



February 8, 1993
Sample Log 5721

John Church
G.H.H. Engineering Inc.
8084 Old Auburn Blvd., Suite E
Citrus Heights, CA 95610

Subject: Analytical Results for 4 Soil Samples
Identified as: Project # 1129.1 (San Pablo)
Received: 01/21/93
Purchase Order: 2899

Dear Mr. Church:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on February 8, 1993 and describes procedures used to analyze the samples.

Sample(s) were received in brass sleeves that were sealed with PTFE sheets and plastic endcaps. Each sample was transported and received under documented chain of custody and stored at 4 degrees C until analysis was performed.

Sample(s) were analyzed using the following method(s):

- "BTEX" (EPA Method 8020/Purge-and-Trap)
- "TPH as Gasoline" (Modified EPA Method 8015/Purge-and-Trap)
- "TPH as Diesel, Motor Oil, Jet/Kerosene" (Mod. 8015/Extraction)
- "Halogenated Solvents" (EPA Method 8010)
- "Metals by Atomic Absorption/ICAP" (EPA Methods 7000/6010/200.7)
- "Oil and Grease" (ASTM Method 5520 E,F)
- "Volatile Organic Priority Pollutants" (EPA Method 8240)
- "Semi-Volatile Organic Priority Pollutants" (EPA Method 8270)
- "Metals" (EPA 6010,7000)
- "RCI" (Reactivity, Corrosivity, Ignitability)

Please refer to the following table(s) for summarized analytical results and contact us at 916-757-4650 if you have questions regarding procedures or results. The chain-of-custody document is enclosed.

Approved by:

Joel Kiff
Senior Chemist



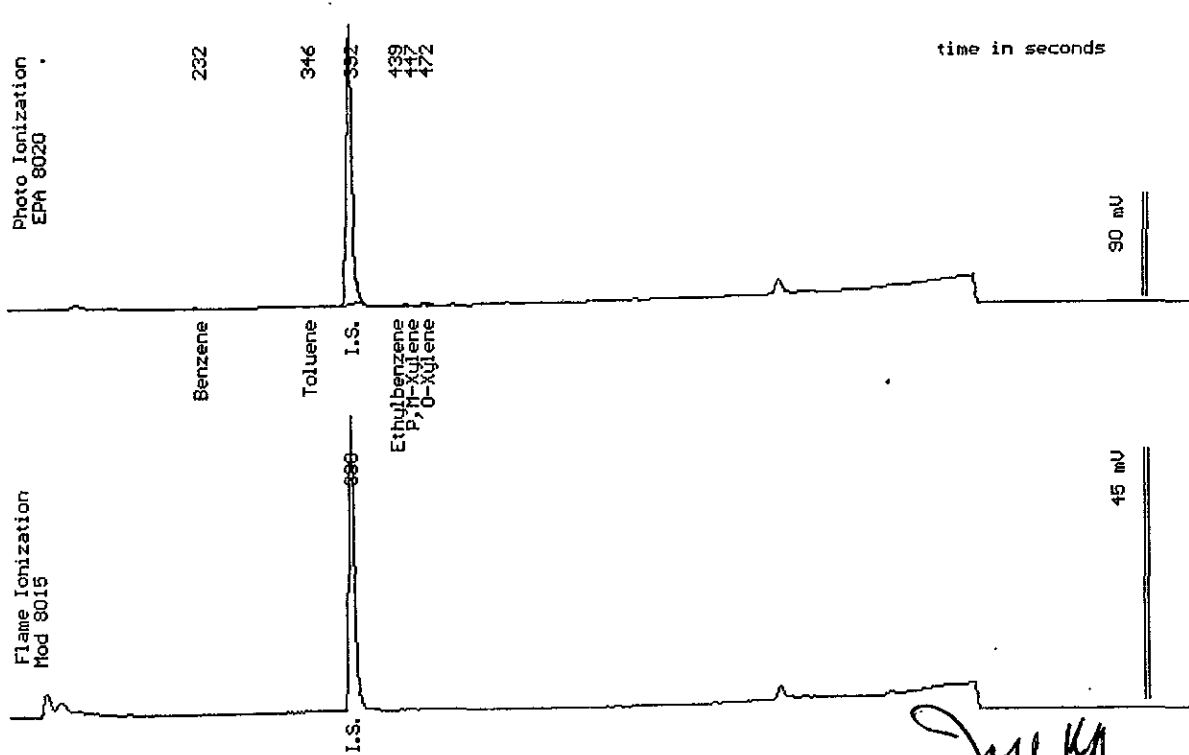
Sample Log 5721
5721-1

Sample: TS12

From : Project # 1129.1 (San Pablo)
Sampled : 01/21/93
Dilution : 1:1
Matrix : Soil

QC Batch : 6093c

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(.50)	<.50



Date Analyzed: 01-30-93
Column : 0.53mm ID X 30m DB5 (J&W Scientific)

Joel Kiff
Joel Kiff
Senior Chemist



Sample Log 5721
5721-1

Sample: TS12

From : Project # 1129.1 (San Pablo)

Sampled : 01/21/93

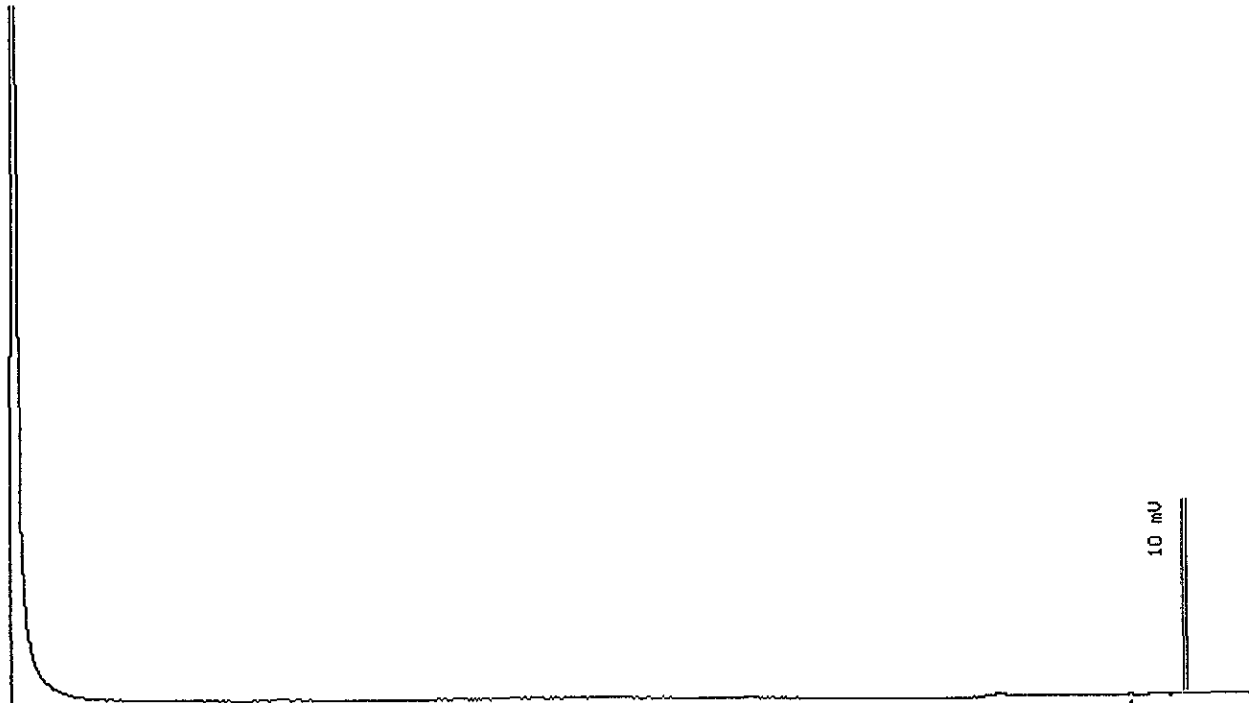
Extracted: 01/27/93

Dilution : 1:1

QC Batch : 8073A

Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
TPH as Diesel	(10)	<10
TPH as Motor Oil	(10)	<10



EPA Mod 8015

Date: 01-28-93 Time: 02:14:53
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

S. Podolsky
Stewart Podolsky
Senior Chemist



February 8, 1993

Sample Log 5721

5721-1

Sample: TS12

From : Project # 1129.1 (San Pablo)

Sampled : 01/21/93

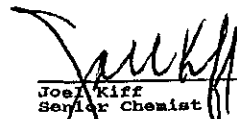
Matrix : Soil

Received : 01/21/93

Analyzed : 01/27/93

8010 - Halogenated Volatile Organics

Parameter	(MDL) mg/kg	Measured Value mg/kg	Flag
Chloromethane	(.005)	<.005	
Chloroethane	(.005)	<.005	
Vinyl Chloride	(.005)	<.005	
Bromomethane	(.005)	<.005	
Trichlorofluoromethane	(.005)	<.005	
1,1-Dichloroethene	(.001)	<.001	
Dichloromethane	(.005)	<.005	
t-1,2-Dichloroethene	(.001)	<.001	
1,1-Dichloroethane	(.001)	<.001	
Chloroform	(.001)	<.001	
1,1,1-Trichloroethane	(.001)	<.001	
1,2-Dichloroethane	(.001)	<.001	
Carbon Tetrachloride	(.001)	<.001	
1,2-Dichloropropane	(.001)	<.001	
Trichloroethene	(.001)	<.001	
Bromodichloromethane	(.001)	<.001	
c-1,2-Dichloroethene	(.001)	<.001	
c-1,3-Dichloropropene	(.001)	<.001	
t-1,3-Dichloropropene	(.001)	<.001	
1,1,2-Trichloroethane	(.001)	<.001	
Tetrachloroethene	(.001)	<.001	
Dibromochloromethane	(.001)	<.001	
Chlorobenzene	(.001)	<.001	
Bromoform	(.001)	<.001	
1,1,2,2-Tetrachloroethane	(.001)	<.001	
1,4-Dichlorobenzene	(.001)	<.001	
1,3-Dichlorobenzene	(.001)	<.001	
1,2-Dichlorobenzene	(.001)	<.001	


Joe Kiff
Senior Chemist



February 24, 1993
Sample Log 5849

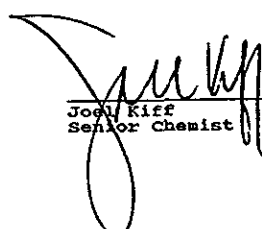
Sample: TS-13

From : Project # 1129.1 (San Pablo)
Sampled : 02/10/93
Matrix : Soil
Extracted : 02/17/93

Received : 02/10/93
Analyzed : 02/22/93

8270 - Semi Volatile Organic Priority Pollutants

Parameter	(MDL) $\mu\text{g}/\text{kg}$	Measured Value $\mu\text{g}/\text{kg}$	Flag
Acenaphthene	(0.70)	<0.70	
Acenaphthylene	(0.70)	0.97 [†]	
Anthracene	(0.70)	0.96 [†]	
Benzo (a) anthracene	(0.70)	3.3	
Benzo (b) fluoranthene	(0.70)	1.9	
Benzo (k) fluoranthene	(0.70)	<0.70	
Benzo (a) pyrene	(0.70)	3.8 [†]	
Benzo (ghi) perylene	(0.70)	2.7	
Benzyl butyl phthalate	(0.70)	<0.70	
bis (2-chloroethyl) ether	(0.70)	<0.70	
bis (2-chloroethoxy) methane	(0.70)	<0.70	
bis (2-ethylhexyl) phthalate	(1.4)	< 1.4	
bis (2-chloroisopropyl) ether	(0.70)	<0.70	
4-Bromophenyl phenyl ether	(0.70)	<0.70	
2-Chloronaphthalene	(0.70)	<0.70	
4-Chlorophenyl phenyl ether	(0.70)	<0.70	
Chrysene	(0.70)	5.4	
Dibenzo (ah) anthracene	(0.70)	<0.70	
Di-n-butyl phthalate	(0.70)	<0.70	
Di-n-octyl phthalate	(0.70)	<0.70	
1,3-Dichlorobenzene	(0.70)	<0.70	
1,2-Dichlorobenzene	(0.70)	<0.70	
1,4-Dichlorobenzene	(0.70)	<0.70	
3,3-Dichlorobenzidine	(0.70)	<0.70	
Diethyl phthalate	(0.70)	<0.70	
Dimethyl phthalate	(0.70)	<0.70	
2,4-Dinitrotoluene	(0.70)	<0.70	


Joel Kiff
Senior Chemist



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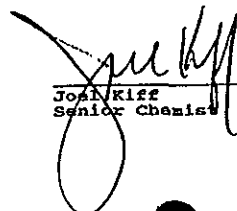
Sample: TS-13

From : Project # 1129.1 (San Pablo)
Sampled : 02/10/93
Matrix : Soil
Extracted : 02/17/93

Received : 02/10/93
Analyzed : 02/22/93

8270 - Semi Volatile Organic Priority Pollutants

Parameter	(MDL) <small>ng/kg</small>	Measured Value <small>ng/kg</small>	Flag
2,6-Dinitrotoluene	(0.70)	<0.70	
Fluoranthene	(0.70)	10	
Fluorene	(0.70)	1.3	
Hexachlorobenzene	(0.70)	<0.70	
Hexachlorobutadiene	(0.70)	<0.70	
Hexachloroethane	(0.70)	<0.70	
Indeno (123-cd) pyrene	(0.70)	2.6 [†]	
Isophorone	(0.70)	<0.70	
Naphthalene	(0.70)	<0.70	
Nitrobenzene	(0.70)	<0.70	
n-Nitrosodi-n-propylamine	(0.70)	<0.70	
Phenanthrene	(0.70)	11 [†]	
Pyrene	(0.70)	11 [†]	
1,2,4-Trichlorobenzene	(0.70)	<0.70	
Benzidine	(0.70)	<0.70	
Hexachlorocyclopentadiene	(0.70)	<0.70	
n-Nitrosodimethylamine	(0.70)	<0.70	
n-Nitrosodiphenylamine	(0.70)	<0.70	
4-Chloro-3-methylphenol	(0.70)	<0.70	
2-Chlorophenol	(0.70)	<0.70	
2,4-Dichlorophenol	(0.70)	<0.70	
2,4-Dimethylphenol	(0.70)	<0.70	
2,4-Dinitrophenol	(0.70)	<0.70	
2-Methyl-4,6-dinitrophenol	(0.70)	<0.70	
2-Nitrophenol	(0.70)	<0.70	
4-Nitrophenol	(0.70)	<0.70	
Pentachlorophenol	(0.70)	<0.70	
Phenol	(0.70)	<0.70	
2,4,6-Trichlorophenol	(0.70)	<0.70	


Joel Kiff
Senior Chemist



February 24, 1993
Sample Log 5849

Sample : TS-13

From : Project # 1129.1 (San Pablo)
Sampled : 02/10/93
Matrix : Soil
Extracted : 02/17/93

Received : 02/10/93
Analyzed : 02/22/93

Tentatively Identified Compounds
(PNA's are denoted by an asterisk)

Compound	CAS #
2-methylnaphthalene *	91576
1-methylnaphthalene *	90120
1,8-dimethylnaphthalene *	569415
Dibenzofuran	132649
9H-Fluorene *	
9H-Fluorene-9-one *	486259
Dibenzothiophene *	132650
2-methylanthracene *	613127
3-methylphenanthrene *	832713
9,10-Anthracenedione *	84651
2-methylpyrene *	3442782
4-methylpyrene *	3353126
1-methylpyrene *	2381217
Pentatriacontane	630079
7H-Benz(de)anthracen-7-one *	82053
Tetratriacontane	14167590
10-methyleicosane	54833237
1-methylbenz(a)anthracene *	2498773
Heptacosane	593497
Benzo(j)fluoranthene *	205823
Benzo(e)pyrene *	192972
Benzo(b)triphenylene *	215587



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EPA 8270 System Monitoring Compound Recovery

Sample	SMC1 (NBZ)#	SMC2 (FBP)#	SMC3 (TPH)#	SMC4 (PHL)#	SMC5 (2FP)#	SMC6 (TBF)#	OTHER	TOT OUT
TS-13	113	114	108	105	97	86		0

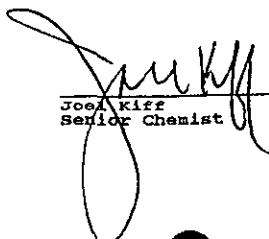
QC Limits

SMC1 (NBZ) = Nitrobenzene-d5	(23-120)
SMC2 (FBP) = 2-Fluorobiphenyl	(30-115)
SMC3 (TPH) = Terphenyl-d14	(18-137)
SMC4 (PHL) = Phenol-d6	(24-113)
SMC5 (2FP) = 2-Fluorophenol	(25-121)
SMC6 (TBF) = 2,4,6-Tribromophenol	(19-122)

Column to be used to flag recovery values

* Values outside of QC limits

D System Monitoring Compound diluted out


Joa Kiff
Senior Chemist

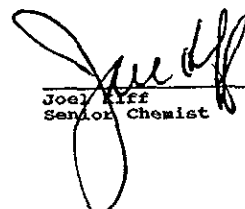


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Table 2: Selected Metals Results for 3 Soil Sample(s)
From Project # 1129.1 (San Pablo)
Received 01/21/93

--all concentrations are units of mg/kg--

Sample	Cadmium	Chromium	Lead	Zinc	Nickel
TS12	<0.2	40	5.6	67	44
TS10	<0.2	32	6.9	110	41
TS11	<0.2	38	18	93	36
(Reporting Limit	0.2	1.0	1.0	1.0	20)


Joel Riff
Senior Chemist

RECEIVED

JUN 20 1992

June 5, 1992
Sample Log 4469

GHH ENGINEERING



Edward James
G.H.H. Engineering Inc.
8084 Old Auburn Blvd., Suite E
Citrus Heights, CA 95610

Subject: Analytical Results for 4 Water Samples
Identified as: Project # 1129 (San Pablo)
Received: 05/28/92
Purchase Order: 6062

Dear Mr. James:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on June 3, 1992 and describes procedures used to analyze the samples.

The sample(s) were received in:

40-ml glass vials sealed with TFE-lined septae
1-L glass bottles sealed with TFE-lined caps
1-L polyethylene bottles with polyethylene caps

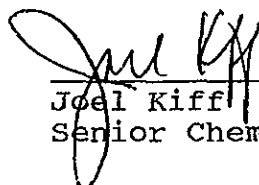
Each sample was transported and received under documented chain of custody, assigned a consecutive log number and stored at 4 degrees Celsius until analysis commenced.

Sample(s) were analyzed using the following method(s):

"BTEX" (EPA Method 602/Purge-and-Trap)
"TPH as Gasoline" (Modified EPA Method 8015/Purge-and-Trap)
"TPH as Diesel, Motor Oil, Jet/Kerosene" (Mod. 8015/Extraction)
"Halogenated Solvents" (EPA Method 601)
"Metals by Atomic Absorption" (EPA Method 7000)
"Oil and Grease" (ASTM Method 5520 B,F)

Please refer to the following table(s) for summarized analytical results and contact us at 916-757-4650 if you have questions regarding procedures or results. The chain-of-custody document is enclosed.

Approved by:


Joel Kiff
Senior Chemist



Sample Log 4469

4469-2

Sample: MW-3

From : Project # 1129 (San Pablo)

Sampled : 05/27/92

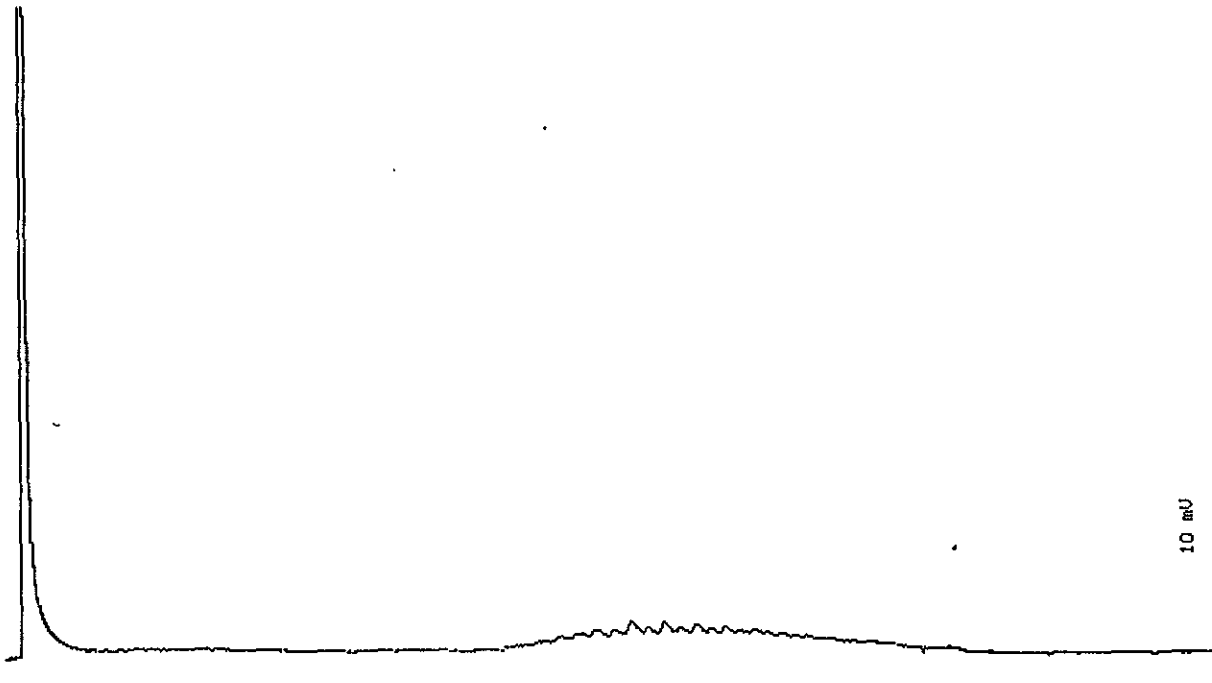
Extracted: 06/03/92

Dilution : 1:1

Matrix : Water

QC Batch : 8030c

Parameter	(MDL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(50)	130



EPA Mod 8015

Motor Oil

Date: 06-04-92 Time: 16:00:24
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

Stewart Podolsky
Senior Chemist