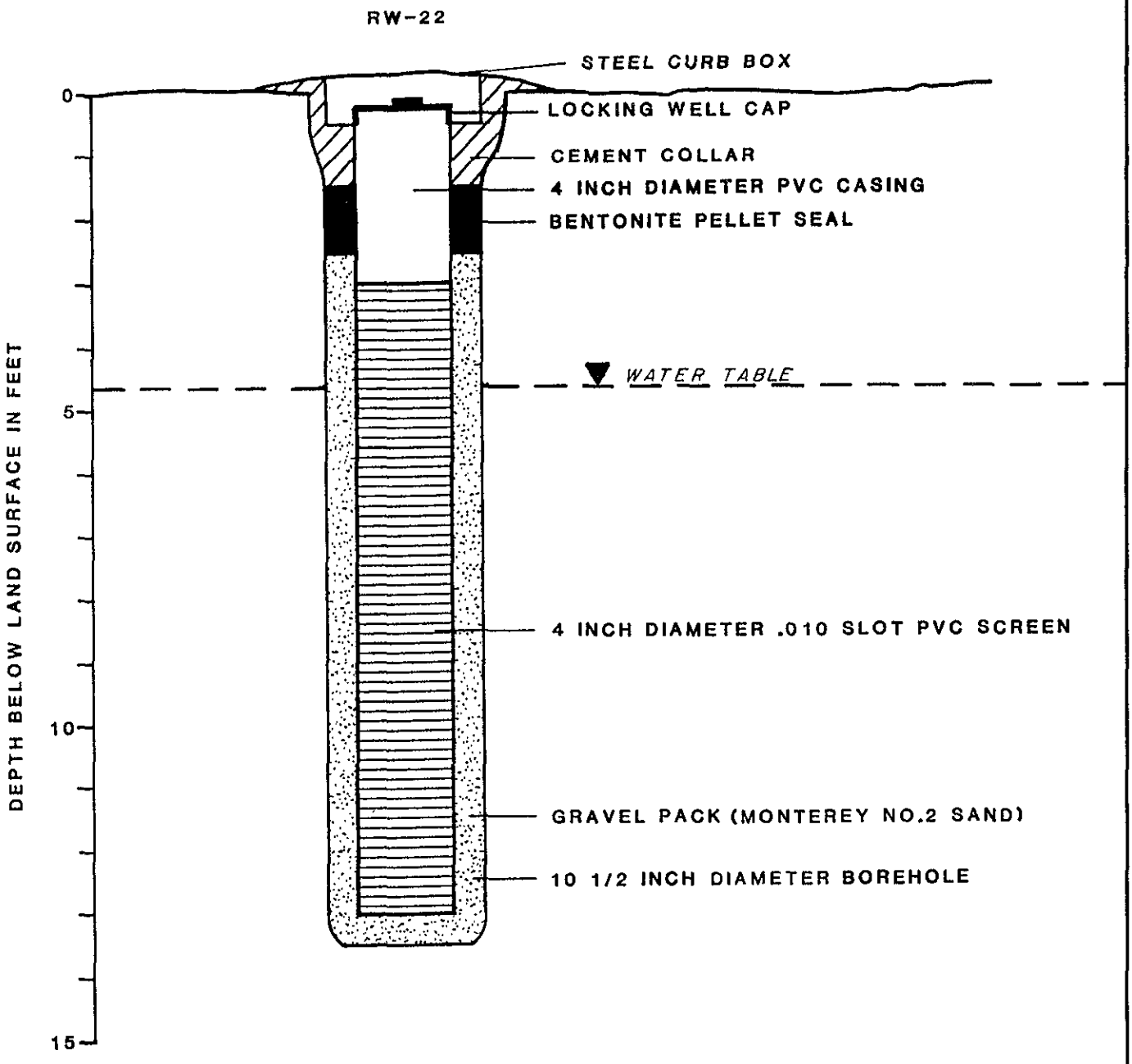
LOCATION OF SOIL BORINGS AND MONITORING WELLS

Prepared for:

PFIZER PIGMENTS INC.

ROUX ASSOCIATES INC
Consulting Ground-Water Geologists & Engineers

Compiled by: G.M.	Date: 4/90	Figure 2
Prepared by: V.M.	Scale: SHOWN	
Project Mgr: J.W.	Revision: 0	
File No: 04739W		



Title:

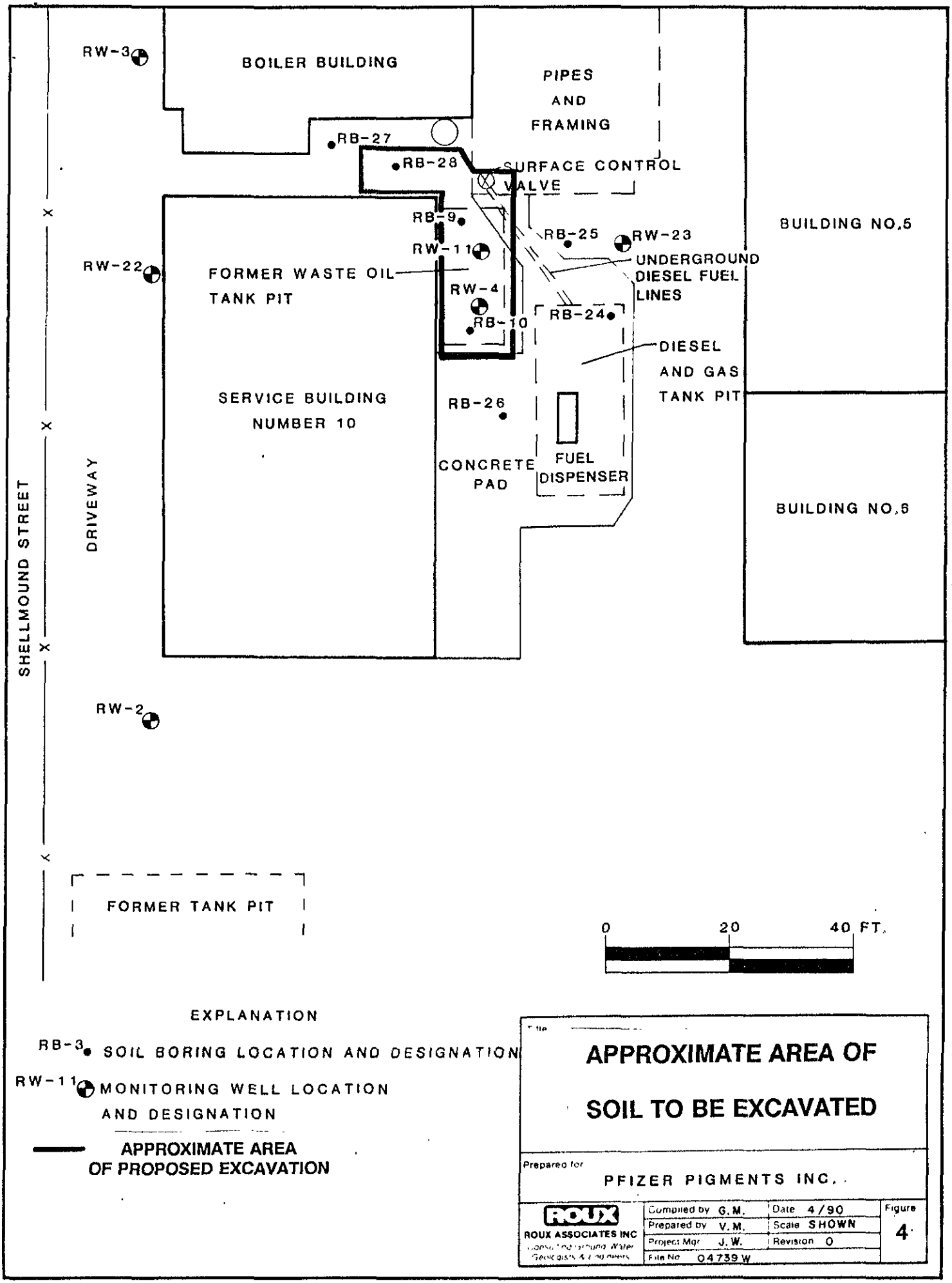
MONITORING WELL CONSTRUCTION DETAILS

Prepared for:

PFIZER PIGMENTS INC.

ROUX ASSOCIATES INC
Consulting Ground-Water Geologists & Engineers

Compiled by: G. M.	Date: 4/90	Figure 3
Prepared by: V. M.	Scale: SHOWN	
Project Mgr: J. W.	Revision: 0	
File No 04739W		



APPROXIMATE AREA OF SOIL TO BE EXCAVATED

Prepared for

PFIZER PIGMENTS INC.

ROUX ASSOCIATES INC

Compiled by G.M.	Date 4/90	Figure 4
Prepared by V.M.	Scale SHOWN	
Project Mgr J.W.	Revision 0	
File No 04739W		

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK)
CONTAMINATION SITE REPORT

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY ☐ YES ☒ NO

HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? ☐ YES ☒ NO

FOR LOCAL AGENCY USE ONLY
I HEREBY CERTIFY THAT I AM A DESIGNATED GOVERNMENT EMPLOYEE AND THAT I HAVE REPORTED THIS INFORMATION TO LOCAL OFFICIALS PURSUANT TO SECTION 25180.7 OF THE HEALTH AND SAFTY CODE.
SIGNED _____ DATE _____

REPORT DATE: 02/06/90 CASE #:

REPORTED BY
NAME OF INDIVIDUAL FILING REPORT: J. N. Dablock
PHONE: (415) 653-6151
SIGNATURE: [signature]
REPRESENTING ☒ OWNER/OPERATOR ☐ REGIONAL BOARD ☐ LOCAL AGENCY ☐ OTHER
COMPANY OR AGENCY NAME:
ADDRESS: 4608 Shellmound Street, Emeryville, CA 94608 (STREET, CITY, STATE, ZIP)

RESPONSIBLE PARTY
NAME: ☒ UNKNOWN
CONTACT PERSON:
PHONE: ( )
ADDRESS: (STREET, CITY, STATE, ZIP)

SITE LOCATION
FACILITY NAME (IF APPLICABLE): Pfizer Pigments Inc.
OPERATOR: Pfizer Pigments Inc.
PHONE: (415) 653-6151
ADDRESS: 4650 Shellmound Street, Emeryville, Alameda 94608 (STREET, CITY, COUNTY, ZIP)
CROSS STREET: Christie
TYPE OF AREA ☐ COMMERCIAL ☒ INDUSTRIAL ☐ RURAL ☐ RESIDENTIAL ☐ OTHER
TYPE OF BUSINESS ☐ RETAIL FUEL STATION ☐ FARM ☒ OTHER

IMPLEMENTING AGENCIES
LOCAL AGENCY / AGENCY NAME: Alameda County Health Services
CONTACT PERSON: Gil Wistar
PHONE: ( )
REGIONAL BOARD: Region 2 San Francisco
CONTACT PERSON: RW-QCB
PHONE: (415) 464-1255

SUBSTANCES INVOLVED
(1) NAME: Unknown diesel fuel
QUANTITY LOST (GALLONS): _____ ☒ UNKNOWN
(2) NAME:
QUANTITY LOST (GALLONS): _____ ☐ UNKNOWN

DISCOVERY/ABATEMENT
DATE DISCOVERED: 01/22/90
HOW DISCOVERED ☐ INVENTORY CONTROL ☒ SUBSURFACE MONITORING ☐ NUISANCE CONDITIONS ☐ TANK TEST ☐ TANK REMOVAL ☐ OTHER
DATE DISCHARGE BEGAN: ☒ UNKNOWN
HAS DISCHARGE BEEN STOPPED? ☐ YES ☐ NO IF YES, DATE
METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY)
☐ REMOVE CONTENTS ☐ REPLACE TANK ☐ CLOSE TANK
☐ REPAIR TANK ☒ REPAIR PIPING ☐ CHANGE PROCEDURE
☐ OTHER Valve

SOURCE/CAUSE
SOURCE OF DISCHARGE
☐ TANK LEAK ☐ UNKNOWN
☒ PIPING LEAK
☐ OTHER Valve Leak
TANKS ONLY/CAPACITY: N/A GAL.
AGE _____ YRS
☐ UNKNOWN
MATERIAL
☐ FIBERGLASS ☐ STEEL ☐ OTHER
CAUSE(S)
☐ OVERFILL N/A ☐ RUPTURE/FAILURE ☐ CORROSION ☐ UNKNOWN ☐ SPILL ☐ OTHER

CASE TYPE
CHECK ONE ONLY
☐ UNDETERMINED ☐ SOIL ONLY ☒ GROUNDWATER ☐ DRINKING WATER - (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)

CURRENT STATUS
CHECK ONE ONLY
☒ SITE INVESTIGATION IN PROGRESS (DEFINING EXTENT OF PROBLEM) ☐ CLEANUP IN PROGRESS ☐ SIGNED OFF (CLEANUP COMPLETED OR UNNECESSARY)
☐ NO ACTION TAKEN ☐ POST CLEANUP MONITORING IN PROGRESS ☐ NO FUNDS AVAILABLE TO PROCEED ☐ EVALUATING CLEANUP ALTERNATIVES

REMEDIAL ACTION
CHECK APPROPRIATE ACTION(S) (SEE BACK FOR DETAILS)
☐ CAP SITE (CD) ☐ EXCAVATE & DISPOSE (ED) ☒ REMOVE FREE PRODUCT (FP) ☐ ENHANCED BIO DEGRADATION (IT)
☐ CONTAINMENT BARRIER (CB) ☐ EXCAVATE & TREAT (ET) ☐ PUMP & TREAT GROUNDWATER (GT) ☐ REPLACE SUPPLY (RS)
☐ TREATMENT AT HOOKUP (HU) ☐ NO ACTION REQUIRED (NA) ☒ OTHER (OT) Under study

COMMENTS
Some fuel was observed in monitoring well on 1/22/90. Source and quantity of fuel at that time was unknown. Additional work on 2/2 indicates subsurface release.

CHAIN-OF-CUSTODY FORMS

ROUX

CHAIN OF CUSTODY

Consulting Ground-Water Geologists & Engineers
ROUX ASSOCIATES INC
775 PARK AVENUE
SUITE 255
HUNTINGTON, NEW YORK 11743

ANALYSES

Page of

Project Name: Diesel Fuel Investigation
Project Number: 04739
Project Location: Pfizer Emeryville
Sampler(s): Greg Murphy / Jerry Wickham

Sample Designation/Location	Date Collected	Time Collected	TPH-Diesel	TOTAL BOTTLES	NOTES
RW-22 2.5-3'	3/29/90	0825	X		1 liner
RW-22 4-4.5'	3/29/90	0833	X		
RW-23 2-2.5'	3/29/90	1047	X		
RW-24 2-2.5'	3/29/90	1115	X		
RW-24 3.5-4'	3/29/90	1120	X		
RB-25 2.5-3'	3/29/90	1505	X		
RB-25 4-4.5'	3/29/90	1510	X		
RB-26 2.5-3'	3/29/90	1202	X		
RB-26 4.5-5'	3/29/90	1208	X		
RB-27 1.5-2'	3/29/90	1404	X		
RB-27 2.5-3'	3/29/90	1415	X		
RB-27 3.25-3.75'	3/29/90	1421	X		
RB-27 0.5-1'	3/29/90	1525	X		

Relinquished by:(Signature)	For	Date	Time	Received by:(Signature)	For	Date	Time
Greg Murphy	Roux	3/30/90	1:30pm	Belinda Peters	Curtis + Tompkins	3-30-90	1:30pm
Relinquished by:(Signature)	For	Date	Time	Received by:(Signature)	For	Date	Time
Relinquished by:(Signature)	For	Date	Time	Received by:(Signature)	For	Date	Time

Delivery Method: Hand Carry

Comments: Roux (415)370-2275 Martinez, CA Fax 370-2235

CHAIN OF CUSTODY

ROUX

Consulting Ground-Water Geologists & Engineers
ROUX ASSOCIATES INC

775 PARK AVENUE
SUITE 255
HUNTINGTON, NEW YORK 11743

ANALYSES

Page of

Project Name: Diesel Fuel Investigation

Project Number: 04739

Project Location: Pfizer Emeryville

Sampler(s): Greg Murphy / Jerry Wickham

Sample Designation/Location	Date Collected	Time Collected	TPH-Diesel	BTEX					TOTAL BOTTLES	NOTES
RB-28 0.5-1'	3/29/90	1445	X							1 Liter
RB-28 1.8-2.3'	3/29/90	1459	X							↓
RB-28 3-3.5'	3/29/90	1512	X							
RB-26	3/30/90	0735	X	X						2 VOA
1										

Relinquished by:(Signature)	For	Date	Time	Received by:(Signature)	For	Date	Time
[signature]	Roux	3/30/90	1:30	Belinda Peters	Curtis + Tompkins	3-30-90	1:20pm
Relinquished by:(Signature)	For	Date	Time	Received by:(Signature)	For	Date	Time
Relinquished by:(Signature)	For	Date	Time	Received by:(Signature)	For	Date	Time

Delivery Method: Hand Carry

Comments:

ROUX

CHAIN OF CUSTODY

Consulting Ground-Water Geologists & Engineers
ROUX ASSOCIATES INC
775 PARK AVENUE
SUITE 255
HUNTINGTON, NEW YORK 11743

ANALYSES

Project Name: Pfizer Diesel Investigation
Project Number: 04739W
Project Location: Pfizer Emeryville
Sampler(s): Greg Murphy / Jerry Wickham

Sample Designation/Location	Date Collected	Time Collected	TPH-Diesel	BTEX					TOTAL BOTTLES	NOTES
RW-2	4/6/90	1134	X	X					3	2 VOA 1 Amber Liter
RW-3	4/6/90	1030	X	X					3	
RW-22	4/60/90	1050	X	X					3	
RW-23	4/6/90	0940	X	X					3	

Relinquished by:(Signature)	For	Date	Time	Received by:(Signature)	For	Date	Time
Greg Murphy	Roux	4/6/90	1230	Belinda Peters	C&T	4/6/90	12:30
Relinquished by:(Signature)	For	Date	Time	Received by:(Signature)	For	Date	Time
Relinquished by:(Signature)	For	Date	Time	Received by:(Signature)	For	Date	Time

Delivery Method: Hand Delivery

Comments: Standard Turnaround

GEOLOGIC LOGS

CONSULTING GROUND WATER GEOLOGISTS
ROUX ASSOCIATES INC

WELL LOG

Project: 04739W
Client: Pfizer, Inc
Page 1 of 7
Logged by: Jerry Wickham/Greg Murphy
Owner:
Well No.: RW-22
Location: Emeryville
M.P. Elevation:
Drilling Start: 3/29/90 End: 3/29/90
Driller: Gregg Drilling and Testing Inc.
Type of Rig: Mobile B-53

WELL DATA

Hole Diameter (in.): 10.5
Final Depth (ft.): 13.5
Casing Diameter: 4"
Casing Length:
Screen Setting: 3-13'
Screen Slot & Type: .010 PVC
Well Status: Monitoring

G W READINGS(1)

Date	DTW MP(2)	Elev.W.T.

SAMPLER

Type: CA. split spoon
Hammer: 140lb.
Fall:

DEVELOPMENT

Elev. (1)	SAMPLE No.	Rec.	Depth	Blows/6"	Strata Change & Gen. Desc.	Depth (ft.)	SAMPLE DESCRIPTION
						1	Asphalt
	1	18"	2-3.5	5,6,6	CL	2	CL, gray brown mottled SILTY CLAY (Fill), with gravel, moist, no odor, shells.
	2	12"	3.5-5	4,6,8		3 4	CL, gray brown to reddish brown SILTY CLAY (Fill), with black layer at 4.5', moist, with glass and debris, strong odor.
	3	12"	5-6.5	6,8,9		5 6	CL, dark gray SILTY CLAY over black SAND, abundant shells, some odor, saturated.
	4	9"	9-10.5	1,2,2		7 8 9 10	CL, dark gray SILTY CLAY, with roots and organic fibers, very soft, light gray layer 9.2'-9.5', organic odor, saturated.
	5	18"	12-13.5	1,2,3		11 12	CL, gray with brown mottling SILTY CLAY, very soft, organic odor, saturated.
						13 14	B.O.B. 13.5
						15	

REMARKS: (1) in feet relative to a common datum
(2) from top of PVC casing

CONSULTING GROUND WATER GEOLOGISTS

ROUX ASSOCIATES INC

WELL LOG

Project: 04739W
Client: Pfizer, Inc
Page 2 of 7
Logged by: Jerry Wickham/Greg Murphy
Owner:
Well No.: RW-23
Location: Emeryville
M.P. Elevation:
Drilling Start: 3/29/90 End: 3/29/90
Driller: Gregg Drilling and Testing Inc.
Type of Rig: Mobile B-53

WELL DATA

Hole Diameter (in.): 10.5
Final Depth (ft.): 13.5
Casing Diameter: 4"
Casing Length:
Screen Setting: 3-13'
Screen Slot & Type: .010 PVC
Well Status: Monitoring

G W READINGS(1)

Date	DTW MP(2)	Elev.W.T.

SAMPLER

Type: Hand auger/Ca. split spoon
Hammer: 140 lb.
Fall:

DEVELOPMENT

Elev. (1)	SAMPLE No.	Rec.	Depth	Blows/6"	Strata Change & Gen. Desc.	Depth (ft.)	SAMPLE DESCRIPTION
							Asphalt
	1	6"	2-2.5	HA	CL		CL, very dark gray SILTY CLAY (Fill), shells, moist, organic odor.
	2	6"	3-3.5	HA			CL, greenish gray SILTY CLAY, with some black mottling, soft, no odor, saturated below 3.5'.
	3	15"	5-6.5	1,1,2			CL, dark gray SILTY CLAY, shells, sticks, organic odor, soft, moist.
	4	15"	8-9.5	2,2,3			CL, dark gray SILTY CLAY, homogeneous, organic odor, soft, moist, sandy silty CLAY lens at 8'-8.2'.
	5		12-13.5	1,1,2			CL, greenish gray SILTY CLAY, saturated, CLAYEY SAND lens at 12.5'-13.
							B.O.B. 13.5'

REMARKS: (1) in feet relative to a common datum
(2) from top of PVC casing

CONSULTING GROUND WATER GEOLOGISTS
ROUX ASSOCIATES INC

WELL LOG

Project: 04739W
Client: Pfizer, Inc
Page 3 of 7
Logged by: Jerry Wickham/Greg Murphy
Owner:
Well No.: RB-24
Location: Emeryville
M.P. Elevation:
Drilling Start: 3/29/90 End: 3/29/90
Driller: Gregg Drilling and Testing Inc.
Type of Rig: Mobile B-53

WELL DATA

Hole Diameter (in.): 6.25
Final Depth (ft.): 4.5
Casing Diameter:
Casing Length:
Screen Setting:
Screen Slot & Type:
Well Status: Filled

G W READINGS(1)

Date	DTW MP(2)	Elev.W.T.

SAMPLER

Type: Ca. split spoon
Hammer: 140 lb.
Fall:

DEVELOPMENT

Elev. (1)	SAMPLE No.	Rec.	Depth	Blows/6"	Strata Change & Gen. Desc.	Depth (ft.)	SAMPLE DESCRIPTION
						1	Concrete
	1	5"	2-2.5	1,2,2	GP, fill	2	GP, pea GRAVEL (Fill), no odor, dry.
	2	5"	3.5-4	1,2,2		3	GP, pea GRAVEL (Fill), odor, saturated.
						4	
						5	B.O.B. 4.5'
						6	

REMARKS: (1) in feet relative to a common datum
(2) from top of PVC casing

CONSULTING GROUND WATER GEOLOGISTS
ROUX ASSOCIATES INC

WELL LOG

Project: 04739W
Client: Pfizer, Inc
Page 4 of 7
Logged by: Jerry Wickham/Greg Murphy
Owner:
Well No.: RB-25
Location: Emeryville
M.P. Elevation:
Drilling Start: 3/29/90 End: 3/29/90
Driller: Gregg Drilling and Testing Inc.
Type of Rig: Mobile B-53

WELL DATA

Hole Diameter (in.): 6.5
Final Depth (ft.): 6.5
Casing Diameter:
Casing Length:
Screen Setting:
Screen Slot & Type:
Well Status: Filled

G W READINGS(1)

Date	DTW MP(2)	Elev.W.T.

SAMPLER

Type: CA. split spoon
Hammer: 140
Fall:

DEVELOPMENT

Elev. (1)	SAMPLE No.	Rec.	Depth	Blows/6"	Strata Change & Gen. Desc.	Depth (ft.)	SAMPLE DESCRIPTION
					SC	1	Asphalt SC, gray, brown CLAYEY SAND (Fill), with shells, gravel, bricks and metal, moist to wet, no odor. Concrete raodway 1.6-2.0'.
	1	18"	2-3.5	1,1,2	CL	2	CL, green gray SILTY CLAY with abundent shells, moist to wet, no odor.
						3	
	2	18"	3.5-5	1,1,2		4	CL, green gray SILTY CLAY with scattered shells, saturated, light gray silty clay layer at 5.5'-6.0'.
	3	12"	5-6.5	1		5	
						6	
						7	B.O.B. 6.5'
						8	

REMARKS: (1) in feet relative to a common datum
(2) from top of PVC casing

CONSULTING GROUND WATER GEOLOGISTS

ROUX ASSOCIATES INC

WELL LOG

Project: 04739W
Client: Pfizer, Inc
Page 5 of 7
Logged by: Jerry Wickham/Greg Murphy
Owner:
Well No.: RB-26
Location: Emeryville
M.P. Elevation:
Drilling Start: 3/29/90 End: 3/29/90
Driller: Gregg Drilling and Testing Inc.
Type of Rig: Mobile B-53

WELL DATA

Hole Diameter (in.): 6.5
Final Depth (ft.): 10.5
Casing Diameter:
Casing Length:
Screen Setting:
Screen Slot & Type:
Well Status: Filled

G W READINGS(1)

Date	DTW MP(2)	Elev.W.T.

SAMPLER

Type: Ca. split spoon
Hammer: 140 lb.
Fall:

DEVELOPMENT

Elev. (1)	SAMPLE No.	Rec.	Depth	Blows/6"	Strata Change & Gen. Desc.	Depth (ft.)	SAMPLE DESCRIPTION
					CL	1	Concrete
	1	18	2-3.5	3,4,5		2	CL, gray brown SILTY CLAY (Fill), with cobbles, bricks.
	2	10"	3.5-5	2,2,3		3 4	CL, green gray SILTY CLAY, moist, no odor, soft. Concrete at 1.8'-2.0'.
	3	8"	5-6.5	1,2,3		5	CL, green gray SILTY CLAY, with gravel, no odor, saturated,
	4	12"	6.5-8			6 7 8	
	5	12"	9-10.5		SW	9	SW, green gray GRAVELLY SAND, soft, no odor, saturated.
						10	B.O.B. 10.5'
						11	

REMARKS: (1) in feet relative to a common datum
(2) from top of PVC casing

CONSULTING GROUND WATER GEOLOGISTS
ROUX ASSOCIATES INC

WELL LOG

Project: 04739W
Client: Pfizer, Inc
Page 6 of 7
Logged by: Jerry Wickham/Greg Murphy
Owner:
Well No.: RB-27
Location: Emeryville
M.P. Elevation:
Drilling Start: 3/29/90 End: 3/29/90
Driller:
Type of Rig: Hand Auger

WELL DATA

Hole Diameter (in.): 3
Final Depth (ft.): 3.75
Casing Diameter:
Casing Length:
Screen Setting:
Screen Slot & Type:
Well Status: Filled

G W READINGS(1)

Date	DTW MP(2)	Elev.W.T.

SAMPLER

Type: Hand Auger
Hammer: 30 lb.
Fall: 18 in.

DEVELOPMENT

Elev. (1)	SAMPLE No.	Rec.	Depth	Blows/6"	Strata Change & Gen. Desc.	Depth (ft.)	SAMPLE DESCRIPTION
	1	6"	.5-1.0	HA	CL		Asphalt
						1	CL, yellow brown SITLY CLAY (Fill), with gravel, bricks.
	2	6"	1.5-2	HA			CL, light gray SILTY CLAY, with some gravel, moist, no odor, warm.
	3	4"	2.5-3	HA		2	CL, dark gray SILTY CLAY with yellow brown mottling.
	4	4"	3.25-3.75	HA		3	
						4	B.O.B. 3.75'
						5	
						6	

REMARKS: (1) in feet relative to a common datum
(2) from top of PVC casing

CONSULTING GROUND WATER GEOLOGISTS
ROUX ASSOCIATES INC

WELL LOG

Project: 04739W
Client: Pfizer, Inc
Page 7 of 7
Logged by: Jerry Wickham/Greg Murphy
Owner:
Well No.: RB-28
Location: Emeryville
M.P. Elevation:
Drilling Start: 3/29/90 End: 3/29/90
Driller: Roux
Type of Rig: Hand Auger

WELL DATA

Hole Diam. (in.):
Final Depth (ft.): 3.5'
Casing Diameter:
Casing Length:
Screen Setting:
Screen Slot & Type:
Well Status: Filled

G W READINGS(1)

Date	DTW MP(2)	Elev.W.T.

SAMPLER

Type: Hand Auger
Hammer: 30
Fall: 18

DEVELOPMENT

Elev. (1)	SAMPLE No.	Rec.	Depth	Blows/6"	Strata Change & Gen. Desc.	Depth (ft.)	SAMPLE DESCRIPTION
	1	6"	.5-1	HA	GW	1	Asphalt GW, reddish brown to black GRAVEL (Fill), with zones of green gray silty clay, moist, strong diesel odor.
	2	6"	1.8-2.3	HA	CL	2	CL, green gray SILTY CLAY (Fill), moist, faint odor with gravel lens 1.2-1.5'.
	3	6"	3-3.5	HA		3	CL, very dark gray to black SANDY CLAY (Fill), shells, wet, no odor.
						4	CL, greenish gray SILTY CLAY, wet, no odor. B.O.B. 3.5'
						5	

REMARKS: (1) in feet relative to a common datum
(2) from top of PVC casing

LABORATORY REPORTS

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 03/30/90
DATE REPORTED: 04/11/90

LAB NUMBER: 100043

CLIENT: ROUX ASSOCIATES

REPORT ON: 16 SOIL SAMPLES &
1 WATER SAMPLE

PROJECT #: 04739
LOCATION: PFIZER EMERYVILLE

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 100043
CLIENT: ROUX ASSOCIATES
JOB #: 04739
LOCATION: PFIZER EMERYVILLE

DATE RECEIVED: 03/30/90
DATE EXTRACTED: 04/04/90
DATE ANALYZED: 04/07/90
DATE REPORTED: 04/11/90

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT (mg/Kg)
100043-1	RW-22 2.5-3'	ND	ND	10
100043-2	RW-22 4-4.5'	ND	ND	10
100043-3	RW-23 2-2.5'	ND	30	10
100043-4	RW-24 2-2.5'	ND	ND	10
100043-5	RW-24 3.5-4'	ND	35	10
100043-6	RB-25 2.5-3'	ND	ND	10
100043-7	RB-25 4-4.5'	ND	35	10
100043-8	RB-26 2.5-3'	ND	ND	10
100043-9	RB-26 4.5-5'	ND	36	10
100043-10	RB-27 1.5-2'	ND	ND	10
100043-11	RB-27 2.5-3'	ND	47	10
100043-12	RB-27 3.25-3.75'	ND	ND	10
100043-13	RB-27 0.5-1'	ND	ND	10
100043-14	RB-28 0.5-1'	ND	8,400	100
100043-15	RB-28 1.8-2.3'	ND	1,200	10
100043-16	RB-28 3-3.5'	ND	130	10

ND = Not Detected at or above reporting limit.

QA/QC SUMMARY

Duplicate: Relative % Difference	1
Spike: % Recovery	87

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 100043
CLIENT: ROUX ASSOCIATES
JOB NUMBER: 04739
JOB LOCATION: PFIZER EMERYVILLE

DATE RECEIVED: 03/30/90
DATE ANALYZED: 03/30/90
DATE REPORTED: 04/11/90

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	CLIENT ID	BENZENE (ug/L)	TOLUENE (ug/L)	TOTAL XYLENES (ug/L)	ETHYL BENZENE (ug/L)	REPORTING LIMIT * (ug/L)
100043-17	RB-26	ND	ND	ND	ND	1.0

ND = Not detected at or above reporting limit.

* Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	94

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 03/30/90
DATE REPORTED: 04/18/90

LAB NUMBER: 100043

CLIENT: ROUX ASSOCIATES

REPORT ON: 1 WATER SAMPLE

PROJECT #: 04739
LOCATION: PFIZER EMERYVILLE

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 100043
CLIENT: ROUX ASSOCIATES
JOB #: 04739
LOCATION: PFIZER EMERYVILLE

DATE RECEIVED: 03/30/90
DATE EXTRACTED: 04/09/90
DATE ANALYZED: 04/12/90
DATE REPORTED: 04/18/90

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (mg/L)	DIESEL RANGE (mg/L)	REPORTING LIMIT (mg/L)
100043-17	RB-26	ND	ND	2.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	106

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 04/06/90
DATE REPORTED: 04/18/90

LAB NUMBER: 100110

CLIENT: ROUX ASSOCIATES

REPORT ON: 4 WATER SAMPLES

PROJECT #: 04739W
LOCATION: PFIZER EMERYVILLE

RESULTS: SEE ATTACHED

QA/QC Approval

Final Approval

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 100110
CLIENT: ROUX ASSOCIATES
JOB #: 04739W
LOCATION: PFIZER EMERYVILLE

DATE RECEIVED: 04/06/90
DATE EXTRACTED: 04/09/90
DATE ANALYZED: 04/14/90
DATE REPORTED: 04/18/90

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (mg/L)	DIESEL RANGE (mg/L)	REPORTING LIMIT (mg/L)
100110-1	RW-2	ND	ND	0.50
100110-2	RW-3	ND	ND	0.50
100110-3	RW-22	ND	ND	0.50
100110-4	RW-23	ND	ND	0.50

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	106

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 100110
CLIENT: ROUX ASSOCIATES
JOB NUMBER: 04739W
JOB LOCATION: PFIZER EMERYVILLE

DATE RECEIVED: 04/06/90
DATE ANALYZED: 04/06/90
DATE REPORTED: 04/18/90

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	CLIENT ID	BENZENE (ug/L)	TOLUENE (ug/L)	TOTAL XYLENES (ug/L)	ETHYL BENZENE (ug/L)	REPORTING LIMIT * (ug/L)
100110-1	RW-2	ND	ND	ND	ND	1.0
100110-2	RW-3	ND	ND	ND	ND	1.0
100110-3	RW-22	ND	ND	ND	ND	1.0
100110-4	RW-23	ND	ND	ND	ND	1.0

ND = Not detected at or above reporting limit.

* Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	93