(1)

Law Offices
ORRICK, HERRINGTON & SUTCLIFFE
A PROFESSIONAL CORPORATION
600 MONTGOMERY STREET
SAN FRANCISCO, CALIFORNIA 94111
TELEPHONE (415) 392-1122
CABLE "ORRICK"
TELEX 34-0873

SAN JOSE OFFICE
55 ALMADEN BLVD., SUITE 425
SAN JOSE, CALIFORNIA 95113
TELEPHONE (408) 298-8800

SACRAMENTO OFFICE
520 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814
TELEPHONE (916) 447-7752

June 7, 1984

'84 JUN -1 PM 4:15

ALCO HAZMAT

Mr. Donald D. Dalke
Chief, Toxics Cleanup Division
Regional Water Quality Control Board
1111 Jackson Street
Oakland, California 94607

Dear Don:

Enclosed is a copy of the May 30, 1984 "Final Report of Initial Site Investigation -- King Petroleum Inc. Property, Alameda, CA (K/J 4011)," which was prepared by Kennedy/Jenks Engineers. This relates to the presence of certain substances on property in Alameda owned by John Richard and Molly M. King.

Sincerely,

Edward L. Strohbehn, Jr.

Enclosure

cc: Chris Knoblock
J. Richard King
Timothy P. Walker

EM0088

Kennedy/Jenks Engineers

657 Howard Street
San Francisco California 94105
415-362-6065

30 May 1984

RECEIVED
JUN 1 1984
E. L. S.

Clean Air Technology
151 University Avenue
Suite 205
Palo Alto, CA 94301

Attn.: Ms. Patricia Barrentine

Subject: Final Report of Initial Site Investigation - King Petroleum, Inc. Property, Alameda, CA (K/J 4011)

Gentlemen:

Attached herewith is our final report on the initial investigation of the King Petroleum, Inc. property in Alameda, California for potential site contamination.

If you have any questions, please do not hesitate to contact me.

Very truly yours,

KENNEDY/JENKS ENGINEERS, INC.

James F. Norton

James F. Norton

JFN/lh

Attachment

cc: Edward L. Strohbehn, Jr.
Orrick, Herrington & Sutcliffe

EM0089

Kennedy Jenks Engineers

FINAL REPORT

INITIAL SITE INVESTIGATION OF THE KING PETROLEUM, INC. PROPERTY ALAMEDA, CALIFORNIA

Presented To

Ms. Patricia Barrentine
Chief Executive Officer
Clean Air Technology, Inc.
151 University Avenue
Suite 205
Palo Alto, California

28 May 1984

EM0090

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LIST OF TABLES AND FIGURES

INTRODUCTION

Mr. John Barni, a developer, plans to purchase the property of King Petroleum, Inc. in Alameda for construction of a multiple unit housing complex. The property, which is on the corner of Versailles and Fernside Avenues, has been used for several years as a bulk loading facility for gasoline, lubrication oils, and other petroleum products. The Planning Board of the City of Alameda requested that the soil and groundwater at the King Petroleum, Inc. property be tested for the presence of heavy metals and hydrocarbons prior to the Board's approval of the pending zoning change for the property.

Clean Air Technology, Inc. has retained Kennedy/Jenks Engineers for the sampling and analyzing of the soil and groundwater samples. King Petroleum, Inc. has retained Subsurface Consultants, Inc. to direct the soil test borings and prepare the geophysical logs for the test borings.

TECHNICAL APPROACH

Kennedy/Jenks Engineers originally proposed to collect and analyze three surface samples and one groundwater sample in order to assess the presence of heavy metals and toxic organic compounds on the King Petroleum, Inc. property. A composite of the three soil samples would be analyzed for polychlorinated biphenyls (PCBs) using EPA Method 608 and for 17 metals using an ICAP instrument (a modified EPA method). A groundwater sample was to be collected from an existing well on a property adjacent to the King Petroleum, Inc. property. The groundwater sample would be analyzed for purgeable halocarbons (EPA Method 601) and purgeable hydrocarbons (EPA Method 602).

Upon review of the proposed technical approach, the Director of the City of Alameda Planning Board requested that the three soil samples be taken at three feet below the ground surface. An additional soil sample was to be taken in the area and at the depth of the bottom of the previous underground tanks.

The field program for collection of the soil and groundwater samples was completed on March 5, 1984. Prior to the initiation of the soil borings, Subsurface Consultants, Inc. was directed to make deeper borings so that additional geotechnical information could be obtained for designing the future development for the site. The four soil borings were logged their entire depth (i.e., about 15 feet below the surface).

The test borings were drilled with 8-inch diameter, hollow stem auger equipment. Four soil borings were taken on the King Petroleum, Inc. property at the locations shown on Plate 1 of Appendix A.

The soil samples were obtained in 2.5-inch inside diameter brass liners using a modified California sampler having a 3.0-inch outside diameter. The sampler was driven by a 140 pound hammer with a 30-inch drop.

Test boring 1 was drilled on the northern edge of the area that Mr. King indicated as being the previous location of the underground tanks. From our discussion with Mr. Richard King, it is our understanding that Exxon Corporation had removed all underground tanks from the site in 1982. In discussions with the staff of Kennedy/Jenks Engineers on March 5, 1984, Mr. Richard King indicated that the bottoms of the tanks were approximately 12 feet below the ground surface (i.e., the tanks were eight feet in diameter and placed four feet below the ground surface). The soil sample was taken from boring 1 at the depth of 12.5 feet below the ground surface.

The soil samples were taken in borings 2, 3, and 4 at the depths of 3.0 feet, 3.5 feet, and 4.0 feet, respectively.

All downhole equipment was steam cleaned prior to drilling each boring. The sample liners were steam cleaned prior to use. The sample liners were promptly sealed and labeled after retrieval. Teflon sheeting was placed between the caps and the soil samples to minimize possible contamination of the samples. The caps were sealed with plastic tape. The chain-of-custody forms were filled out and the soil samples with the forms were given to Kennedy/Jenks Engineers staff that were on-site. The Kennedy/Jenks Engineers staff reviewed the chain-of-custody forms and placed the samples in a plastic cooler chest.

When boring 1 was completed, the subsurface water was observed to be within a few feet of the surface. At this time, Mr. King had not obtained verbal approval for Kennedy/Jenks Engineers to test the existing groundwater well just off-site of the King Petroleum, Inc. property. To ensure a sample of subsurface water was collected and analyzed for the King Petroleum, Inc. site, Kennedy/Jenks Engineers' staff decided to sample the surface waters in boring 1 even though the normal procedures recommended by the United States Environmental Protection Agency and the California Regional Water Quality Control Board for installation and development of groundwater monitoring wells could not be followed. The subsurface water was sampled from boring 1 with a Kemmerer sampler within a few minutes of completion of the boring. The unfiltered subsurface water sample was

submerged-filled into four vials. A Teflon septum was placed on the vials and the vials were capped so that there was no air space above the samples. The labeled vials were promptly placed into the plastic cooler, and the chain-of-custody form was filled out. The Kemmerer sampler and the other downhole equipment was steam cleaned prior to being lowered into the boring.

Just before the last boring was finished, Mr. King informed the Kennedy/Jenks Engineers staff that the owner of the adjacent property with the existing groundwater well was available so that the well could be sampled. (See Drawing 1 for location of the well.) According to the owner, he had constructed the well by pumping sandy water out of the well through a long PVC pipe. He estimated the well to be about 30 feet deep. The well was pumped for about five minutes using the owner's pump and piping system. A water sample was pumped from the well with the owner's pump into four sample vials. The vials were capped using the procedure described above and placed into the plastic cooler.

All the borings except boring 4 were backfilled with the cuttings from the borings as soon as the soil and (the subsurface water) samples were taken. Boring 4 was left open for one day so that the level of the subsurface water could equilibrate in the boring.

The soil and groundwater samples were brought back to the laboratory for analysis.

RESULTS

The King Petroleum, Inc. site is essentially level and mostly covered concrete pavement. Several buildings and abandoned tank pads are on the site as shown in Drawing 1, Site Plan.

The test borings encountered medium dense to dense clayey sands of the Merritt Formation. The upper seven feet of boring 1, the upper two feet of boring 2, the upper three to four feet of boring 3, and the upper two feet of boring 4 were dark gray and had a strong petroleum odor. Below these depths the soil changed to blue-gray and did not possess the petroleum odor. See Subsurface Consultants, Inc. report in Appendix A.

Because of the strong petroleum odor of the upper soils at the King Petroleum, Inc. property, the soil sample from boring 3, which was collected from the upper soils, was analyzed for purgeable halocarbons (EPA Method 601) and purgeable hydrocarbons (EPA Method 602). No purgeable halocarbons were detected in the sample. However, the sample contained 350 µg/kg of ben-

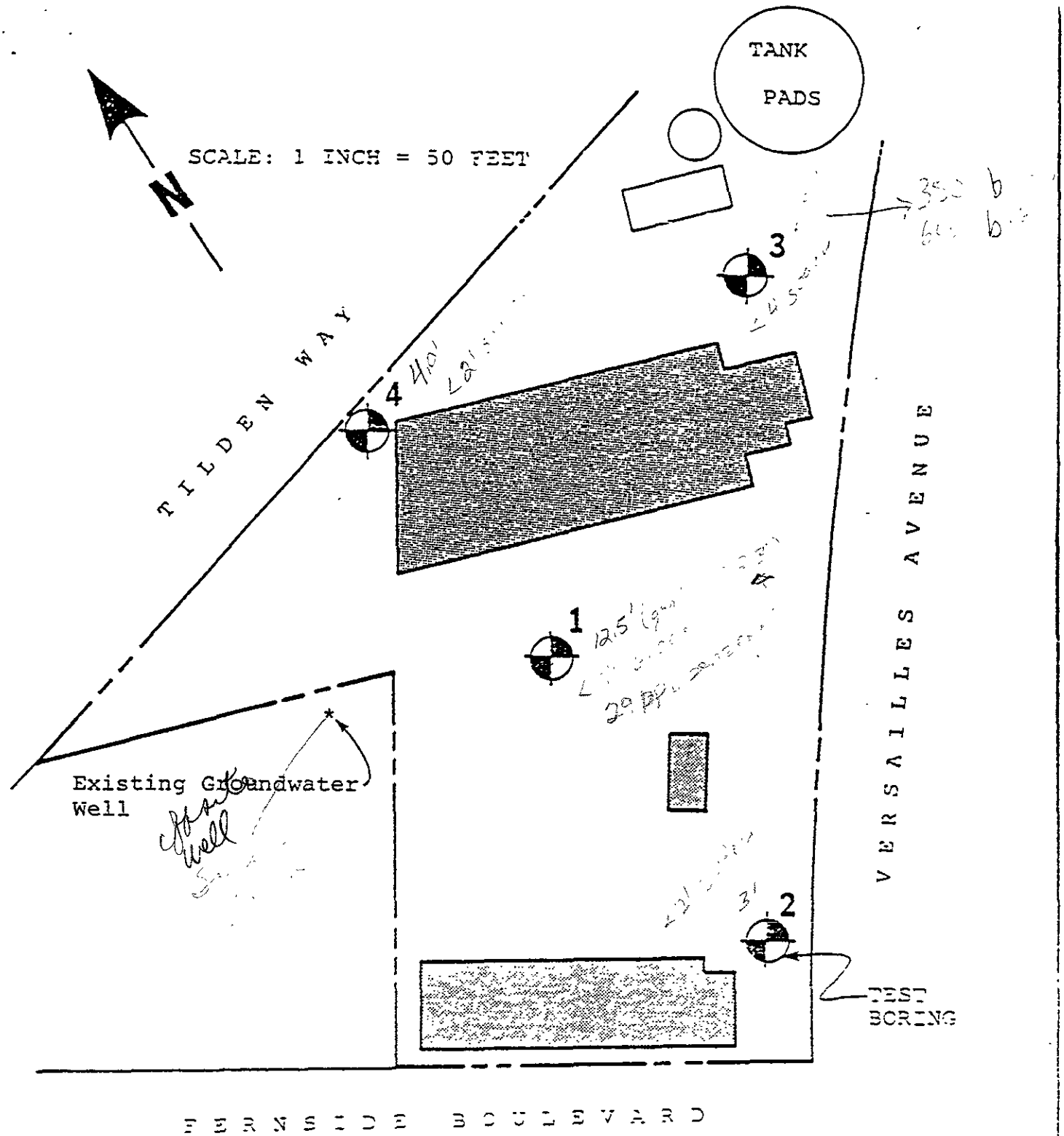
zene, and 640 µg/kg of ethylbenzene. Numerous other compounds were observed on the chromatograph for the sample, but were not identified by EPA Method 602 (See Table 1.)

The groundwater appears to be within a few feet of the ground surface of the King Petroleum, Inc. site. Prior to flushing the well adjacent to the King Petroleum property, the water surface in the well was within a few feet of the ground surface. After one day of drilling boring 4, the groundwater was within two feet of the top of the boring.

No purgeable halocarbons were found in the subsurface water sample collected from boring 1. However, 29 µg/l (ppb) of benzene was measured in the subsurface water sample.

No purgeable halocarbons or hydrocarbons were found in the groundwater sample from the off-site well to the west of the property.

Table 2 presents the measured concentrations of 17 metals for which the soil sample from boring 1 and the composite sample from the soil samples of borings 2, 3, and 4 were tested. No PCBs were detected in the samples from boring 1 and the composite sample (see Table 2).



EM0096

SITE MAP

KING PETROLEUM FACILITY- ALAMEDA

JOB NUMBER	DATE	APPROVED
130.001	3/9/94	

PLATE 1

TABLE 1

BORING 3
SOIL SAMPLE
PURGEABLE HYDROCARBON ANALYSES[1]

HYDROCARBON	CONCENTRATION[2] (µg/kg)
Benzene	350
Chlorobenzene	<5
1,2-Dichlorobenzene	<5
1,3-Dichlorobenzene	<5
1,4-Dichlorobenzene	<5
Ethylbenzene	640
Toluene	<5

[1] Analysis by EPA Method 602 (purgeable aromatics).

[2] The chromatograph showed numerous unidentified peaks.

TABLE 2

SOIL METAL AND
POLYCHLORINATED BIPHENYL ANALYSES

METAL	MEASURED CONCENTRATION (mg/kg)[1] BORING 1	COMPOSITE SAMPLE[2]
Arsenic	<2	<2
Antimony	<5	<5
Barium	63	110
Beryllium	0.18	0.23
Cadmium	0.29	0.39
Chromium (T)	53	36
Cobalt	8.6	3.8
Copper	110	20
Lead	<1	<1
Mercury	0.1	0.1
Nickel	50	52
Selenium	<0.5	<0.5
Silver	<1	<1
Thallium	<2	<2
Vanadium	15	17
Zinc	93	27
Polychlorinated biphenyls	<1.0	<1.0

[1]Milligram per kilogram, wet weight (as received)
[2]Equal weight composite of the soil samples from borings 1, 3, and 4.

March 20, 1984
SCI 120.001

Mr. James F. Norton
Kennedy/Jenks Engineers
657 Howard Street,
San Francisco, California 94105

Report
Geotechnical Services
King Petroleum Facility
Alameda, California

Dear Mr. Norton,

This letter records the results of our geotechnical engineering services for Kennedy/Jenks Engineers' initial site assessment of the King Petroleum facility in Alameda, California. The project is located at 2100 Versailles Avenue. The location of the site in relation to nearby streets is shown on Plate 1, Site Plan. We understand that the site will eventually be developed as a multi unit housing tract. Because of the site's past history as a petroleum products bulk storage facility, having both above and below ground storage tanks, the Alameda Zoning Board has requested that a soil and groundwater investigation be performed.

The scope of our services initially consisted of drilling four, shallow test borings to obtain soil samples at depths of about 3 feet at three locations and at about 12 feet at one other location. During our investigation, the scope of our services was expanded to include deeper test borings to provide soil information for future site development. However, developing conclusions and design recommendations for future development were excluded from our current scope of services.

Field Investigation

The test borings were drilled using 8-inch-diameter, hollow stem auger equipment. Test boring locations and sample depths were specified by Mr. James Norton of Kennedy/Jenks Engineers. Our field engineer observed drilling operations, logged the soils encountered and obtained soil samples. The samples were obtained in 2.5 inch diameter brass liners using a Modified California Drive Sampler having a 3.0 inch outside diamater. The sampler was driven by a 140 pound hammer with a 30 inch drop. The blow counts required to drive the sampler were

Subsurface Consultants, Inc.
Ciricord Plaza • Suite 900 • 180 Grand Avenue • Oakland, California 94612 • 415-[illegible]

recorded and are presented on the Logs of Test Borings, Plates 2 and 3. The liners were promptly sealed with plastic caps after sample retreival. Teflon sheeting was placed between the caps and the soil samples to minimize the likelihood of sample contamination. Finally, the caps were sealed with plastic tape. Upon completion of drilling, the appropriate soil samples and chain of custody records were given to an on-site representative of Kennedy/Jenks Engineers.

The sampler, sample tubes and augers were steam cleaned prior to their initial use. The sampler and augers were again steam cleaned before each subsequent use.

Upon completion of drilling, all test borings, were backfilled with soil cuttings generated by drilling. Test Boring 4 was left open for several days so that a stabilized water level could be measured.

Site and Subsurface Conditions

The site is essentially level and covered by asphalt concrete pavement. Several buildings and tank pads also exist on site; their locations are shown on the Site Plan, Plate 1.

The test borings encountered medium dense to dense clayey sands of the Merritt Formation. These materials extended to the bottom of the test borings. The upper 7 feet of soil in Boring 1 and upper 2 to 4 feet in Borings 2 through 4 was dark gray in color and had a strong petroleum odor. Below this surface layer, the soils changed color to gray-brown and did not possess a petroleum odor. All of the soils contained significant quantities of silt and clay, and generally became dense with depth.

Groundwater was encountered in Test Boring 4 at a depth of about 2 feet. We judge that this water level is characteristic of conditions throughout the site.

If you have any questions regarding our services, please call.

Very truly yours,
Subsurface Consultants, Inc.

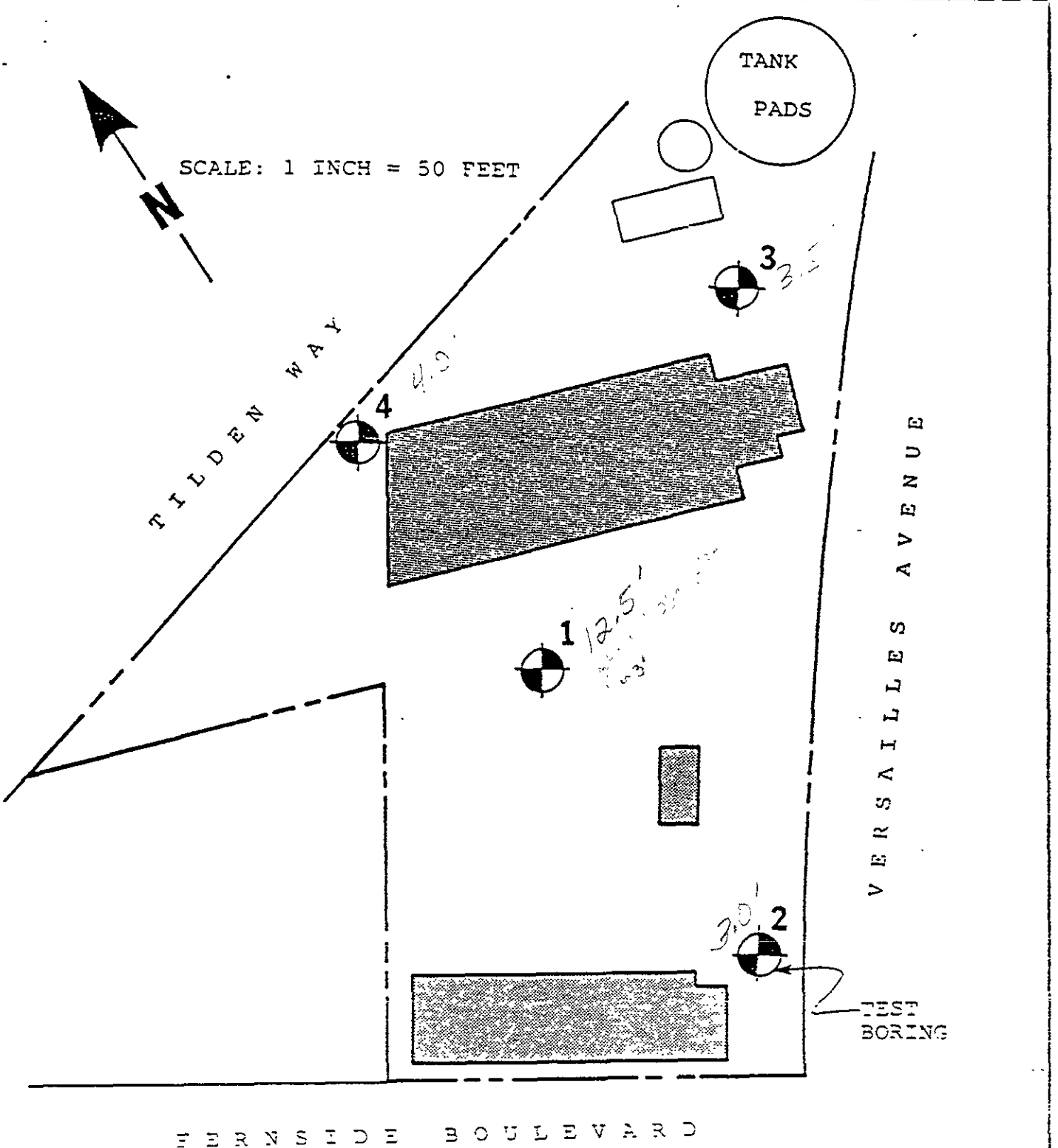
James P. Bowers
Civil Engineer 28962

Attachments: Plates 1 thru 3

cc: King Petroleum, Inc.
Attention: Mr. Richard King

EM0101

PJD / JB / jl



EM0102

SITE PLAN

Subsurface Consultants

KING PETROLEUM FACILITY- ALAMEDA

JOB NUMBER	DATE	APPROVED
120.001	3/9/84	DB

PLATE 1

LOG OF TEST BORING 1

EQUIPMENT 8" Hollow Auger
DATE DRILLED 3/5/84
ELEVATION*

LABORATORY TESTS	MOISTURE CONTENT %	DRY DENSITY (PCF)	DEPTH (FT)	SAMPLE	BLOWS PER FOOT	
			0			DARK GREY CLAYEY SAND (SC) medium dense, moist, strong odor of petroleum
			5			color change to mottled grey brown, becomes dense
			10		45	boring was backfilled prior to obtaining a stabilized water level
			15			

SAMPLER OD: 3 INCHES
SAMPLER ID: 2.5 INCHES

HAMMER WEIGHT: 140 LBS.
HAMMER DROP: 30 INCHES

*BORING ELEVATIONS WERE NOT MEASURED; HOWEVER, THEY ARE JUDGED THE SAME FOR ALL BORINGS

LOG OF TEST BORING 2

EQUIPMENT 8" Hollow Auger
DATE DRILLED 3/5/84
ELEVATION*

LABORATORY TESTS	MOISTURE CONTENT %	DRY DENSITY (PCF)	DEPTH (FT)	SAMPLE	BLOWS PER FOOT	
			0			DARK GREY CLAYEY SAND (SC) medium dense, moist, strong petroleum odor
			5		21	MOTTLED GREY BROWN CLAYEY SAND (SC) medium dense, moist
			10		21	
			15		60+	boring was backfilled prior to obtaining a stabilized water level becomes dense

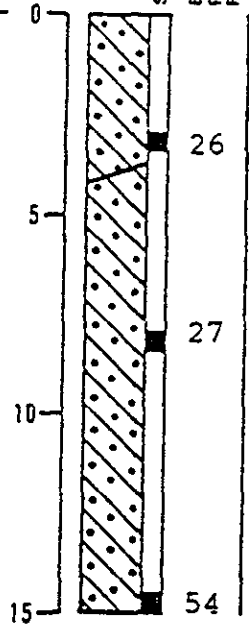
EM0103

Subsurface Consultants	KING PETROLEUM FACILITY-ALAMEDA			PLATE
	JOB NUMBER	DATE	APPROVED	2
	120..001	3/12/84		

LOG OF TEST BORING 3

EQUIPMENT 8" Hollow Auger
DATE DRILLED 3/5/84
ELEVATION *

LABORATORY TESTS | MOISTURE CONTENT % | DRY DENSITY (PCF) | DEPTH (FT) | SAMPLE | BLOWS PER FOOT



DARK GREY CLAYEY SAND (SC)
medium dense, moist
MOTTLED GREY BROWN CLAYEY SAND (SC)
medium dense, moist

SAMPLER OD: 3 INCHES
SAMPLER ID: 2.5 INCHES

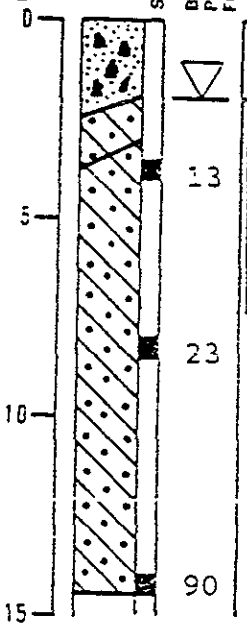
HAMMER WEIGHT: 140 LBS.
HAMMER DROP: 30 INCHES

becomes dense and less clayey
boring was backfilled prior to obtaining stabilized water level

LOG OF TEST BORING 4

EQUIPMENT 8" Hollow Auger
DATE DRILLED 3/5/84
ELEVATION *

LABORATORY TESTS | MOISTURE CONTENT % | DRY DENSITY (PCF) | DEPTH (FT) | SAMPLE | BLOWS PER FOOT



3 INCHES ASPHALT
15 INCHES GRAVEL
BLACK CLAYEY SAND (SC)
loose, moist, strong petroleum odor
MOTTLED GREY BROWN CLAYEY SAND (SC)
medium dense, moist
groundwater, 3/12/84

becomes dense

becomes less clayey

EM0104

Subsurface Consultants	KING PETROLEUM FACILITY-ALAMEDA			PLATE
	JOB NUMBER	DATE	APPROVED	3
	120.001	3/12/84		

Soil Analysis Report

Kennedy/Jenks Engineers
Laboratory Division
657 Howard Street
San Francisco, California 94105
415-362-6065 495-6627

Received 3/5/84
Reported 3/26/84

For Kennedy/Jenks Engineers
Attention J. F. Norton
Address 657 Howard Street
San Francisco, CA 94105

Lab. No.		84694	84695-7
Source King Petroleum Alameda, CA	Boring: Depth:	#1 12.5'	#2, #3, & #4 (1) -
Date Collected		3/5/84	3/5/84
Time Collected		0930	0945-1110
Collected by		Subsurface Consultants, Inc.	

Analysis	Units	Analytical Results	
Arsenic (As)	mg/Kg(2)	<2	<2
Antimony (Sb)	mg/Kg(2)	<5	<5
Barium (Ba)	mg/Kg(2)	63	110
Beryllium (Be)	mg/Kg(2)	0.18	0.23
Cadmium (Cd)	mg/Kg(2)	0.29	0.39
T. Chromium (Cr)	mg/Kg(2)	53	36
Cobalt (Co)	mg/Kg(2)	8.6	3.8
Copper (Cu)	mg/Kg(2)	110	20
Lead (Pb)	mg/Kg(2)	<1	<1
Mercury (Hg)	mg/Kg(2)	0.1	0.1
Molybdenum (Mo)	mg/Kg(2)	<2	<2
Nickel (Ni)	mg/Kg(2)	50	52
Selenium (Se)	mg/Kg(2)	<0.5	<0.5
Silver (Ag)	mg/Kg(2)	<1	<1
Thallium (Tl)	mg/Kg(2)	<2	<2
Vanadium (V)	mg/Kg(2)	15	17
Zinc (Zn)	mg/Kg(2)	93	27
Polychlorinated Biphenyls (PCBs)	mg/Kg(2)	<1.0	<1.0
Total Solids	%	84.9	83.3

EM0106

Comments:

(1) Equal weight composite of Boring #2 @ 3 ft, Boring #3 @ 3.5 ft and Boring #4 @ 4 ft.
(2) Milligrams per Kilogram, Wet Weight (as received) basis

cc: T. G. Erler, Kennedy/Jenks Engineers, Inc.

Analyst CAL, JW Manager Leverett K. Smith

Kennedy/Jenks Engineers, Laboratory Division
657 Howard Street
San Francisco, CA 94105
415-495-6627

Received 3/5/84
Reported 3/26/84

Soil Analysis Report

For Kennedy/Jenks Engineers
657 Howard Street, San Francisco, CA 94105
Attention: J. F. Norton

Lab.No.:	84696
Source: King Petroleum, Alameda, CA	Boring #3
Treatment:	Depth 3.5 ft
Date Collected:	3/5/84
Time Collected:	1110
Collected by:	Subsurface Consultants, Inc.

Analysis	Units *	Analytical Results
PURGEABLES		
Carbon Tetrachloride	ug/Kg	<2
1,2-Dichloroethane	ug/Kg	<2
1,1,1-Trichloroethane	ug/Kg	<2
1,1-Dichloroethane	ug/Kg	<2
1,1,2,-Trichloroethane	ug/Kg	<2
1,1,2,2-Tetrachloroethane	ug/Kg	<2
2-Chloroethylvinyl ether	ug/Kg	<2
Chloroform	ug/Kg	<2
1,1-Dichloroethene	ug/Kg	<2
Trans-1,2-dichloroethene	ug/Kg	<2
1,2-Dichloropropane	ug/Kg	<2
Trans-1,3-dichloropropene	ug/Kg	<2
cis-1,3-Dichloropropene	ug/Kg	<2
Methylene Chloride	ug/Kg	<2
Bromoform	ug/Kg	<2
Bromodichloromethane	ug/Kg	<2
Fluorotrichloromethane	ug/Kg	<2
Chlorodibromomethane	ug/Kg	<2
Tetrachloroethene	ug/Kg	<2
Trichloroethene	ug/Kg	<2
1,1,2-Trichloro-1,2,2-trifluoroethane(1)	ug/Kg	<2

EM0107

Comments: Analysis by EPA Method 601, Purgeable Halocarbons.
* Micrograms per Kilogram, Wet (as received) Weight Basis

cc: T. G. Erler, Kennedy/Jenks Engineers

Analyst JW

Manager Leverett R. Smith

Kennedy/Jenks Engineers, Laboratory Division
657 Howard Street
San Francisco, CA 94105
415-495-6627

Received 3/5/84
Reported 3/26/84

Soil Analysis Report

For Kennedy/Jenks Engineers
657 Howard Street, San Francisco, CA 94105
Attention: J. F. Norton

Lab.No.:		84696
Source:	King Petroleum, Alameda, CA	Boring #3 Depth 3.5 ft
Date Collected:		3/5/84
Time Collected:		1110
Collected by:		Subsurface Consultants, Inc.

Analysis	Units *	Analytical Results
PURGEABLES		
Benzene (1)	ug/Kg	350
Chlorobenzene (1)	ug/Kg	<5
1,2-Dichlorobenzene (1)	ug/Kg	<5
1,3-Dichlorobenzene (1)	ug/Kg	<5
1,4-Dichlorobenzene (1)	ug/Kg	<5
Ethylbenzene (1)	ug/Kg	640
Toluene (1)	ug/Kg	<5

EM0108

Comments: (1) Analysis by EPA Method 602 (Purgeable Aromatics).

Note:
The chromatogram showed numerous unidentifiable peaks.

cc: T. G. Erler, Kennedy/Jenks Engineers

Analyst JW

Manager Everett R. Smith

Kennedy/Jenks Engineers, Laboratory Division
657 Howard Street
San Francisco, CA 94105
415-495-6627

Received 3/5/84
Reported 3/26/84

Groundwater Analysis Report

For Kennedy/Jenks Engineers
657 Howard Street, San Francisco, CA 94105
Attention: J. F. Norton

Lab.No.:		84698	84699
Source:		Boring #1 Groundwater	Off-site Well #1 Groundwater
Date Collected:		3/5/84	3/5/84
Time Collected:	Grab:	0945	1200
Collected by:		T. Holsen	

Analysis	Units *	Analytical Results	
PURGEABLES			
Carbon Tetrachloride	ug/L	<2	<2
1,2-Dichloroethane	ug/L	<2	<2
1,1,1-Trichloroethane	ug/L	<2	<2
1,1-Dichloroethane	ug/L	<2	<2
1,1,2,-Trichloroethane	ug/L	<2	<2
1,1,2,2-Tetrachloroethane	ug/L	<2	<2
2-Chloroethylvinyl ether	ug/L	<2	<2
Chloroform	ug/L	<2	<2
1,1-Dichloroethene	ug/L	<2	<2
Trans-1,2-dichloroethene	ug/L	<2	<2
1,2-Dichloropropane	ug/L	<2	<2
Trans-1,3-dichloropropene	ug/L	<2	<2
cis-1,3-Dichloropropene	ug/L	<2	<2
Methylene Chloride	ug/L	<2	<2
Bromoform	ug/L	<2	<2
Bromodichloromethane	ug/L	<2	<2
Fluorotrichloromethane	ug/L	<2	<2
Chlorodibromomethane	ug/L	<2	<2
Tetrachloroethene	ug/L	<2	<2
Trichloroethene	ug/L	<2	<2
1,1,2-Trichloro-1,2,2-trifluoroethane(1)	ug/L	<2	<2

EM0109

Comments: Analysis by EPA Method 601, Purgeable Halocarbons.
Sample No. 84698 showed numerous unidentifiable peaks on the purgeables chromatogram.

cc: T. G. Erler, Kennedy/Jenks Engineers

Analyst JW

Manager Everett R. Smith

Kennedy/Jenks Engineers, Laboratory Division
657 Howard Street
San Francisco, CA 94105
415-495-6627

Received 3/5/84
Reported 3/26/84

Soil Analysis Report

For Kennedy/Jenks Engineers
657 Howard Street, San Francisco, CA 94105
Attention: J. F. Norton

Lab.No.:		84698	84699
Source:		Boring #1 Groundwater	Off-site Well #1 Groundwater
Date Collected:		3/5/84	3/5/84
Time Collected:	Grab:	0945	1200
Collected by:		T. Holsen	

Analysis	Units *	Analytical Results	
PURGEABLES			
Benzene (1 and 2)	ug/L	29	<2
Chlorobenzene (2)	ug/L	<2	<2
1,2-Dichlorobenzene (2)	ug/L	<2	<2
1,3-Dichlorobenzene (2)	ug/L	<2	<2
1,4-Dichlorobenzene (2)	ug/L	<2	<2
Ethylbenzene (2)	ug/L	<2	<2
Toluene (1 and 2)	ug/L	<2	<2

EM0110

Comments: (1) Analysis by EPA Method 601 (Purgeable Halocarbons).
(2) Analysis by EPA Method 602 (Purgeable Aromatics).

cc: T. G. Erler, Kennedy/Jenks Engineers

Analyst JW

Manager Leverett R. Smith