ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

February 8,1999
StID # 1989

REMEDIAL ACTION COMPLETION CERTIFICATION

PAMCO c/o
Mr. Ansel Kinney
369 Broadway
San Francisco, CA 94133

Jay-N Trucking c/o
Mr. E. Spokes Jr. Esq.
909 14th St., P.O. Box 331
Modesto, CA 95353

Crown Cork & Seal
C/o Ms. Nancy Casale Esq.
1333 N. California Blvd.
Suite 450
Walnut Creek, CA 94596

Violet Geisler Trust
225 W. Manville St.
Compton, CA 90220

RE: PAMCO Property, 5601 San Leandro St., Oakland CA 94621

Dear Ladies and Gentlemen:

This letter confirms the completion of site investigation and remedial action for the seven (7) underground tanks; two 1000 gallon gasoline, two 5000 gallon diesel, one 12,000 gallon enamel, one 5000 gallon naptha and one 3000 gallon methyl ethyl ketone. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground tank is greatly appreciated.

Based upon the available information and with provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank releases is required.

This notice is issued pursuant to a regulation contained in Title 23, Division 3, Chapter 16, Section 2721 (e) of the California Code of Regulations.

Please contact Barney Chan at (510) 567-6765 if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung
Director, Environmental Health

c: B. Chan, Hazardous Materials Division-files
Chuck Headlee, RWQCB
Mr. Dave Deaner, SWRCB Cleanup Fund
Mr. Leroy Griffin, City of Oakland OES, 505 14th St., 7th Floor, Oakland CA 94612

RACC5601SanLeandro

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225 W. Manville St.
Compton, CA 90220

RE: Fuel Leak Site Case Closure, 5601 San Leandro St., Oakland CA, 94621

Dear Ladies and Gentlemen:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with the Health and Safety Code, Chapter 6.75 (Article 4, Section 25299.37 h). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Health Services, Local Oversight Program (LOP) is required to use this case closure letter. We are also enclosing the case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site.

Site Investigation and Cleanup Summary:

Please be advised that the following conditions exist at the site:

- 210,000 parts per billion (ppb) Total Petroleum Hydrocarbons (TPH)as gasoline, 22 ppb benzene, 82,000 toluene, 30 ppb perchloroethylene, 26 ppb trichloroethylene, 22 ppb cis-dichloroethylene (DCE) and 7.6 ppb trans-DCE remain in groundwater at the site.
- 740 parts per million (ppm) Total Petroleum Hydrocarbons (TPH)as gasoline and 0.012,340,0.035,0.37 ppm benzene, toluene, ethyl benzene and xylenes, respectively, remain in soil at the site.

In addition, one monitoring well, MW-102, remains at the site due to the inability to find and properly close it. Caution should be taken if any subsurface work in its vicinity is done.

This site should be included in the City of Oakland Permit Tracking System.

Please contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

enclosures: Case Closure Letter, Case Closure Summary

c: B. Chan, files (letter only)
Mr. L. Griffin, City of Oakland OES, 505 14th St., 7th Floor, Oakland CA 94612

TrLt5601SanLeandro

RO#61-1280

JAN 2 1998

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION **Date:** December 19, 1997

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Parkway Rm 250, Alameda CA 94502**

City/State/Zip: **Alameda** Phone: **(510) 567-6700**

Responsible staff person: Barney Chan Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: PAMCO Property

Site facility address: 5601 San Leandro St., Oakland CA 94621

RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: 1989

ULR filing date: Not filed SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
1. PAMCO c/o Mr. Ansel Kinney	369 Broadway San Francisco, CA 94133	(415) 421-9099
2. Jay-N Trucking c/o Mr. E. Spokes Jr. Esq.	909 14th St., P.O. Box 331 Modesto, CA 95353	(209) 579-1369
3. Crown Cork & Seal c/o Nancy Casalle Esq.	1333 N. California Blvd., Suite 450 Walnut Creek, CA 94596	(510) 935-0700
4. Violet Geisler Trust	225 W. Manville St. Compton, CA 90220	

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	5,000	diesel	Removed	10/21/92
2	5,000	diesel	Removed	10/21/92
3	1,000	gasoline	Removed	10/21/92
4	1,000	gasoline	Removed	10/21/92
5	12,000	enamel	Removed	10/21/92
6	5,000	toluene (naptha)	Removed	10/22/92
7	3,000	MEK	Removed	10/22/92

98 JAN 13 AM 8:03

Leaking Underground Fuel Storage Program

III **RELEASE AND SITE CHARACTERIZATION INFORMATION**

Cause and type of release: holes noted in the 1000 gasoline tank from the eastern set of tanks

Site characterization complete? Yes

Date approved by oversight agency:

Monitoring Wells installed? Yes Number: 5

Proper screened interval? Yes, approximately 5'-depth of well, except MW2 which is screened from 15-28' bgs

Highest GW depth: 2.02' Lowest depth: 6.08'

Flow direction: generally southwesterly, however has varied from north to southwest
Most sensitive current use: commercial/industrial

Are drinking water wells affected? No Aquifer name: NA

Is surface water affected? No Nearest affected SW name: NA

Off-site beneficial use impacts (addresses/locations): NA

Report(s) on file? **Yes** Where is report(s)? Alameda County
1131 Harbor Bay Parkway,
Room 250, Alameda CA 94502-6577

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment of Disposal w/destination)	Date
Tanks & Piping	2-1,000 gallon	Disposed by Erickson	10/21/92
	2-5,000 gallon	Richmond, CA	"
	1-12,000 gallon		"
	1-5,000 gallon	" " "	10/22/92
	1-3,000 gallon		
Soil	Approx. 800 cy	Aerated and reused @ 98th Ave. Overpass Project by Cal Trans	3/20/96
Ground/Rainwater	~5-10,000 gallon	Reused onsite	12/14/92

Leaking Underground Fuel Storage Program

Western Group of Petroleum Tanks, Jay-N Trucking tanks
Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before[1]	After[2]	Before[3]	After[4]
TPH (gasoline)	*23,000	33	*13,000	140
TPH (Diesel)	---	ND	---	ND
Benzene	ND	0.004	670	22
Toluene	ND	0.028	870	ND
Ethylbenzene	ND	0.035	1,700	ND
Xylenes	161	0.090	32,000	ND
Others: VOCs			PCE-30, TCE-26 c-1,2DCE-22, t-1,2DCE-7.6	

Comments (Depth of Remediation, etc.):
*** TPH as kerosene**
1 Soil samples 10692PS-1, taken by ACEH on 10/6/92
2 Overexcavation samples taken on 11/30/92
3 Grab groundwater sample (10792BJ) taken by ACEH on 10/7/92
4 Groundwater sampling results for MW-1 from May 12, 1997, 13th QMR

Eastern Group of Tanks, Crown Cork & Seal (Continental Can)
Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Soil (ppm)		Water (ppb)	
	Before[1]	After[3]	Before[2]	After[4]	Before[5]	Before[6]
	12k enamel		MEK tank		12K	MEK
TPH (gasoline)	ND	ND	1700	ND	620	51,000
TPH (Diesel)	ND	ND			ND	----
Benzene	ND	ND	ND	ND	ND	160
Toluene	0.064	0.015	360	0.018	140	28,000
Ethylbenzene	ND	ND	10	ND		250
Xylenes	ND	ND	51	ND		37
Others: VOCs Acetone					710	
MEK			36	3100	4300	250,000

Comments (Depth of Remediation, etc.):
1 Soil samples 12K-W-10'6" and 12K-E-10'6" (10/23/92)
2 Soil sample #6-1K-3K-9' (10/23/92)
3 Soil sample 003,E Wall, after overexcavation (4/19/93)
4 Soil sample 005,S Wall, after overexcavation (4/19/93)
5 Grab groundwater sample from 12K pit, #1-12k-H20 (10/23/92)
6 Grab groundwater sample from former enamel, MEK & gas tanks, sple AQI (4/19/93)

b

Eastern Group of Tanks, Crown Cork & Seal (Cont'd)
Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm) Before[1]	Soil (ppm) After[2]	Soil (ppm) Before[3]	Soil (ppm) After[4]	Water (ppb) Before[5]	Water (ppb) After[6]
	1k gasoline		5k naptha			
TPH (gasoline)	11,000	740	220	ND	51,000	210,000*
TPH (Diesel)			160	ND		ND
Benzene	38	0.012	ND	ND	160	13
Toluene	3500	340	ND	ND	28,000	82,000
Ethylbenzene	94	0.021	2.4	ND	37	ND
Xylenes	490	0.37	1.8	ND	250	ND

Others: VOCs Acetone — 250,000
MEK
chlorinated VOCs — c-1,2-DCE(22), t-1,2-DCE(7.6), PCE(30),TCE(26),VC(2.4)

Comments (Depth of Remediation, etc.):
1 Soil sample, #3West Side@9', 3/22/93
2 Soil sample 005, S. Wall, 4/19/93 after overexcavation
3 Soil sample 5k-NE-11' and 5k-NW-11' (10/23/92)
4 Soil sample, Pit A, #1 NW Corner@9', 3/22/93 after overexcavation
5 Grab groundwater sample, sple AQI, from overexcavation pit of 12k, MEK and 1K gasoline USTs (4/19/93)
6 Groundwater monitoring results from 13th QMR, 5/12/97
*** Chromatogram is inconsistent with gasoline standard (due to high toluene)**

IV. **CLOSURE**
Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Undetermined

Does corrective action protect public health for current land use? YES

Site management requirements: This site should be entered into the City of Oakland's permit tracking system. An appropriate health and safety plan must be implaced prior to subsurface work on the site.

Should corrective action be reviewed if land use changes? Yes

Monitoring wells Decommisioned: No

Number Decommisioned: 0 Number Retained: 5

List enforcement actions taken: Pre-enforcement hearing;November 22, 1995

List enforcement actions rescinded: above

Leaking Underground Fuel Storage Program

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Barney M. Chan Title: Hazardous Materials Specialist

Signature: Barney M Chan Date: 12/29/97

Reviewed by

Name: Tom Peacock Title: Manager

Signature: Tom Peacock Date: 12-22-97

Name: Madhulla Logan Title: Hazardous Materials Specialist

Signature: Madhulla Logan Date: 10/22/97

VI. RWQCB NOTIFICATION

Date Submitted to RB: 1/2/98 RB Response: Concur

RWQCB Staff Name: ~~K. Graves~~ Stephen Hill Title: ~~AWRCE~~ ESIV Sup Date: 1/6/98

VII. ADDITIONAL COMMENTS, DATA, ETC.

see site summary

Brief Site History

PAMCO- 5601 San Leandro St., Oakland CA 94621, StID # 1989

From 1929-1935 Former site of Continental Can Company and warehouse. The site was operated as Continental Can through approximately 1968, when the site was sold and operated as a warehouse. In the 1980's the site was used by Jay-N Trucking Company. Plate 2 is a site plan and provides a general map of the site and adjoining properties.

In October 1992 the first set of fuel tanks; 2-5k diesel and a 1k UL gasoline tank between these two were removed. These tanks were installed and operated by Jay N Trucking. The 1K gas tank was initially brought to the surface "accidently" from the tank pit without a permit but later was removed and disposed as an emergency on October 8, 1992. On **October 6, 1992**, soil and grab water samples were taken by Mssrs. P. Smith and B. Oliva of ACDEH and were run by the County Environmental lab. See exhibit 1 for Mr. B. Oliva's account of ACEH's response to this incident. Sidewall and floor soil samples, as well as three soil samples from the stockpile, were taken for chemical analysis. Exhibit 2 is Mr. P. Smith's map of site and sample locations. The sidewall sample detected up to 23,000 ppm kerosene and 161 ppm xylene. A grab groundwater sample from this pit, run by TAL of Hayward, exhibited 13 mg/l kerosene and 670,870,1700 and 32,000 ppb BTEX, respectively. Exhibits 3 and 4 give the analytical results from ACEH environmental lab and Trace Analysis Lab (TAL).

On 10/21/92 the two 5K diesel tanks were removed in conjunction with initiating the removal of the other four USTs on the eastern portion of the site. Based on the initial contamination detected in the samples taken by ACEH, no soil samples were taken immediately after the diesel tank removals. Rather, the fuel tank pit was overexcavated and five sidewall soils samples taken at the soil/water interface on 11/25/92 by SEMCO. Exhibit 5 is a ACEH inspection report and map of sample locations, followed by copies of the analytical results. The results of these samples for the analysis of TPHg, d and BTEX indicated that the overexcavation was successful. Permission was granted to backfill this pit. The ground/rain water which filled the tankpit was transferred to a holding tank. A sample from this water exhibited ND for diesel, 56 ppb TPHg and 12 ppb benzene. Although not authorized by any agency, the water was discharged onto the west side of the property. See Exhibit 6 for copy of these analytical results. All stockpiled soils were taken to a site at 750 98th Ave. in Oakland which was also owned by the same property owner, PAMCO.

The eastern set of tanks consisted of a 12k enamel, 3K methyl ethyl ketone (MEK), 1K gasoline and a 5K naptha tank (more likely toluene). Their removals were initiated on 10/21/92. Soil samples were taken from the ends of the naptha tank and the enamel tanks. The 3K MEK tank was located immediately adjacent to an existing building and extended beneath a concrete stairwell, therefore, the tank was required to be removed in two pieces. The required soil sample was taken through a hole made through the west end of the MEK tank and smelled of solvent; (#5-3k-W-10'). The gasoline UST laid end to end east of the MEK tank, also along side the existing building. The one soil sample taken beneath the west (fill) end of the gas tank smelled of gas. One soil sample was taken by hand augering a sample beneath the stairwell. This sample (#6-1k-3k-9') smelled of gasoline, although it was physically located beneath the east end of the MEK tank. Analytical results of the sample indicated a significant gasoline release from the gas tank (1700 ppm TPHg) that had migrated beneath the MEK tank and the 12K enamel tank. MEK was detected at 36 ppm in the soil sample beneath the MEK tank (#5-3k-W-10') as well as in a grab GW sample from beneath the 12K enamel tank (#1-12k-H20). TPHd/g was detected in the northwest soil sample beneath the naptha tank (5k-NW-11'). See Figure 1 for a map of sample locations followed by copies of their analytical results. Based on these results, overexcavation was performed on 3/22/93, 4/2/93 and 4/19/93.

Due to a dispute with the contractor, no formal tank closure report was ever provided to our office. Therefore, we were not provided; sample location maps, manifests documenting the disposal of underground tanks, an accounting for the removal of all excavated soils, a narrative of field activities and a tabulation of analytical data from pre- and post-excavation samples. This narrative is compiled using the raw analytical data, field notes and hand drawn maps.

Overexcavation of all four eastern tanks occurred on **3/22/93, 4/2/93 and 4/19/93.** Analytical results indicate successful overexcavation around the naptha tank and all other areas with the exception of along the southern wall, adjacent to the MEK and gasoline tanks where TPHg at 740 ppm, 0.012, 340, 0.021 and 0.37 ppm, BTEX respectively and 3100 ppm MEK was exhibited in soil sample #5. Figure 2 represents overexcavation and sampling which occurred on 3/22/93 followed a copy of these analytical results. Figure 3 represents the overexcavation and sampling which occurred on 4/19/93. Note these samples were taken at a depth 11-11.5'bgs, below the initial soil sample depth of 9'bgs.

Meanwhile, additional potential responsible parties (PRPs) were identified. These individuals are Jay-N Trucking, who installed the fuel tanks on the west side of the property. Mr. Jim Naia, president of Jay-N, was represented by his attorney, Mr. Ernest Spokes, Jr.. On behalf of Jay-N Trucking, RUST Environmental performed both Phase I and Phase II investigations near these former fuel tanks to show that the chlorinated solvents detected at this site did not come from these tanks.

Another PRP is Continental Can, who installed and used the eastern tanks in their operations prior to selling the site to Mr. Ronald Hothem, president of PAMCO, in 1992. Continental Can which was bought out by Crown Cork and Seal is represented by their attorney, Ms. Nancy Casale. Crown Cork and Seal retained PES Environmental Inc. (PES) as their consultant. After evaluating the site history, PES performed both a Tier 1 and Tier 2 a human health risk assessment (HHRA) to evaluate the risk from residual soil and groundwater contamination.

July 7&8, 1993, three monitoring wells were installed in locations presumedly downgradient relative to the three tank locations (naptha, (MEK, gasoline & enamel) and fuel tanks). A southwesterly groundwater gradient was assumed at that time. This gradient is contrary to the initial calculated gradient, however, a south-southwest gradient has been shown to exist using elevation readings from PES temporary wells plus readings from the two additional onsite wells. See figure 4 for the locations of these wells followed by analytical data from these wells.

The parameters analyzed in each well was based upon the contents of the former tanks adjacent to each well. Therefore, MW3 was the only well monitored for VOAs due to its location relative to the former MEK and enamel tanks.

These following observations were made from the above investigations:

1. A significant **toluene** release was detected from the "naptha" tank. This tank likely contained toluene during its usage, not naptha. The soil sample from MW-2 at 19′ bgs exhibited **650 ppm toluene**. Both soil and groundwater are impacted.

2. Chlorinated HVOCs have also impacted the site. Significant concentrations of vinyl chloride, cis and trans- DCE, TCE and PCE have been detected in groundwater. The source of these HVOCs has not been determined.

County's September 17, 1993 letter requested further investigation to define the limits of contaminants identified.

The difference in DTW in MW2 vs MW1 and MW3 may be accountable to the lack of a fine-gravel aquifer in the area of MW2. Note MW2 was also screened differently than the other wells based upon first encountered groundwater being detected deeper. The steep gradient (0.4%) of the first quarter monitoring event may not be representative of site.

The third monitoring event indicated a **southerly** gradient, contrary to prior readings. The high toluene contamination being detected in MW2 may be preventing the detection of the HVOC contaminants.

A January 31, 1994 supplemental work plan to determine the limits of contamination was submitted to our office by BSK & Associates. The wp included four well points to determine extent of groundwater contamination and three additional monitoring wells. Two well points and one well were proposed on the adjacent property, 5401 San Leandro St. owned by Mr. Charles Campanella.

Considerable discussion came from Mr. Campanella, his attorney and his consultant, Geomatrix. Their opinion was that offsite investigation was not necessary. Ultimately, the conditions of Mr. Campanella's access agreement was not agreeable to Mr. Hothem, the property owner, as well as the County. Therefore, Mr. Hothem decided to perform the part of the additional investigation which was on his property only.

September 22, 1994- the supplemental onsite investigation occurred under the direction of BSK & Associates. This investigation indicated that the toluene contamination in groundwater associated with the "naptha" tank extended further north. No sources of HVOCs were detected in soil. This time groundwater gradient appeared to migrate laterally outward from MW3. See Figure 5 for the location of these borings followed by their analytical data.

In August 24, 27 and September 23, 1995 additional groundwater sample points were advanced to complete onsite groundwater characterization. Other areas on the west and south sides of the property identified oil and grease in the grab groundwater samples in samples SP-G and SP-D, respectively. No other areas besides the USTs were found to be of significant concern. See Figure 6 for the location of these borings followed by their analytical data.

In June of 1995, PES, on behalf of Crown Cork and Seal (Continental Can), performed additional site characterization. Eight temporary wells, TW-1 through TW-8, were installed in addition to sampling the existing five wells. Groundwater gradient taken over a several week period indicated a southerly directional flow. The temporary wells were installed along the property boundaries and along the southern border of the existing building. Of particular interest are TW-3, TW-4 and TW-5 along the border of Mr. Campanella's property. These temporary wells detected elevated levels of TPHg, benzene and toluene in groundwater southwest of the naptha tank, the assumed source. DCE, TCE and vinyl chloride were detected not only in the area of the former tanks but at points beyond indicating a potential sitewide or regional problem. It was PES' opinion, like BSK's, that offsite investigation was needed and our office concurred.

November 22, 1995 a pre-enforcement hearing was held at the County office to identifying responsible parties and facilitate offsite access to complete site investigation. A second hearing was reset for December 12, 1995 to allow additional information to be presented.

January 22, 1996- RUST Environmental, on behalf of Jay-N Trucking, prepared a Phase I report analyzing all prior results. The conclusion of their report was that the release of TPH from the Jay-N tanks indicates a decreasing trend. They further stated that there did not appear to be any evidence of a source for the HVOCs from the tanks they operated, therefore, Jay-N should be released as a PRP for these chemicals. Their responsibility for the TPH release should also end since they recommended no further work. The County did not make a decision on this matter at this time, rather, we waited for result of the offsite investigation.

April 3, 1996- offsite investigation on the Campenella property, 5401 San Leandro St., was performed by advancing four borings, TW-C1 through TW-C4. Consultants for Mr. Campanella argued that only grab groundwater samples need be taken for chemical analysis. Our office relented to this request. TPHg and HVOCs were ND in all grab groundwater samples. Low levels of BTX were detected in borings TW-C2 and TW-C4. It, therefore, appears that chlorinated solvent and TPH groundwater contamination has not significantly impacted the Campanella site. See Plate 3 for the locations of the temporary wells followed by the analytical data for both onsite and offsite temporary wells.

On March 20, 1996 the stockpiled soils, approximately 800 cubic yards at the 98th Ave. site, was sampled and tested for chemical analysis. One four-point composite was taken from each 100 cubic yard pile. The composite samples were analyzed for TPHg, BTEX, VOCs via Method 8240 and TPHd. With the exception of an unknown hydrocarbon in the diesel range in concentrations from 2-56 ppm, no other analytes were detected. These results were discussed with the RWQCB. The property owner arranged to have this soil reused as fill to buildup the 98th Ave. overpass currently being constructed. This use was approved by the Water Board and the soils were reused as fill.

Rust Environmental, on behalf of Jay-N Trucking, continued to attempt to have the fuel USTs considered separately from the other USTs. In **November 1996**, Rust conducted a shallow boring survey. After interviewing a former employee and doing a site survey, shallow borings were advanced in areas where surface drainage could occur. Four boring were advanced. Three soil samples from each boring were analyzed for chlorinated solvents. Only SB-1-2 @ 1.5-2' depth detected any HVOCs. 1,1-DCA @ 11ppb was detected in this sample. It appears that the area of the Jay-N tanks and any area associated with steam cleaning is not the source of the chlorinated solvents detected at this site. See figure 7 for the location of these borings followed by their analytical results.

Table 1 provides a summary of the cumulative groundwater sampling at this site.

Versar, representing the current property owner proposed a pump and treat remediation sytem and cleanup goals of MCLs. PES, representing Continental Can on the other hand, proposed a baseline Human Health Risk Assessment, HHRA. An **October 30, 1996** HHRA was prepared by PES for American National Can to evaluate the residual TPH and HVOC contamination. Upon review and comment by Madhulla Logan, staff risk assessor, an August 18, 1997 revised RBCA Tier 2 HRA was prepared.

Site specific data for depth to groundwater, capillary and vadose zone thickness, foundation crack factor and target risk for a commercial setting were used. In addition, the most recent groundwater monitoring data was used to estimate contaminant concentrations.

The risk assessment evaluated the most probable exposure pathways, groundwater volatilization to indoor air for onsite commercial workers. Based upon the above modifications, the site passes the Tier 2 HHRA SSTLs. See Table 2 for a summary of the RBCA analysis results.

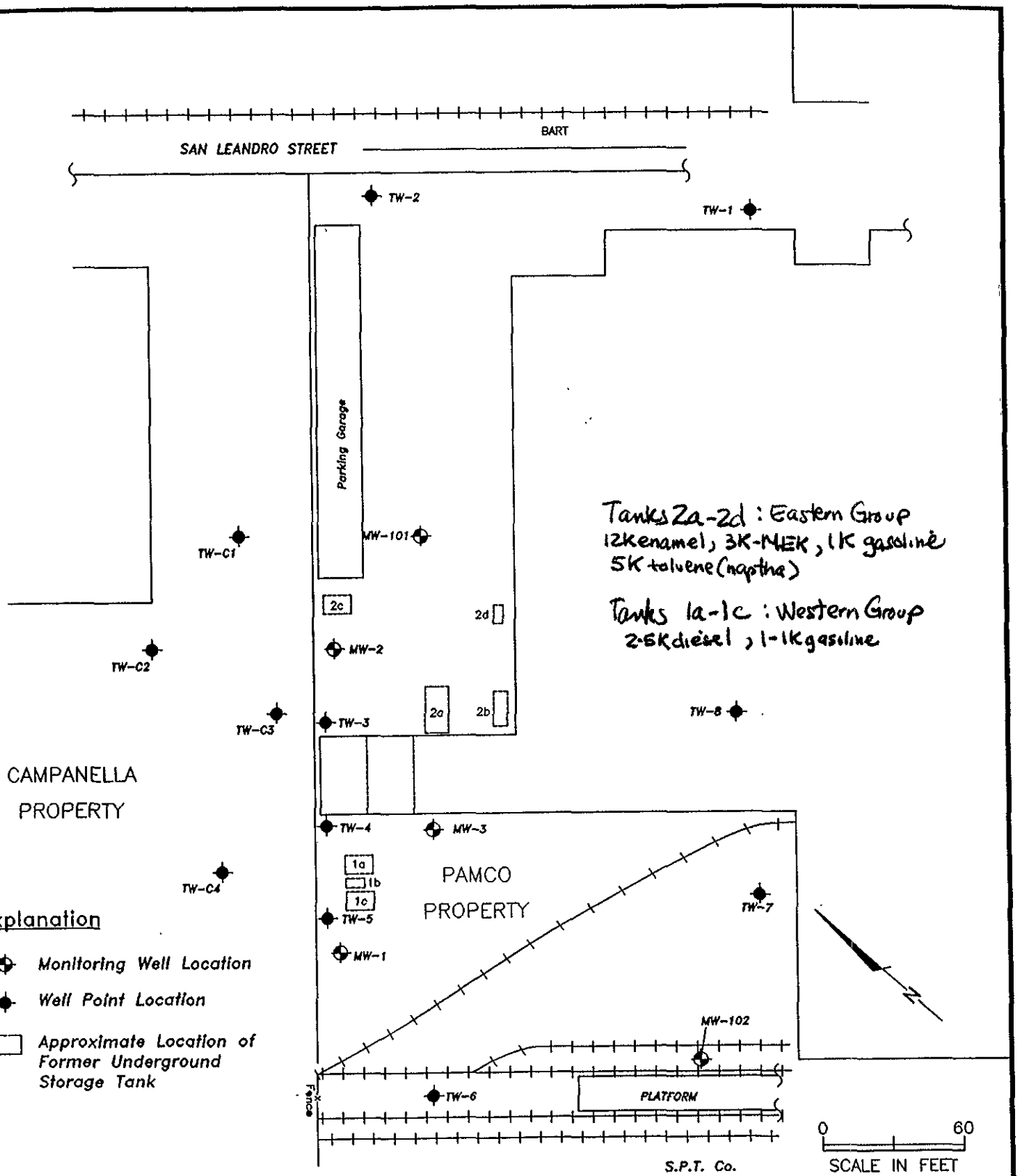
Site closure is recommended based upon:

* adequate source removal of the tanks and affected soils, nearly 800 cy of soil was excavated;

* adequate site characterization which indicates a limited extent of both soil and groundwater contamination present both onsite and offsite;

* the shallow groundwater in this industrial area in Oakland is not considered a source for drinking water. No drinking water or domestic wells are located within 1/2 mile radius of this site; and

* No significant risk to human health is anticipated based upon current site use and a RBCA Tier 2 evaluation.



PES Environmental, Inc.
Engineering & Environmental Services

Site Plan
Revised Tier 2 Health Risk Assessment
Pacific American Management Company Facility
5601 San Leandro Street
Oakland, California

PLATE 2

125.0502.001	0200118_.DWG		8/97
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

MEMORANDUM

Exhibit 1.

DATE: October 6, 1992

TO: files

FROM: Brian P. Oliva

SUBJ: illegal tank pull at 5555 San Leandro Blvd, Oakland

I responded to a call at 1:30 pm from Sergeant Alan Whitman from the Oakland Police Department in order to assist Paul Smith from this office for the purpose of taking legal samples and other evidence to the Alameda County Environmental Health Lab. Mr. Smith and I sampled the water in the area of an illegally removed diesel UST in the approximate location of the interface. The water appeared to have 'free-product" floating on top of it and had a strong odor. Two other samples were also taken of the sand/backfill material. The two remaining samples were taken in 40 ml VOA containers and were placed in an ice chest. All samples were taken to the Alameda Division of Hazardous Materials at 80 Swan Way, Oakland, CA by four O'Clock on utilizing "chain of custody" procedures. The UST were Quarantined by myself and a quarantine seal/self adhering stamp was attached to one of the removed tanks with an photograph of myself and Sergeant Whitman placing the stamp on the subject illegally removed UST. The quarantine directed that the 6 tanks not be moved prior to contacting our office.

Sincerely,

Brian P. Oliva

Brian P. Oliva

5555snle

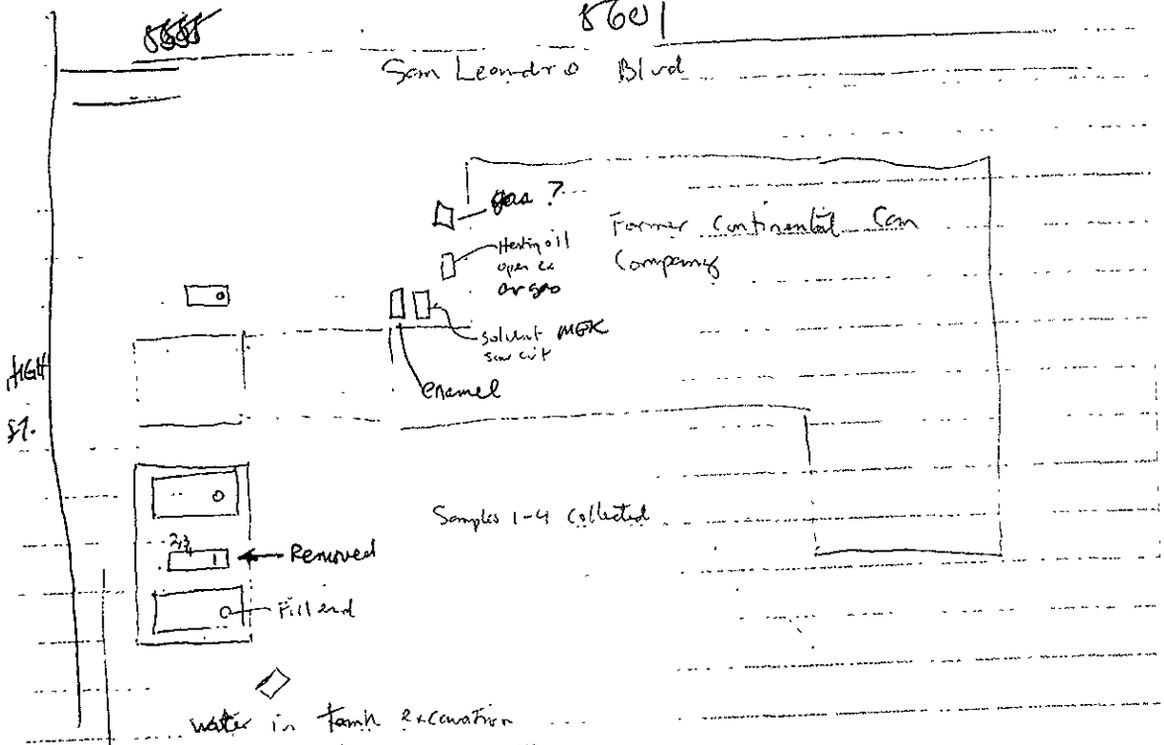
Exhibit 2.

Map indicating soil sample locations by P. Smith (ACEH)
238-3030 – Ariel Schirtman FAX

5601 San Leandro St.
Old Continental Can Co.

5555 San Leandro St.

8601
San Leandro Blvd



98th 7000 Block East side
Pacific American Group 415 421-9099

look into letter re: UST removal
operate

6000 816 Sinclair Gas Diesel (T4603)
1000 921 Nabisco

Jay N. Trucking Co. 5601 San Leandro
3/18/88 AL insp UST

Hadden

Exhibit 3

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
ENVIRONMENTAL HEALTH LABORATORY

92 OCT 13 11:11

ANALYTICAL REQUEST

Laboratory No. 92-087

Sample Identification 5 soil samples from Former Continental Can Company, 5555 San Lear

Analyses Requested by: Brian Olivia

Date Collected: 10/6/92 Collected by: Paul Smith

Date Received: 10/7/92 Received by: Darcy Wong

Analyses Requested Btex ,Kerosene

K-(14-25mm) D-(25-29)

Background Information Illegal tank removal

ANALYTICAL RESULTS

Parameter	Observation or Result				
	Sidewall soil/water				Stockpile
Sample Identification	10692PS-1	-4	-5	-6	-7
LaB#	92-087-1	-2	-3	-4	-5
Kerosene,% (extract) GC-FID	2.3	1.3	0.6	0.3	1.5
Benzene,ppm	<4.4	<4.4	<4.4	<4.4	<4.4
Toluene,ppm	<4.4	<4.4	<4.4	<4.4	<4.4
Ethylbenzene,ppm	<4.4	<4.4	<4.4	<4.4	<4.4
Xylene(p&o),ppm	161	87	29	19	81
*ppm =mg/kg	↑ Soil under 1000gal	↑ Soil/water Interface			9ppm Ave

15,000 ppm

Conclusions: 10692PS-1,-4,-5,-6,-7 contain kerosene and xylenes.

Date Analyses Completed: 10/9/92 Chemist: Darcy Wong

Approved: DW

Distribution: Paul Smith, Brian Olivia, T Shirasawa, R. Shadid.

BC/cdb
7/85

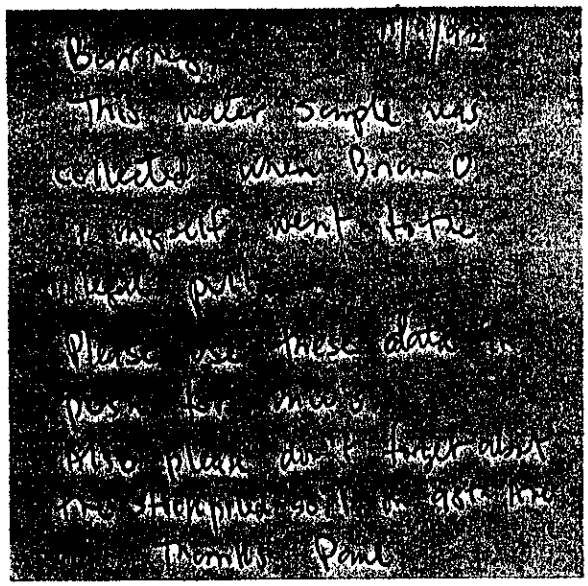
Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545

Exhibit 4

Telephone (510) 783-6960
Facsimile (510) 783-1512

TAL

Grab GW Sample taken by ACEH



October 27, 1992

Mr. Paul Smith
Alameda County Hazardous Materials Division
80 Swan Way, Room 200
Oakland, California 94621

Dear Mr. Smith:

Trace Analysis Laboratory received two water samples on October 13, 1992 for your project, Former Continental Can Co. (our custody log number 2588).

These samples were analyzed according to your chain of custody. Our analytical report and the completed chain of custody form are enclosed for your review.

Trace Analysis Laboratory is certified under the California Environmental Laboratory Accreditation Program. Our certification number is 1199.

If you should have any questions or require additional information, please call me.

Sincerely yours,

Jennifer Pekol
Project Specialist

Enclosures

Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545

Exhibit 4

Telephone (510) 783-6960
Facsimile (510) 783-1512

TAL

LOG NUMBER: 2588
DATE SAMPLED: 10/07/92
DATE RECEIVED: 10/13/92
DATE EXTRACTED: 10/14/92
DATE ANALYZED: 10/21/92
DATE REPORTED: 10/27/92

CUSTOMER: Alameda County District Attorney's Office

REQUESTER: Paul Smith of Alameda County Hazardous Materials Division

PROJECT: Former Continental Can Co.

Sample Type: Water

Method and Constituent:	Units	10792BJ Concentration	10792BJ Reporting Limit	Method Blank Concentration	Method Blank Reporting Limit
DHS Method:					
Total Petroleum Hydrocarbons as Kerosene	ug/l	13,000	50	ND	50

13 ppm

QC Summary:

% Recovery: 108
% RPD: 8.3

Concentrations reported as ND were not detected at or above the reporting limit.

This sample contains compounds eluting earlier and later than the kerosene standard.

Exhibit 4

TAL Trace Analysis Laboratory, Inc.

LOG NUMBER: 2588
DATE SAMPLED: 10/06/92
DATE RECEIVED: 10/13/92
DATE ANALYZED: 10/16/92
DATE REPORTED: 10/27/92
PAGE: Two

Sample Type: Water

Method and Constituent:	Units	10692PS Concentration	10692PS Reporting Limit	Method Blank Concentration	Method Blank Reporting Limit
Modified EPA Method 8020 for:					
Benzene	ug/l	670	580	ND	0.50
Toluene	ug/l	870	630	ND	0.50
Ethylbenzene	ug/l	1,700	790	ND	0.50
Xylenes	ug/l	32,000	2,200	ND	1.5

QC Summary:

% Recovery: 81
% RPD: 7.4

Concentrations reported as ND were not detected at or above the reporting limit.

This sample was analyzed 3 days beyond the 7-day holding time for this analysis.

Louis W. DuPuis
Quality Assurance/Quality Control Manager

Spls #1-5 =
#1 -6'3"-N-C
2 6'4"-N-E
3 6'5"-E
4 6'5"-S
5 6'5"-W

Exhibit 5

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200
Oakland, CA 94621
(415) 271-4320

Hazardous Materials Division Inspection Form

Site ID# _____ Site Name Pamco - overexcavation Jay-N USTs Today's Date 11/25/92

Site Address 5601 San Leandro St EPA ID# _____

City Oak Zip 94621 Phone _____

MAX Amt. Stored > 500lbs/55g/200cf? Y N
Hazardous Waste generated per month? _____

Inspection Categories:
___ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
___ II. Business Plans, Acute Hazardous Materials
___ III. Underground Tanks

W S N E

The marked items represent violations of the Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

I.A GENERATOR (Title 22)

	1. Waste ID	* 66471
	2. EPA ID	66472
	3. > 90 days	66508
	4. Label dates	66508
	5. Biennial	66493
Manifest	6. Records	66492
	7. Correct	66484
	8. Copy sent	66492
	9. Exception	66484
	10. Copies Rec'd	66492
Misc.	11. Treatment	66371
	12. On-site Disp. (H.S.&C.)	26189.5
	13. Ex Haz. Waste	66570
Prevention	14. Communications	67121
	15. Aisle Space	67124
	16. Local Authority	67126
	17. Maintenance	67120
	18. Training	67105
Contin. gency	19. Prepared	67140
	20. Name List	67141
	21. Copies	67141
	22. Emg. Coord. Trng.	67144
Containers, Tanks	23. Condition	67241
	24. Compatibility	67242
	25. Maintenance	67243
	26. Inspection	67244
	27. Buffer Zone	67246
	28. Tank Inspection	67259
	29. Containment	67245
	30. Safe Storage	67261
	31. Freeboard	67257

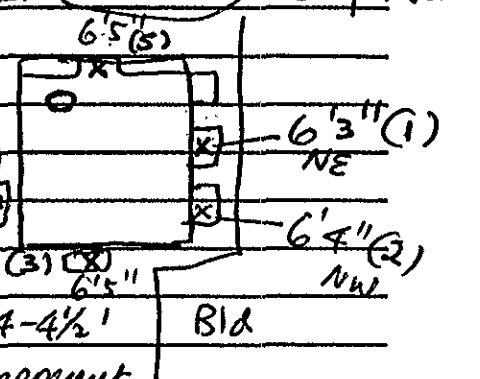
I.B TRANSPORTER (Title 22)

	32. Applic./Insurance	66428
	33. Comp. Cert./CHP Insp.	66448
	34. Containers	66465
Manifest	35. Vehicles	66465
	36. EPA ID #s	66531
	37. Correct	66541
	38. HW Delivery	66543
	39. Records	66544
Cont'd	40. Name/ Covers	66545
	41. Recyclables	66800

Rev 6/88

Samco (M. Tenbrink et al)

Comments:
Witness the lateral overexcavation of diesel/gasoline pit was NOT on site. ⟶ comp. West



O = approx 1' steel extraction pipe set ~5' into water table
water @ ~6'
Appears to be a black clay with slight diesel odor @ ~4-4½'
at 6' the olive gray clay has no apparent odor. 5 spls taken @ water/soil interface
the entire N wall will be excavated.
The stockpile and from this pit will be spld @ 4 spls to be composited into 1 for the approx 50 cu yds & can be transferred to the 98th Ave site
Other stockpiles exist (incoherent)
① associated w/ the gasoline/& Naptha tanks
- 2 tubes from ea composited to be run for TPHg, d & BTEX.
② 1 associated w/ MEK tank (4 comp into 1) to be run for TPHg & 8240. * includes BTEX

Contact: _____

Title: _____ Inspector: B Chan

Signature: _____ Signature: _____

Exhibit 5

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 55823
CLIENT: SEMCO
CLIENT JOB NO.: PAMCO

DATE RECEIVED: 11/30/92
DATE REPORTED: 12/08/92

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
by Modified EPA SW-846 Method 8015

LAB #	Sample Identification	Concentration (mg/kg) Diesel Range
1	#1-6'3"-N-C	ND<10
2	#2-6'4"-N-E	ND<10
3	#3-6'5"-E	ND<10
4	#4-6'5"-S	ND<10
5	#5-6'5"-W	ND<10
6	#6-COMP-W	12
7	#7-COMP-E	ND<10
8	#8-COMP-N	ND<10

mg/kg - parts per million (ppm)

Minimum Detection Limit for Diesel in Soil: 10mg/kg

QAQC Summary:

Daily Standard run at 200mg/L: %DIFF Diesel = <15
MS/MSD Average Recovery = 105%: Duplicate RPD = 0 %

Richard Srna, Ph.D.

Cecilia M. Iovenni (for)
Laboratory Director

Exh.5

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647 2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55823
CLIENT: SEMCO
CLIENT JOB NO.: PAMCO

DATE RECEIVED: 11/30/92
DATE REPORTED: 12/08/92

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
by Modified EPA SW-846 Method 5030 and 8015

LAB #	Sample Identification	Concentration (mg/kg) Gasoline Range
1	#1-6'3"-N-C	ND<1
2	#2-6'4"-N-E	ND<1
3	#3-6'5"-E	ND<1
4	#4-6'5"-S	ND<1
5	#5-6'5"-W	33
6	#6-COMP-W	2
7	#7-COMP-E	ND<1
8	#8-COMP-N	ND<1

mg/kg - parts per million (ppm)

Method Detection Limit for Gasoline in Soil: 1 mg/kg

QAQC Summary:

Daily Standard run at 2mg/L: %Diff Gasoline = <15
MS/MSD Recovery = 95%: Duplicate RPD = 5.3%

Richard Srna, Ph.D.

Cecilia M. Joaquin (for)
Laboratory Manager

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821 7123

Exh. 5

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55823
CLIENT: SEMCO
CLIENT JOB NO.: PAMCO

DATE RECEIVED: 11/30/92
DATE REPORTED: 12/08/92

ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 5030 and 8020

LAB #	Sample Identification	Concentration(mg/kg) Benzene	Toluene	Ethyl Benzene	Xylenes
1	#1-6'3"-N-C	0.004	ND<.003	ND<.003	ND<.003
2	#2-6'4"-N-E	ND<.003	ND<.003	ND<.003	ND<.003
3	#3-6'5"-E	ND<.003	ND<.003	ND<.003	ND<.003
4	#4-6'5"-S	0.003	ND<.003	ND<.003	0.007
5	#5-6'5"-W	ND<.003	0.028	0.035	0.090
6	#6-COMP-W	0.033	0.023	0.018	0.260
7	#7-COMP-E	ND<.003	ND<.003	ND<.003	ND<.003
8	#8-COMP-N	ND<.003	ND<.003	ND<.003	ND<.003

mg/kg - parts per million (ppm)

Method Detection Limit in Soil: 0.003 mg/kg

QAQC Summary:

Daily Standard run at 20ug/L: %Diff 8020 = <15
MS/MSD Average Recovery = 93%: Duplicate RPD = 2.0%

Richard Srna, Ph.D.

Cecilia M. Joaquin (for)
Laboratory Manager

CHAIN OF CUSTODY AND ANALYSIS REQUEST

LAB NO. _____

Exhibit 5

Section I

Consultant Name: SEMCO
Office Location: 1741 Leslie Rd. San Mateo, CA 94402
Fax No.: (415) 572-9734
Project Manager: Terry Hamilton
Phone: (415) 572 8033
Send Coolers to : Modesto ☐ San Mateo ☐
Project No. / P.O. No.: PAMCO

TURN AROUND TIME (Circle One)
Same Day | 72 Hrs
24 Hrs | 5 Day
48 Hrs

SUPERIOR ANALYTICAL, INC.
Martinez 415/229-1512 | San Francisco 415/647-2081

Sampler: M TANIGUCHI
Regulatory Agency: ALAMEDA Co (BARNEY)

Section II — Analysis Request

Sample Identification	S=Soil A=Air W=Water Matrix	TPH - G & D	TPH - Low Level D	TPH - G	BTXE	O&G	8010	8240	Metals	Others * Subject to Subcontracting
Overexcavation Samples (diesel + gas broke)										
1 #1-6'5"-N-C	S	X			X					
2 #2-6'4"-N-E	S	X			X					
3 #3-6'5"-E	S	X			X					
4 #4-6'5"-S	S	X			X					
5 #5-6'5"-W	S	X			X					
6 #6-Comp-N	S	X			X					
7 #7-Comp-E	S	X			X			X		
8 #8-Comp-N	S	X			X					
9										
10										
11										
12										

Section III — Sample Information

Date	Time	Containers: Quantity	Containers: Pres.	Sampling Remarks
11/25/92	306	1		Bioremediation ☐
	311	1		
	315	1		
	320	1		
	324	1		
	330	4		Contamination ☐ Composite in LAB (TPH Soils)
	402	4		Composite in LAB (Lacq+naptha Soils)
↓	434	4		Composite in LAB, (MEK Sp)

Relinquished by: [signature]	Date/Time: 11/30/92 1836	Received by:	
Organization: SEMCO		Organization:	
Relinquished by:	Date/Time:	Received by:	
Organization:		Organization:	
Relinquished by:	Date/Time: 11/30/92 1836	Received by: Cecilia Tongson	
Organization:		Organization: Superlab	

Please Initial
Samples Stored in Ice
Appropriate Containers
Samples Preserved
VOA's without Headspace
Comments

HROMALAB, INC.

Environmental Laboratory (1094)

Represent Water discharged Well Water
Exhibit 6

5 DAYS TURNAROUND

December 11, 1992 ChromaLab File No.: 1292113

BSK & ASSOCIATES

Attn: Alex Eskandari

RE: One water sample for Gasoline and BTEX analysis

Project Name: PACIFIC AMERICAN MANAGEMENT, Pleasanton
Project Number: 192296.3
Date Sampled: Dec. 10, 1992 Date Submitted: Dec. 10, 1992
Date Analyzed: Dec. 10, 1992

RESULTS:

Sample I.D.	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
#1 WEST EXCAVATION	56	12	N.D.	N.D.	N.D.
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	102%	82%	101%	78%	80%
DUP SPIKE RECOVERY	----	86%	111%	84%	86%
DETECTION LIMIT	50	0.5	0.5	0.5	1.5
METHOD OF ANALYSIS	5030/8015	602	602	602	602

ChromaLab, Inc.,

Eric Costa
Analytical Chemist

Eric Tam
Laboratory Director

cc

2239 Omega Road, #1 • San Ramon, California 94583
(510) 831-1789 • Facsimile (510) 831-8798
Federal ID #68-0140157

Exh. 6

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

December 11, 1992 ChromaLab File No.: 1292113

BSK & ASSOCIATES

Attn: Alex Bakandari

RE: One water sample for Diesel analysis

Project Name: PACIFIC AMERICAN MANAGEMENT, Pleasanton
Project Number: 192296.3
Date Sampled: Dec. 10, 1992 Date Submitted: Dec. 10, 1992
Date Extracted: Dec. 11, 1992 Date Analyzed: Dec. 11, 1992

RESULTS:

Sample I.D.	Diesel (ug/L)
#2 WEST EXCAVATION	N.D.
BLANK	N.D.
SPIKE RECOVERY	86%
DUP SPIKE RECOVERY	93%
DETECTION LIMIT	50
METHOD OF ANALYSIS	3510/8015

ChromaLab, Inc.

Yiu Tam
Analytical Chemist

Eric Tam
Laboratory Director

cc

2239 Omega Road, #1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

Jay-N
USTS

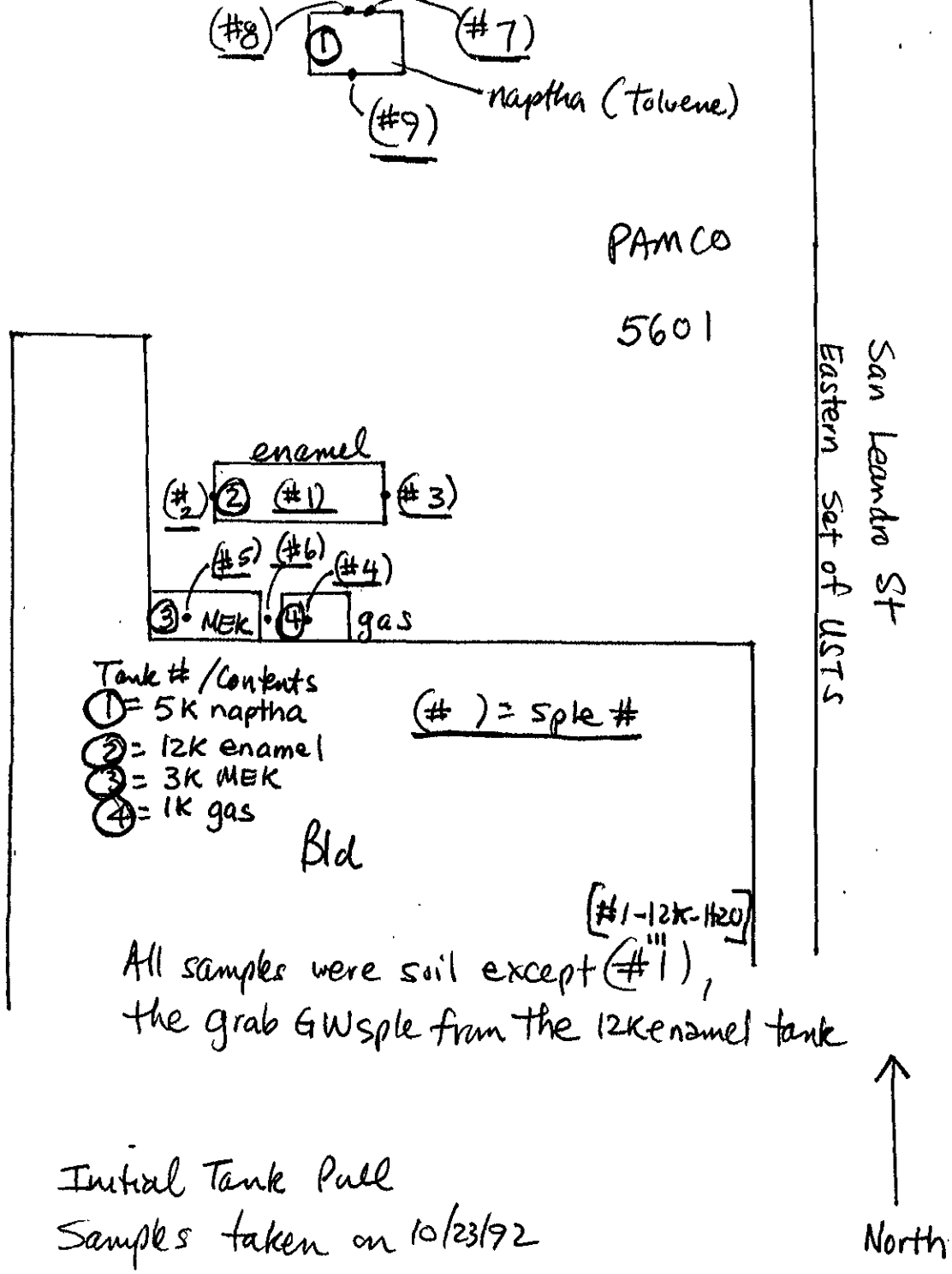


Fig. 1

Handdrawn by B.E.

Section I

CHAIN OF CUSTODY AND ANALYSIS REQUEST

LAB NO. _____

Consultant Name: SEMCO
Office Location: 1741 Leslie Rd. San Mateo, CA 94402
Fax No.: (415) 572-9734
Project Manager: CHUCK KIPER
Phone: (415) 572 9033

TURN AROUND TIME (Circle One)
Same Day | 24 Hrs | 48 Hrs | 72 Hrs | (5 Day)

SUPERIOR ANALYTICAL, INC.
Martinez 415/229-1512 | San Francisco 415/547-2081

TOTAL P.01

Send Coolers to : Modesto ☐ San Mateo ☒

Sampler: SEMCO - M. THOMAS

Project No. / P.O. No.: Continental Can-5601 San Leandro

Regulatory Agency: Alameda County (BARNEY CHAN)

Section II — Analysis Request

Sample Identification	Matrix (S=Soil A=Air W=Water)	TPH - G & D	TPH - Low Level D	TPH - G	BTXE	O&G	8010	8240	Metals	Others * Subject to Subcontracting	EPA 624
1 #1-12k-H2O	W	X									X
2 #2-12k-W-10'6"	S	X						X			
3 #3-12k-E-10'6"	S	X						X			
4 #4-1k-9'6"	S			X	X						
5 #5-3k-W-10'	S							X			
6 #6-1k-3k-9'	S			X				X			
7 #7-5k-NE-11'	S	X			X						
8 #8-5k-NW-11'	S	X			X						
9 #9-5k-S-11'	S	X			X						
10											
11											
12											

Section III — Sample Information

Date	Time	Containers: Quantity	Containers: Preserv.	Sampling Remarks
10/22/92	240	8		ENAMEL
	300	1		ENAMEL
	310	1		ENAMEL
	326	1		GAS
	420	1		MEK
	435	1		MEK
	519	1		NAPTHA
	520	1		NAPTHA
	521	1		NAPTHA

Bioremediation ☐
Contamination ☐

Relinquished by: _____ Date/Time: 10/23/92 900am
Organization: SEMCO
Received by: _____
Organization: Express II

Relinquished by: _____ Date/Time: _____
Organization: _____
Received by: _____
Organization: _____

Relinquished by: _____ Date/Time: _____

Please Initial _____
Samples Stored in Ice _____
Appropriate Containers _____
Samples Preserved _____
VOA's without Headspace _____

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821 7123

CERTIFICATE OF ANALYSIS

LABORATORY NO. 55691-2
CLIENT: SEMCO
DATE SAMPLED : 10/22/92
DATE ANALYZED: 10/29/92

DATE RECEIVED: 10/23/92
DATE REPORTED: 10/30/92
PROJECT NO. CONTINENTAL CAN-5601 S.L.

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: [redacted]12K-W-10'6"

Compound	MDL	ug/kg	Compound	MDL	ug/kg
Chloromethane	50	ND	Cis-1,3-Dichloropropene	15	ND
Bromomethane	50	ND	Trichloroethene	15	ND
Vinyl Chloride	50	ND	Dibromochloromethane	15	ND
Chloroethane	50	ND	1,1,2-Trichloroethane	15	ND
Methylene Chloride	50	ND	Benzene	5	ND
Acetone	50	ND	Trans-1,3-Dichloropropene	15	ND
Carbon Disulfide	15	ND	2-Chloroethyl Vinyl ether	15	ND
Trichlorofluoromethane	15	ND	Bromoform	15	ND
1,1-Dichloroethene	15	ND	4-Methyl-2-Pentanone	50	ND
1,1-Dichloroethane	15	ND	2-Hexanone	50	ND
trans-1,2-Dichloroethene	15	ND	Tetrachloroethene	15	ND
Chloroform	15	ND	1,1,2,2-Tetrachloroethane	15	ND
1,2-Dichloroethane	5	ND	Toluene	15	[redacted]
2-Butanone	100	ND	Chlorobenzene	15	ND
1,1,1-Trichloroethane	15	ND	Ethylbenzene	15	ND
Carbon Tetrachloride	15	ND	Styrene	15	ND
Vinyl Acetate	50	ND	Total Xylenes	15	ND
Bromodichloromethane	15	ND	1,3-Dichlorobenzene	15	ND
1,2-Dichloropropane	15	ND	1,4-Dichlorobenzene	15	ND
cis-1,2-Dichloroethene	15	ND	1,2-Dichlorobenzene	15	ND

ug/kg = parts per billion (ppb)
ND = ANALYTE NOT DETECTED ABOVE QUANTITATION LIMIT
QC DATA:

Surrogate Recoveries		QC LIMITS soil
1,2-DCA-d4.....	101%	70-121 %
Toluene-d8.....	106%	81-117 %
Bromofluorobenzene.....	94%	74-121 %

Comments:

Richard Srna, Ph.D.

Laboratory Director

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

CERTIFICATE OF ANALYSIS

LABORATORY NO. [illegible]
CLIENT: SEMCO

DATE RECEIVED: 11/30/92
DATE REPORTED: 12/08/92
JOB NO. PAMCO

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS by Gas Chromatography/ Mass Spectrometry

SAMPLE: #8-COMP-N

Compound	ug/kg	Compound	ug/kg
Chloromethane	ND<50	Cis-1,3-Dichloropropene	ND<15
Bromomethane	ND<50	Trichloroethene	ND<15
Vinyl Chloride	ND<50	Dibromochloromethane	ND<15
Chloroethane	ND<50	1,1,2-Trichloroethane	ND<15
Methylene Chloride	ND<50	Benzene	ND<5
Acetone	ND<50	Trans-1,3-Dichloropropene	ND<15
Carbon disulfide	ND<15	2-Chloroethyl vinyl ether	ND<15
Trichlorofluoromethane	ND<15	Bromoform	ND<15
1,1-Dichloroethene	ND<15	4-Methyl-2-Pentanone	ND<50
1,1-Dichloroethane	ND<15	3-Hexanone	ND<50
1,2-Dichloroethene (trans)	ND<15	Tetrachloroethene	ND<15
Chloroform	ND<15	1,1,2,2-Tetrachloroethane	ND<15
1,2-Dichloroethane	ND<5	Toluene	ND<15
2-Butanone (MEK)	ND<100	Chlorobenzene	ND<15
1,1,1-Trichloroethane	ND<15	Ethylbenzene	ND<15
Carbon Tetrachloride	ND<15	Styrene	ND<15
Vinyl Acetate	ND<50	Total Xylenes	ND<15
Bromodichloromethane	ND<15	1,3-Dichlorobenzene	ND<15
1,2-Dichloropropane	ND<15	1,4-Dichlorobenzene	ND<15
1,2-Dichloroethene (cis)	ND<15	1,2-Dichlorobenzene	ND<15

ug/kg = part per billion (ppb)
QC DATA:

Surrogate Recoveries		QC Limits water	QC Limits soil
1,2-DCA-d4.....	96%	76-114	70-121
Toluene-d8.....	101%	88-110	81-117
Bromofluorobenzene.....	105%	86-115	74-121

comments:

Richard Srna, Ph.D.
Cecilia G. Joaquin (for)
Laboratory Director

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

CERTIFICATE OF ANALYSIS

LABORATORY NO. 55691-1
CLIENT: SEMCO
DATE SAMPLED : 10/22/92
DATE ANALYZED: 10/29/92

DATE RECEIVED: 10/23/92
DATE REPORTED: 10/30/92
PROJECT NO. CONTINENTAL CAN-5601 S.L.

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: #1-12K-H20

Compound	MDL	ug/L	Compound	MDL	ug/L
Chloromethane	10	ND	Cis-1,3-Dichloropropene	3	ND
Bromomethane	10	ND	Trichloroethene	3	ND
Vinyl chloride	10	ND	Bromodichloromethane	3	ND
Chloroethane	10	ND	1,1,2-Trichloroethane	3	ND
Methylene Chloride	10	ND 710	Benzene	1	ND
Acetone	10	[redacted]	Trans-1,3-Dichloropropene	3	ND
Carbon Disulfide	3	ND	2-Chloroethyl vinyl ether	3	ND
Trichlorofluoromethane	3	ND	Bromoform	3	ND
1,1-Dichloroethene	3	ND	4-Methyl-2-Pentanone	10	ND
1,1-Dichloroethane	3	ND	2-Hexanone	10	ND
trans-1,2-Dichloroethene	3	ND	Tetrachloroethene	3	ND
Chloroform	3	ND	1,1,2,2-Tetrachloroethane	3	ND
1,2-Dichloroethane	1	ND	Toluene	3	140
2-Butanone	20	[redacted]	Chlorobenzene	3	ND
1,1,1-Trichloroethane	3	ND 300	Ethylbenzene	3	ND
Carbon Tetrachloride	3	ND	Styrene	3	ND
Vinyl Acetate	10	ND	Total Xylenes	3	ND
Bromodichloromethane	3	ND	1,3-Dichlorobenzene	3	ND
1,2-Dichloropropane	3	ND	1,4-Dichlorobenzene	3	ND
cis-1,2-Dichloroethene	3	ND	1,2-Dichlorobenzene	3	ND

ug/L = parts per billion (ppb)
ND = ANALYTE NOT DETECTED ABOVE QUANTITATION LIMIT
QC DATA:

Surrogate Recoveries		QC LIMITS water
1,2-DCA-d4.....	89%	76-114 %
Toluene-d8.....	96%	88-110 %
Bromofluorobenzene.....	97%	86-115 %

comments:

Richard Srna, Ph.D.

Laboratory Director

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-7081 / fax (415) 821-7173

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 55691
CLIENT: SEMCO
CLIENT JOB NO.: CONTINENTAL CAN 5601 S.L.

DATE RECEIVED: 10/23/92
DATE REPORTED: 10/30/92

ANALYSIS FOR TOTAL PERTROLEUM HYDROCARBONS
by Modified EPA SW 846 Method 8015

LAB #	Sample Identification	Concentration (ug/L) Gasoline Range
[redacted]	[redacted]	[redacted]
1	1-12K H20	620

ug/L - parts per billion (ppb)

Minimum Detection Limit for Gasoline in Water: 50 ug/L

QAQC Summary:

Daily Standard run at 2mg/L: %DIFF Gasoline = <15 %
MS/MSD Average Recovery = 98 %: Duplicate RPD = 2 %

Richard Srna, Ph.D.

Laboratory Director

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 871-7123

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 55691
CLIENT: SEMCO
CLIENT JOB NO.: CONTINENTAL CAN 5601 S.L.

DATE RECEIVED: 10/23/92
DATE REPORTED: 10/30/92

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
by Modified EPA SW-846 Method 8015

LAB #	Sample Identification	Concentration (ug/L) Diesel Range
1	~~#1 12K H2O~~ 1-12K H2O	~~ND<50~~ ND<50

ug/L = parts per billion (ppb)

Minimum Detection Limit for Diesel in Water: 50ug/L

QAQC Summary:

Daily Standard run at 200mg/L: %DIFF Diesel = <15%
MS/MSD Average Recovery = 96%: Duplicate RPD = 3%

Richard Srna, Ph.D.

Laboratory Director

Superior Precision Analytical, Inc.
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CERTIFICATE OF ANALYSIS

LABORATORY NO.: 55691
CLIENT: SEMCO
CLIENT JOB NO.: CONTINENTAL CAN 5601 S.I.

DATE RECEIVED: 10/23/92
DATE REPORTED: 10/30/92

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
by Modified EPA SW-846 Method 5030 and 8015

LAB #	Sample Identification	Concentration (mg/kg) Gasoline
2	#2-12K-W-10'6"	ND<1
3	#3-12K-E-10'6"	ND<1
4	#4-1K-9'6"	590
6	#6-1K-3K-9'	1700
7	#7-5K-NE-11'	ND<1
8	#8-5K-NW-11'	220
9	#9-5K-S-11'	ND<1

* Does not match typical gasoline pattern.
mg/kg - parts per million (ppm)

Method Detection Limit for Gasoline in Soil: .1 mg/kg

QAQC Summary:

Daily Standard run at 2mg/L: %Diff Gasoline = <15
MS/MSD Recovery = 81%: Duplicate RPD = 2

Richard Srna, Ph.D.

Laboratory Manager

Superior Precision Analytical, Inc.
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CERTIFICATE OF ANALYSIS

LABORATORY NO. 55691-3
CLIENT: SEMCO
DATE SAMPLED : 10/22/92
DATE ANALYZED: 10/29/92

DATE RECEIVED: 10/23/92
DATE REPORTED: 10/30/92
PROJECT NO. CONTINENTAL CAN-5601 S.L.

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: #3-12K-E-10'6"

Compound	MDL	ug/kg	Compound	MDL	ug/kg
Chloromethane	50	ND	Cis-1,3-Dichloropropene	15	ND
Bromomethane	50	ND	Trichloroethene	15	ND
Vinyl Chloride	50	ND	Dibromochloromethane	15	ND
Chloroethane	50	ND	1,1,2-Trichloroethane	15	ND
Methylene Chloride	50	ND	Benzene	5	ND
Acetone	50	ND	Trans-1,3-Dichloropropene	15	ND
Carbon Disulfide	15	ND	2-Chloroethyl vinyl ether	15	ND
Trichlorofluoromethane	15	ND	Bromoform	15	ND
1,1-Dichloroethene	15	ND	4-Methyl-2-Pentanone	50	ND
1,1-Dichloroethane	15	ND	2-Hexanone	50	ND
trans-1,2-Dichloroethene	15	ND	Tetrachloroethene	15	ND
Chloroform	15	ND	1,1,2,2-Tetrachloroethane	15	ND
1,2-Dichloroethane	5	ND	Toluene	15	[redacted]
2-Butanone	100	ND	Chlorobenzene	15	ND
1,1,1-Trichloroethane	15	ND	Ethylbenzene	15	ND
Carbon Tetrachloride	15	ND	Styrene	15	ND
Vinyl Acetate	50	ND	Total Xylenes	15	ND
Bromodichloromethane	15	ND	1,3-Dichlorobenzene	15	ND
1,2-Dichloropropane	15	ND	1,4-Dichlorobenzene	15	ND
cis-1,2-Dichloroethene	15	ND	1,2-Dichlorobenzene	15	ND

ug/kg = parts per billion (ppb)
ND = ANALYTE NOT DETECTED ABOVE QUANTITATION LIMIT
QC DATA:

Surrogate Recoveries		QC LIMITS Soil
1,2-DCA-d4.....	99%	70-121 %
Toluene-d8.....	105%	81-117 %
Bromofluorobenzene.....	95%	74-121 %

comments:

Richard Srna, Ph.D.

Laboratory Director

Superior Precision Analytical, Inc.
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C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 55691-6
CLIENT: SEMCO
DATE SAMPLED : 10/22/92
DATE ANALYZED: 10/29/92

DATE RECEIVED: 10/23/92
DATE REPORTED: 10/30/92
PROJECT NO. CONTINENTAL CAN-
5601 S.L.

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: [redacted] 6-15-15-9

Compound	MDL	ug/kg	Compound	MDL	ug/kg
Chloromethane	20000	ND	Cis-1,3-Dichloropropene	6000	ND
Bromomethane	20000	ND	Trichloroethene	6000	ND
Vinyl Chloride	20000	ND	Dibromochloromethane	6000	ND
Chloroethane	20000	ND	1,1,2-Trichloroethane	6000	ND
Methylene Chloride	20000	ND	Benzene	20000	ND
Acetone	20000	ND	Trans-1,3-Dichloropropene	6000	ND
Carbon Disulfide	6000	ND	2-Chloroethyl vinyl ether	6000	ND
Trichlorofluoromethane	6000	ND	Bromoform	6000	ND
1,1-Dichloroethene	6000	ND	4-Methyl-2-Pentanone	20000	ND
1,1-Dichloroethane	6000	ND	2-Hexanone	20000	ND
trans-1,2-Dichloroethene	6000	ND	Tetrachloroethene	6000	ND
Chloroform	6000	ND	1,1,2,2-Tetrachloroethane	6000	ND
1,2-Dichloroethane	2000	ND	Toluene	[redacted]	
2-Butanone	40000	ND	Chlorobenzene	6000	ND
1,1,1-Trichloroethane	6000	ND	Ethylbenzene	6000	[redacted]
Carbon Tetrachloride	6000	ND	Styrene	6000	ND
Vinyl Acetate	20000	ND	Total Xylenes	6000	[redacted]
Bromodichloromethane	6000	ND	1,3-Dichlorobenzene	6000	ND
1,2-Dichloropropane	6000	ND	1,4-Dichlorobenzene	6000	ND
cis-1,2-Dichloroethene	6000	ND	1,2-Dichlorobenzene	6000	ND

ug/kg = parts per billion (ppb)
ND = ANALYTE NOT DETECTED ABOVE QUANTITATION LIMIT
QC DATA:

Surrogate Recoveries		QC LIMITS soil
1,2-DCA-d4.....	100%	70-121 %
Toluene-d8.....	104%	81-117 %
Bromofluorobenzene.....	102%	74-121 %

comments:

Richard Srna, Ph.D.

Laboratory Director

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 55691
CLIENT: SEMCO
CLIENT JOB NO.: CONTINENTAL CAN 5601 S.L.

DATE RECEIVED: 10/23/92
DATE REPORTED: 10/30/92

ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES by EPA SW-846 Methods 5030 and 8020

LAB #	Sample Identification	Concentration (mg/kg) Benzene	Toluene	Ethyl Benzene	Xylenes
4	#4-1K-9'6"	ND<.15	2.5	2.9	28
7	#7-5K-NE-11'	ND<.003	0.028	ND<.003	ND<.003
8	#8-5K-NW-11'	ND<.30	ND<.30	2.4	1.8
9	#9-5K-S-11'	ND<.003	0.030	ND<.003	ND<.003

mg/kg - parts per million (ppm)

Method Detection Limit in Soil: 0.003 mg/kg

$\frac{150}{5} = 50 \times dil$

QAQC Summary:

Daily Standard run at 20ug/L: %Diff 8020 = <15%
MS/MSD Average Recovery = 84%: Duplicate RPD = 2%

Richard Srna, Ph.D.

Laboratory Manager

Superior Precision Analytical, Inc.
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CERTIFICATE OF ANALYSIS

LABORATORY NO.: 55691
CLIENT: SEMCO
CLIENT JOB NO.: CONTINENTAL CAN 5601 S.L.

DATE RECEIVED: 10/23/92
DATE REPORTED: 10/30/92

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
by Modified EPA SW-846 Method 8015

LAB #	Sample Identification	Concentration (mg/kg) [redacted] DIESEL RANGE
2	#2-12K-W-10'6"	ND<10
3	#3-12K-E-10'6"	ND<10
7	#7-5K-NE-11'	ND<10
8	#8-5K-NW-11'	160*
9	#9-5K-S-11'	ND<10

* Does not match typical Diesel pattern.
mg/kg - parts per million (ppm)

Minimum Detection Limit for Diesel in Soil: 10mg/kg

QAQC Summary:

Daily Standard run at 200mg/L: %DIFF Diesel = <15%
MS/MSD Average Recovery = 104%: Duplicate RPD = 5%

Richard Srna, Ph.D.

Laboratory Director

TANK REMOVAL RESULTS

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7173

CERTIFICATE OF ANALYSIS

LABORATORY NO. 55691-5
CLIENT: SEMCO
DATE SAMPLED : 10/22/92
DATE ANALYZED: 11/02/92

DATE RECEIVED: 10/23/92
DATE REPORTED: 11/03/92
PROJECT NO. CONTINENTAL CAN-5601 S.L.

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: #5-3K-W-10'

Compound	MDL	ug/kg	Compound	MDL	ug/kg
Chloromethane	2000	ND	Cis-1,3-Dichloropropene	600	ND
Bromomethane	2000	ND	Trichloroethene	600	ND
Vinyl Chloride	2000	ND	Dibromochloromethane	600	ND
Chloroethane	2000	ND	1,1,2-Trichloroethane	600	ND
Methylene Chloride	2000	ND	Benzene	200	ND
Acetone	2000	ND	Trans-1,3-Dichloropropene	600	ND
Carbon Disulfide	600	ND	2-Chloroethyl vinyl ether	600	ND
Trichlorofluoromethane	600	ND	Bromoform	600	ND
1,1-Dichloroethene	600	ND	4-Methyl-2-Pentanone	2000	ND
1,1-Dichloroethane	600	ND	2-Hexanone	2000	ND
trans-1,2-Dichloroethene	600	ND	Tetrachloroethene	600	ND
Chloroform	600	ND	1,1,2,2-Tetrachloroethane	600	ND
1,2-Dichloroethane	200	ND	Toluene	600	14000
2-Butanone	4000	36000	Chlorobenzene	600	ND
1,1,1-Trichloroethane	600	ND	Ethylbenzene	600	ND
Carbon Tetrachloride	600	ND	Styrene	600	ND
Vinyl Acetate	2000	ND	Total Xylenes	600	ND
Bromodichloromethane	600	ND	1,3-Dichlorobenzene	600	ND
1,2-Dichloropropane	600	ND	1,4-Dichlorobenzene	600	ND
cis-1,2-Dichloroethene	600	ND	1,2-Dichlorobenzene	600	ND

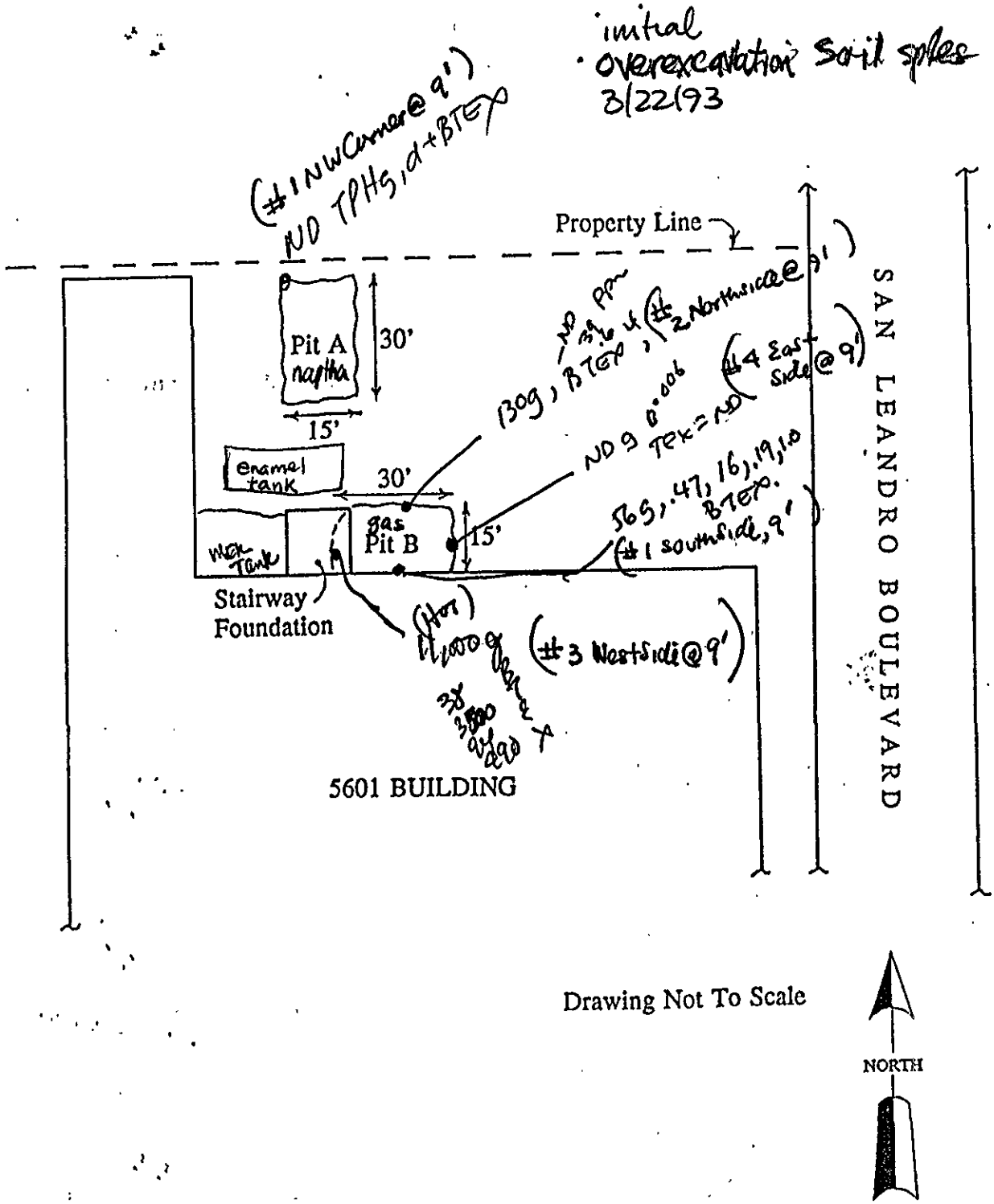
ug/kg = parts per billion (ppb)
ND = ANALYTE NOT DETECTED ABOVE QUANTITATION LIMIT
QC DATA:

Surrogate Recoveries		QC LIMITS soil
1,2-DCA-d4.....	96%	70-121 %
Toluene-d8.....	104%	81-117 %
Bromofluorobenzene.....	100%	74-121 %

comments:

Richard Srna, Ph.D.

Laboratory Director



TANK EXCAVATION SOIL SAMPLING AND TESTING SERVICES 5601 SAN LEANDRO BOULEVARD OAKLAND, CALIFORNIA	SITE PLAN Job No. P93056.3 April 1993	BSK & ASSOCIATES Fig 2.

ALYTICAL
BSK
LABORATORIES
Environmental Services

1414 Stanislaus Street
Fresno, California 93706
Telephone (209) 485-8310
FAX (209) 485-6935
1-800-877-8310

BSK-Pleasanton
Pamco

Date Sampled : 03/22/93
Time Sampled : 0915
Date Received : 03/24/93
Date of Analysis : 03/29/93
Report Issue Date: 03/30/93

Case Number : Ch930776
Lab ID Number : 0776-1 Sample Type: SOLID
Project Number : P93056.3
Sample Description: Pit A, #1 NW Corner @ 9'

Analyses for Total Petroleum Hydrocarbons as Diesel [TPH(D)] by Method DHS GC/FID

Results Reported in Milligrams per Kilogram (mg/kg)

Analyte	Results	DLR
TPH(D)	ND	1.0

Sample DLR = DLR x DLR Multiplier, DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting.
Exceptional sample conditions or matrix interferences may result in higher detection limits.
ND: None Detected
* - This sample contains lower molecular weight hydrocarbons.
** - This sample contains higher molecular weight hydrocarbons.
***-This sample contains both higher and lower molecular weight hydrocarbons.

Cynthia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager

930311 TPHDS.T

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Environmental Services

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Fresno, California 93706
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FAX (209) 485-6935
1-800-877-8310

BSK-Pleasanton
Pamco

Date Sampled : 03/22/93
Time Sampled : 0915
Date Received : 03/24/93
Date of Analysis : 03/26/93
Report Issue Date: 03/30/93

Case Number : Ch930776
Lab ID Number : 0776-1
Project Number : P93056.3
Sample Description: Pit A, #1 NW Corner @ 9'

Sample Type: SOLID

Analyses for BTEX by EPA Method 8020 and TPH (G) by EPA Method 8015

Results Reported in Milligrams per Kilogram (mg/kg)

Compound	Results	DLR
Benzene	ND	0.005
Toluene	ND	0.005
Ethylbenzene	ND	0.005
Total Xylene Isomers	ND	0.005
Total Petroleum Hydrocarbons (G)	ND	1.

Sample DLR = DLR x DLR Multiplier, DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting.
Exceptional sample conditions or matrix interferences may result in higher detection limits.
ND: None Detected

Cynthia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager

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BSK-Pleasanton
Pamco

Date Sampled : 03/22/93
Time Sampled : 0930
Date Received : 03/24/93
Date of Analysis : 03/26/93
Report Issue Date: 03/30/93

Case Number : Ch930776
Lab ID Number : 0776-2
Project Number : P93056.3
Sample Description: Pit B, #1 South Side @ 9'

Sample Type: SOLID

Analyses for BTEX by EPA Method 8020 and TPH (G) by EPA Method 8015

Results Reported in Milligrams per Kilogram (mg/kg)

Compound	Results	DLR
Benzene	0.47	0.005
Toluene	16	0.005
Ethylbenzene	0.19	0.005
Total Xylene Isomers	1.0	0.005
Total Petroleum Hydrocarbons (G)	56	1.

Sample DLR = DLR x DLR Multiplier, DLR Multiplier = 25

DLR: Detection Limit for the Purposes of Reporting.
Exceptional sample conditions or matrix interferences may result in higher detection limits.
ND: None Detected

Cynthia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager

0106 BTPS.t

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BSK-Pleasanton
Pamco

Date Sampled : 03/22/93
Time Sampled : 0940
Date Received : 03/24/93
Date of Analysis : 03/26/93
Report Issue Date: 03/30/93

Case Number : Ch930776
Lab ID Number : 0776-3
Project Number : P93056.3
Sample Type: SOLID
Sample Description: Pit B, #2 North Side @ 9'

Analyses for BTEX by EPA Method 8020 and TPH (G) by EPA Method 8015

Results Reported in Milligrams per Kilogram (mg/kg)

Compound	Results	DLR
Benzene	ND	0.005
Toluene	39	0.005
Ethylbenzene	0.6	0.005
Total Xylene Isomers	4.0	0.005
Total Petroleum Hydrocarbons (G)	130	1.

Sample DLR = DLR x DLR Multiplier, DLR Multiplier = 100

DLR: Detection Limit for the Purposes of Reporting.
Exceptional sample conditions or matrix interferences may result in higher detection limits.
ND: None Detected

ynthia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager

6 BTPS.t

ANALYTICAL BSK LABORATORIES Environmental Services
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Fresno, California 93706
Telephone (209) 485-8310
FAX (209) 485-6935
1-800-877-8310

BSK-Pleasanton
Pamco

Date Sampled : 03/22/93
Time Sampled : 0950
Date Received : 03/24/93
Date of Analysis : 03/26/93
Report Issue Date: 03/30/93

Case Number : Ch930776
Lab ID Number : 0776-4
Project Number : P93056.3
Sample Description: Pit B, #3 West Side @ 9'

Sample Type: SOLID

Analyses for BTEX by EPA Method 8020 and TPH (G) by EPA Method 8015

Results Reported in Milligrams per Kilogram (mg/kg)

Compound	Results	DLR
Benzene	38	0.005
Toluene	3500	0.005
Ethylbenzene	94	0.005
Total Xylene Isomers	490	0.005
Total Petroleum Hydrocarbons (G)	11000	1.

Sample DLR = DLR x DLR Multiplier, DLR Multiplier = 500

DLR: Detection Limit for the Purposes of Reporting.
Exceptional sample conditions or matrix interferences may result in higher detection limits.
ND: None Detected

nthia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager

BTPS.t

ANALYTICAL BSK LABORATORIES Environmental Services
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Fresno, California 93706
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FAX (209) 485-6935
1-800-877-8310

BSK-Pleasanton
Pamco

Date Sampled : 03/22/93
Time Sampled : 1030
Date Received : 03/24/93
Date of Analysis : 03/26/93
Report Issue Date: 03/30/93

Case Number : Ch930776
Lab ID Number : 0776-5
Project Number : P93056.3
Sample Description: Pit B, #4 East Side @ 9'

Sample Type: SOLID

Analyses for BTEX by EPA Method 8020 and TPH (G) by EPA Method 8015

Results Reported in Milligrams per Kilogram (mg/kg)

Compound	Results	DLR
Benzene	0.006	0.005
Toluene	ND	0.005
Ethylbenzene	ND	0.005
Total Xylene Isomers	ND	0.005
Total Petroleum Hydrocarbons (G)	ND	1.

Sample DLR = DLR x DLR Multiplier, DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting.
Exceptional sample conditions or matrix interferences may result in higher detection limits.
ND: None Detected

thia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager

MTPS.t

Telephone (209) 485-8310 • Fax (209) 485-7427

BSK Log Number 0776

ANALYSIS REQUEST/CHAIN OF CUSTODY RECORD

1000

Client Name: Pamco

Address: c/o BSK, 1181 Quarry Ln #300

City, State, Zip: Pleasanton, CA 94566

Project or P.O.#: P93056.3

Phone #: (510) 462-4000

Report, attention: Alex Eskandari

Sampled by: F. Robert Gregoras

Date sampled	Time sampled	Type (See key below)	Sample description	Number of containers	Lab Sample number	Sample Seals (See key below)	TPH-Gasoline	TPH-Diesel	BTXE	Hazardous sample Special handling required	Remarks
3/23/93	9:15	SO	Pit A, #1 NW corner @ 9'	1	1	A	X	X	X		
3/23/93	9:30	SO	Pit B #1 So. Side @ 9'	1	2		X		X		
3/23/93	9:40	SO	Pit B, #2 No. Side @ 9'	1	3		X		X		
3/23/93	9:50	SO	Pit B, #3 west side @ 9'	1	4	A	X		X		
3/23/93	10:30	SO	Pit B, #4 East Side @ 9'	1	5	A	X		X		

Lab Use Only in this section

Analysis required

3/30 AJ

IMPORTANT NOTICE: No samples will be analyzed without an authorized signature in this section.

I am hereby requesting BSK's Normal Chain-of-Custody Procedures for the above samples. I understand that these procedures are generally consistent with those outlined in the U.S. E.P.A. SW 846 and that there is no extra charge for this service.

By: Joan K. Eggo
Authorized Signature

I am hereby requesting BSK's Formal Chain-of-Custody Procedures for the above samples. I understand that these procedures are generally consistent with those outlined in U.S. EPA Contract Laboratory Program Statement of Work, Section F, and that there is a charge of $50.00 per work order or $5.00 a bottle, whichever is greater.

By: _____
Authorized Signature

	Signature	Print Name	Company	Date	Time
Relinquished by	Joan K. Eggo	F. Robert Gregoras	BSK & Assoc.	3/23/93	9:00
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by	Janice Garrison	Janice Garrison	BSK	3/24/93	1655

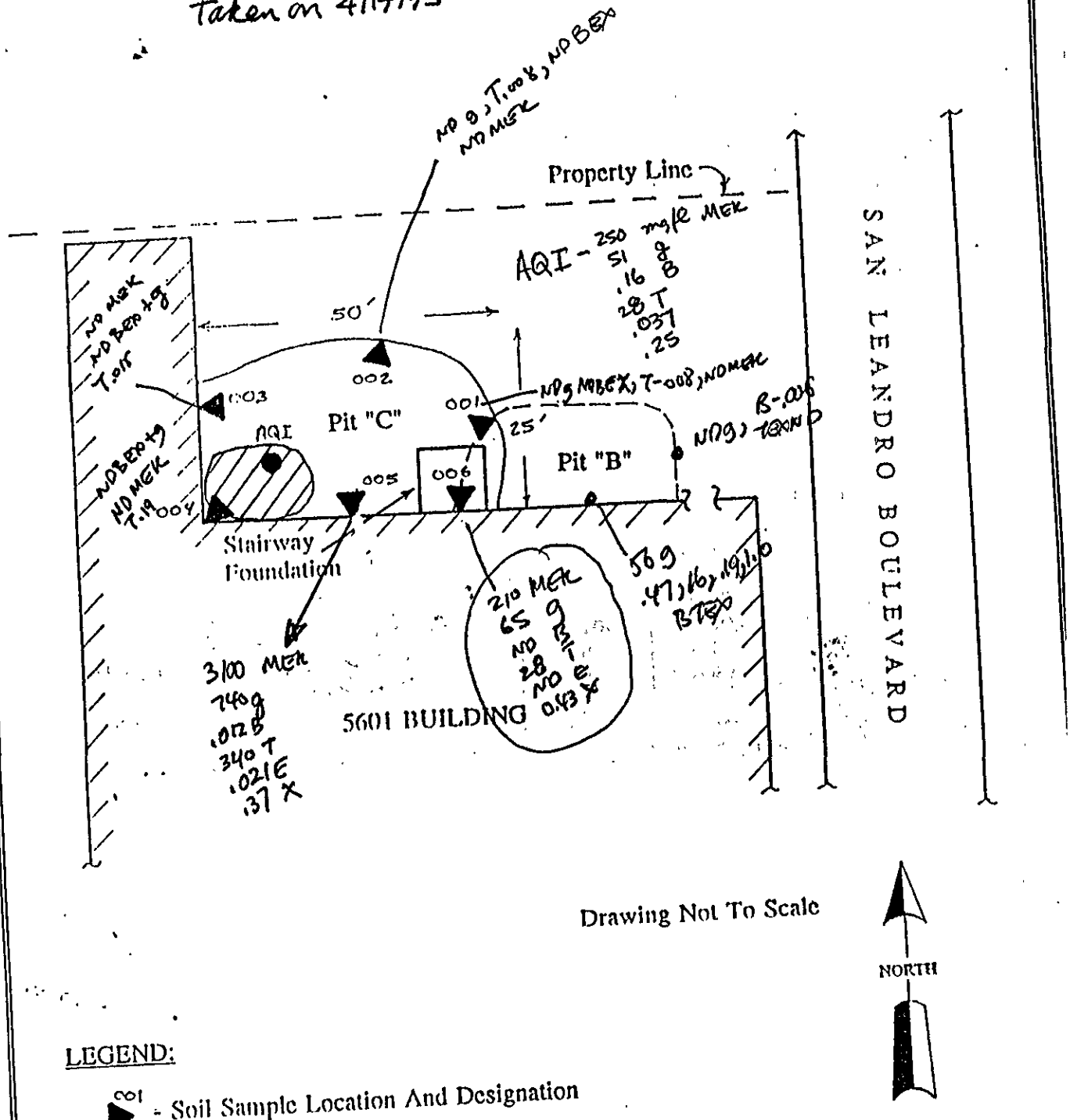
BSK & Associates Chemical Laboratories

1414 Stanislaus Street Fresno, California 93706

Telephone (209) 485-8310 • Fax (209) 485-7427

KEY: Type: AQ–Aqueous SL–Sludge SO–Soil PE–Petroleum OT–Other
Seals: P–Present A–Absent B–Broken
DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR
Note:
Samples are discarded 14 days after results are reported unless other arrangements are made.
Hazardous samples will be returned to client or disposed of at client expense.

Post-excavation Soil + GW Samples
Taken on 4/19/93



LEGEND:

001 - Soil Sample Location And Designation

- Water Sample Location And Designation

TANK EXCAVATION SOIL AND WATER SAMPLING AND TESTING SERVICES 5601 SAN LEANDRO BOULEVARD OAKLAND, CALIFORNIA	**SITE PLAN** Job No. P93056.3 May 1993	BSK & ASSOCIATES Figure 3

TABLE 1: SOIL RESULTS

(Results in ppm - parts per million)

	CONSTITUENTS					
SAMPLE LOCATION	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	TPH as GASOLINE	MEK
001, W. Wall	ND	0.008	ND	ND	ND	ND
002, N. Wall	ND	0.008	ND	ND	ND	ND
003, E. Wall	ND	0.015	ND	ND	ND	ND
004, SW Corner	ND	0.19	ND	ND	ND	ND
005, S. Wall	0.012	340	0.021	0.37	740	3100
006, S. Wall	ND	28	ND	0.43	65	210

ND - None Detected

TABLE 2: WATER RESULTS

(Results in ppb - parts per billion)

	CONSTITUENTS					
SAMPLE LOCATION (Action Level)	BENZENE (1)	TOLUENE (100)	ETHYL-BENZENE (680)	XYLENES (1750)	TPH as GASOLINE (NA)	MEK (30)
AQI	160	28,000	37	250	51,000	250,000

Action Levels are those of the California Department of Health Services Drinking Water Standards, 1991, and the California Health Servives Drinking Water Action Levels, 1992)

The Chemical Test Data Sheets are included with this letter, as are the Chain-Of-Custody document and Site Plan.

BSK & Associates

BSK Log Number 1045

ANALYSIS REQUEST/CHAIN OF CUSTODY RECORD

1000-

Client Name: PACIFIC AMERICAN GROUP	Project or P.O.#: P93056.3
Address: 1121 QUARRY LANE #300	Phone #: 510 462 4000
City, State, Zip: PLEASANTON CA 94566	Report attention: ALEX ESKANDARI

Lab Use Only in this section

Analysis required: EPA 601's - MEK; TPH G; BTXE; Hazardous sample Special handling required

Date sampled	Time sampled	Type (See key below)	Sampled by / Sample description	Number of containers	Lab Sample number	Sample Seals (See key below)	EPA 601's - MEK	TPH G	BTXE	Hazardous sample Special handling required	Remarks
											4-30-93
4/19	0920	SO	001/W WALL @ 11.5' (FROM BUCKET)	1	1	P	X	X	X		
4/19	0925	SO	002/N WALL @ 11.0' (FROM BUCKET)	1	2	1	X	X	X		
4/19	0935	SO	003/E WALL @ 11.0' DTS	1	3	1	X	X	X		
4/19	0945	SO	004/SE CORNER @ 11.6' DTS	1	4	1	X	X	X		
4/19	1000	SO	005/S WALL @ 11.5' DTS	1	5	1	X	X	X		
4/19	1010	SO	006/S WALL @ 11.0' DTS	1	6	P	X	X	X		
4/19	1045	AQ	POND IN EXCAVATION AQ1	2	7	P	X	X	X		HAND SAMPLED INTO CLIE SUPPLIED BOTTLES/NO PR

IMPORTANT NOTICE: *No samples will be analyzed without an authorized signature in this section.*

I am hereby requesting BSK's Normal Chain-of-Custody Procedures for the above samples. I understand that these procedures are generally consistent with those outlined in the U.S. E.P.A. SW 846 and that there is no extra charge for this service.

By: _____ Authorized Signature

I am hereby requesting BSK's Formal Chain-of-Custody Procedures for the above samples. I understand that these procedures are generally consistent with those outlined in U.S. EPA Contract Laboratory Program Statement of Work, Section F, and that there is a charge of $50.00 per work order or $5.00 a bottle, whichever is greater.

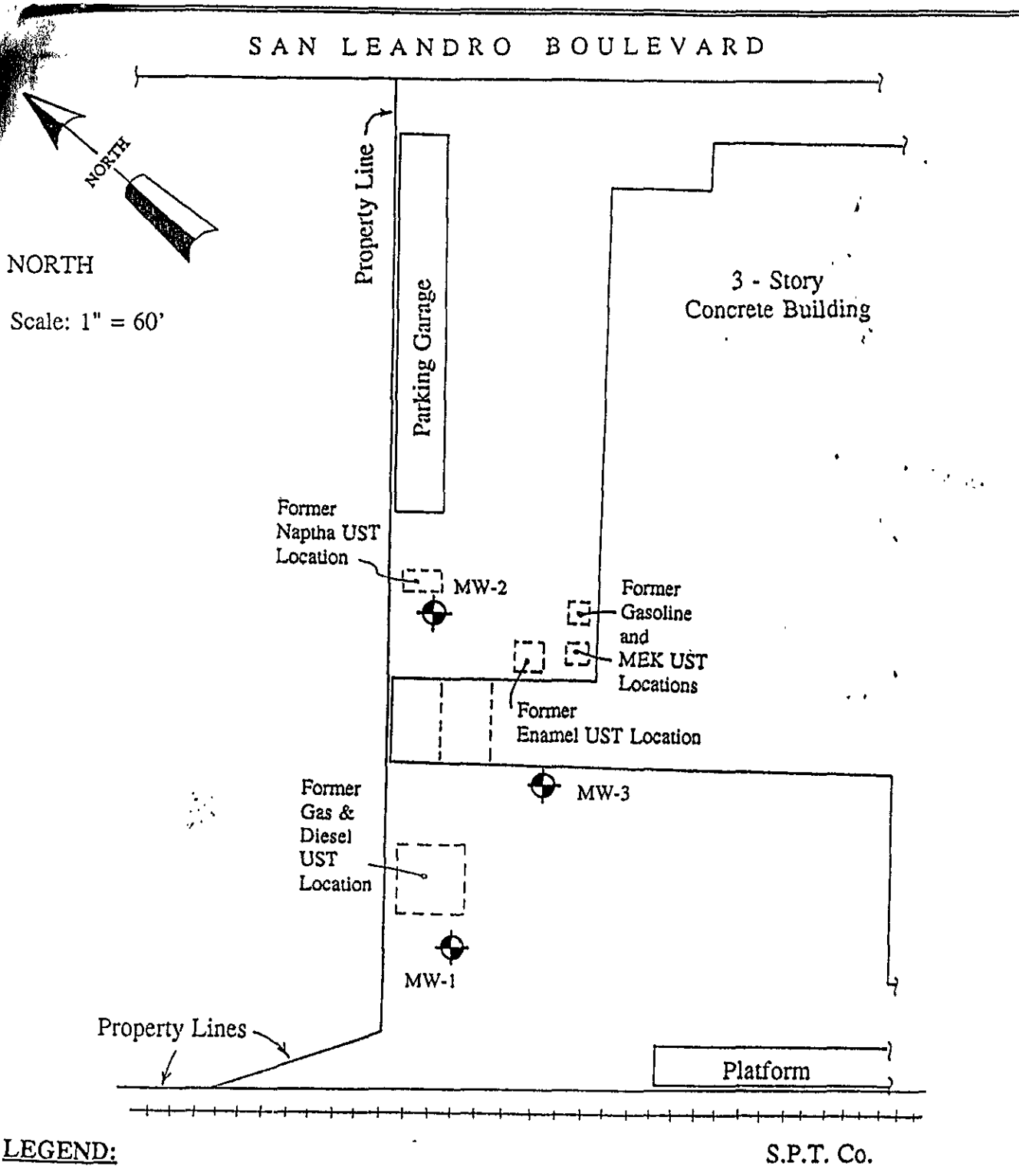
By: _____ Authorized Signature

	Signature	Print Name	Company	Date	Time
Relinquished by		ED KEECH	BSK/PLEASANTON	4/20	0800
Received by	T. A. Vera	T. A. VERA	BSK	4/20/93	1600
Relinquished by					
Received by					
Relinquished by					
Received by					

BSK & Associates Chemical Laboratories

1414 Stanislaus Street Fresno, California 93706

KEY: Type: AQ–Aqueous SL–Sludge SO–Soil PE–Petroleum OT–Other
Seals: P–Present A–Absent B–Broken
DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR
Note:
Samples are discarded 14 days after results are reported unless other arrangements are made.
Hazardous samples will be returned to client or disposed of at client expense.



LEGEND:

- Designation and Approximate Location of Groundwater Monitoring Well

- Approximate Location of Former Underground Storage Tanks (Not to Scale)

REPORT GROUNDWATER MONITORING FACILITY INSTALLATION PAMCO PROPERTY 7825 SAN LEANDRO STREET OAKLAND, CALIFORNIA	SITE PLAN Job No. P93120.3-B August 1993 FIGURE: 4	BSK & ASSOCIATES

TABLE 2A - WATER RESULTS

BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES
Results in Parts Per Billion (ppb)

	CONSTITUENTS			
Sample Location (Action Level)	Benzene $(1)_1$	Toluene $(100)_2$	Ethylbenzene $(680)_1$	Xylenes $(1750)_1$
MW-1	79	ND	ND	0.7
MW-2	380	500,000	17	69
MW-3	16	ND	ND	ND

ND - None Detected
1 - California Department Of Health Services Drinking Water Standard, Revised 10/23/91
2 - California DOHS Action Level, 7/1/92

TABLE 2B - WATER RESULTS

TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE AND DIESEL, TOTAL LEAD, AND VOLATILE ORGANIC COMPOUNDS
Results in Parts Per Billion (ppb)

	CONSTITUENTS			
Sample Location (Action Level)	TPH Gasoline (NA)	TPH Diesel (NA)	Total Lead (50)	Volatile Organics (Determined by Compound)
MW-1	1,100	ND	ND	--
MW-2	720,000	150	--	--
MW-3	450	ND	--	Vinyl Chloride(0.5) - 5.0 1,1-Dichloroethene(6) - 2.3 Trans 1,2-Dichloroethene(10) - 52 Cis 1,2 Dichoroethene(6) - 89 Benzene(1) - 24 Trichloroethene(5) - 150 Tetrachloroethene(5) - 72

ND - None Detected
-- - Not Tested
1 - California Department of Health Services Drinking Water Standards, Revised 10/23/91.
2 - EPA Drinking Water Standard, Revised 7/1/92

Samples were submitted to the laboratory with Chain-Of-Custody documentation and procedures.

The results of the chemical analyses of soil and groundwater are summarized in the following two tables: Table 1 - Soil Results, and Table 2 - Water Results. Soil results are reported in Parts Per Million-PPM (mg/kg); water results are reported in Parts Per Billion-PPB (ug/l).

TABLE 1A - SOIL RESULTS

BENZENE, TOLUENE, ETHYLBENZENE AND XYLENES
Results in Parts Per Million (ppm)

	CONSTITUENTS			
Sample Location	Benzene	Toluene	Ethylbenzene	Xylenes
MW-1 at 11'	ND	ND	ND	ND
MW-2 at 19'	ND	650	ND	ND
MW-3 at 6'	ND	ND	ND	ND
MW-3 at 10'	ND	ND	ND	ND

ND - None Detected

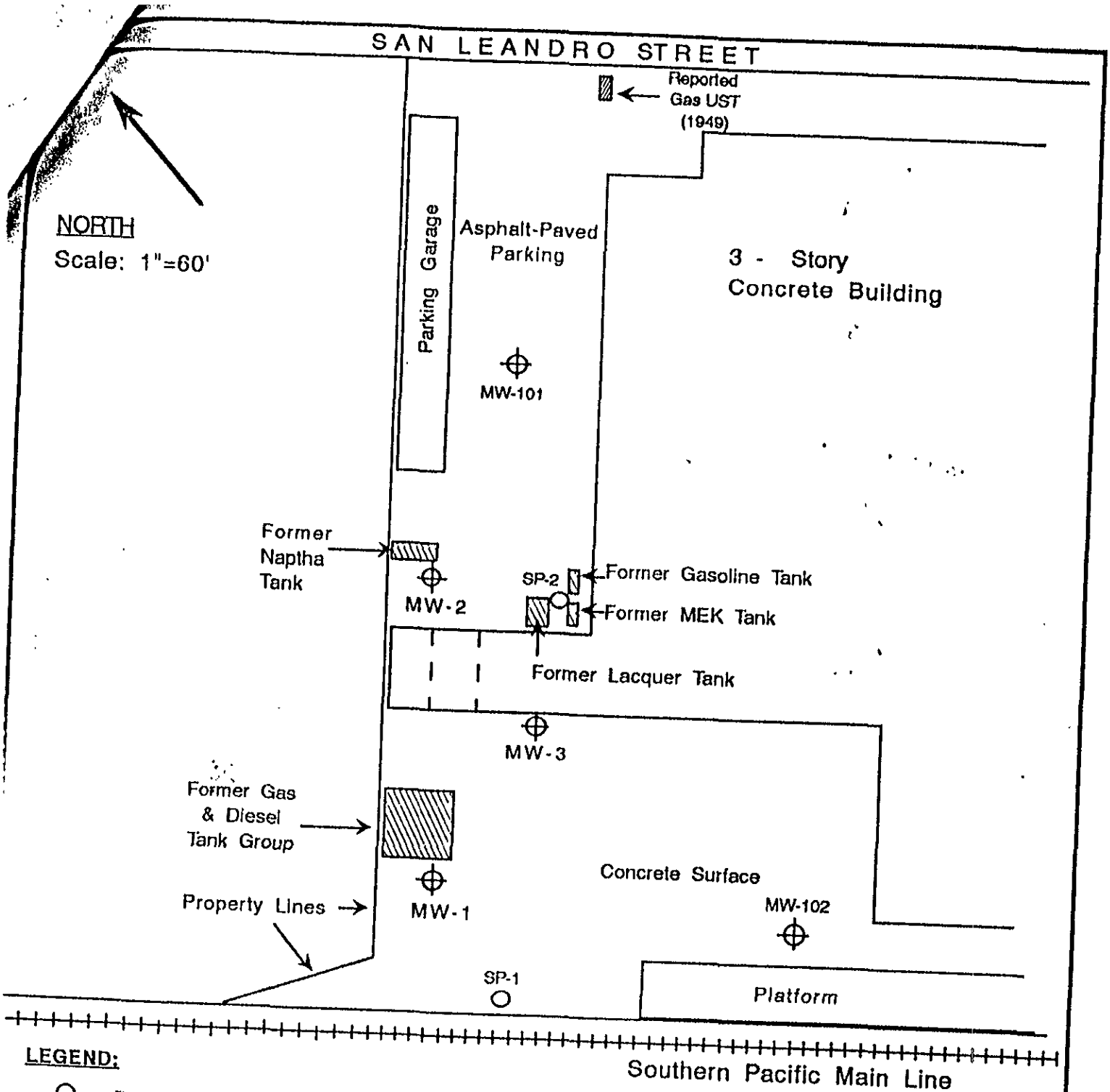
TABLE 1B - SOIL RESULTS

TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE AND DIESEL, TOTAL LEAD, AND VOLATILE ORGANIC COMPOUNDS
Results in Parts Per Million (ppm)

almost all toluene

	CONSTITUENTS			
Sample Location	TPH Gasoline	TPH Diesel	Total Lead	Volatile Organics
MW-1 at 11'	ND	ND	5.4	--
MW-2 at 19'	680	4.8	--	--
MW-3 at 6'	ND	ND	--	Acetone - 0.022
MW-3 at 10'	ND	ND	--	ND

ND - None Detected
-- - Not Tested



LEGEND:

- ○ - Designation and Approximate Location of Sampling-Point
- ⊕ MW-1 - Designation and Approximate Location of Groundwater Monitoring Well
- ▨ - Approximate Location of Former Underground Storage Tank (not to scale)

SUPPLEMENTAL SITE ASSESSMENT -
PAMCO PROPERTY
5601 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

SITE PLAN

Job No. P94109.4
November 1994
FIGURE: 5

BSK & ASSOCIATES

TABLE 1 - SOIL RESULTS

BTEX, TPH as GAS and DIESEL, VOLATILE ORGANICS AND VOLATILE HALOCARBONS

SAMPLE DATE: 9/22/94	CONSTITUENTS								
SAMPLE LOCATION:	Benzene	Toluene	Ethylbenzene	Xylenes	TPH-Gas	TPH-Diesel	Oil & Grease	EPA 601/602	EPA 8015
SP-1 @ 3.5'	0.17	0.76	0.10	0.46	26*	12	520	--	--
SP-1 @ 9'	--	--	--	--	--	--	--	ND	ND
MW-101 @ 10'	ND	ND	ND	ND	ND	ND	ND	--	ND
MW-102 @ 8'	ND	ND	ND	ND	ND	ND	ND	--	ND

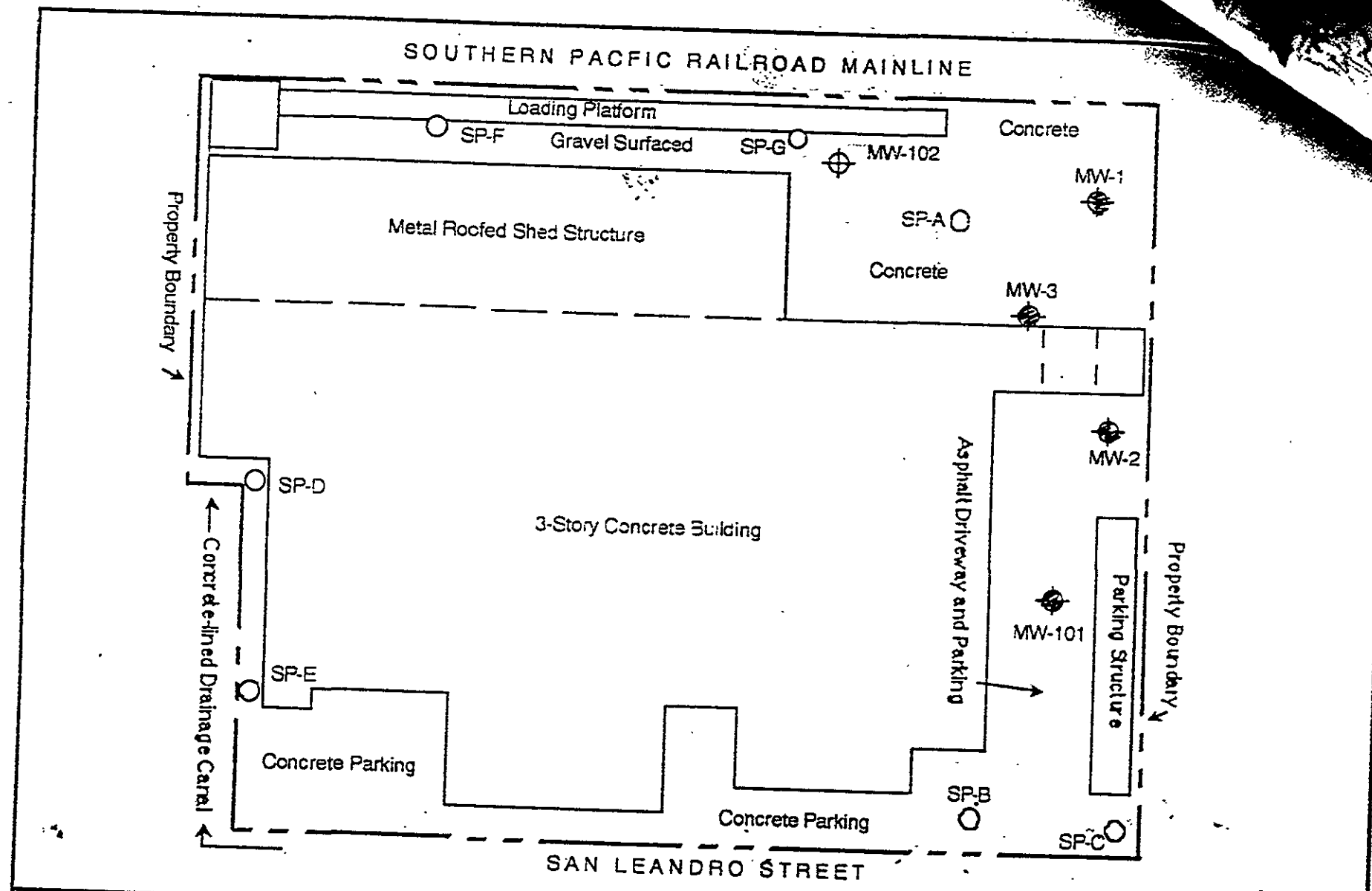
* - Chromatography is inconsistent with the Gasoline Standard, see Appendix A, Figure A-1

TABLE 2 - WATER RESULTS

BTEX, TOTAL PETROLEUM HYDROCARBONS, VOLATILE ORGANICS AND VOLATILE HALOCARBONS

SAMPLE DATE: 9/22/94	CONSTITUENTS (Action Level* - PPB)								
SAMPLE LOCATION	Benzene (1)	Toluene (100,)	Ethylbenzene (680)	Xylenes (1750)	TPH-Gas (NA)	TPH-Diesel (100,)	EPA 601 (Compound Specific)	EPA 602 (Compound Specific)	EPA 8015 (Compound Specific)
SP-1	ND	0.8	1.3	1.6	180	ND	1,2-Dichloroethane - 1.7(0.5)	ND	ND
SP-2	0.7	ND	ND	ND	ND	ND	cis-1,2-Dichloroethene - 2.3(6)	ND	ND
MW-101	29	25,000	40	170	3200	110	1,2-Dichloroethane - 0.6(0.5)	--	ND
MW-102	ND	ND	ND	ND	ND	ND	Chloromethane - 0.6(NA)	--	ND

ND - None Detected
-- - Not Tested
NA - None Available
* - Primary Drinking Water Standard, California Department of Health Services, 10/23/91
1 - Action Level, CaDHS, 7/1/92
2 - EPA Suggested No Adverse Response Level (SNARL), 1980



ADDITIONAL SITE ASSESSMENT
PAMCO PROPERTY
5601 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

LEGEND:
- Sample-Point Location and Designation
- Existing Monitoring Well Location

NORTH
Scale: 1" = 80'

SITE PLAN
Job No. P94237.4
November 1994
FIGURE: 6

BSK & ASSOCIATES

TABLE 1A - SOIL RESULTS

ORGANIC COMPOUNDS (mg/kg)

	CONSTITUENTS								
SAMPLE LOCATION:	Benzene	Toluene	Ethylbenzene	Xylenes	TPH-Gas	TPH-Diesel	Oil & Grease	EPA 601	EPA 8015(M)
SP-A @ 6'	--	--	--	--	--	--	--	ND	ND
SP-B @ 13'	ND	ND	ND	ND	ND	--	--	--	--
SP-C @ 9.5'	ND	ND	ND	ND	ND	--	--	ND	--
SP-D @ 12.5'	ND	ND	ND	ND	ND	ND	ND	ND	--
SP-E @ 10'	--	--	--	--	--	--	--	ND	ND
SP-F @ 3'	ND	ND	ND	ND	ND	ND	ND	ND	ND
SP-G @ 3.5'	ND	ND	ND	ND	ND	ND	ND	ND	ND

(M) - Suite of non-routine compounds specific to the Site.
-- - Not Tested

TABLE 1B- SOIL RESULTS

INORGANICS (mg/kg)

	CONSTITUENTS				
SAMPLE LOCATION: (Action Level)	Cadmium (100)	Chromium (2500)	Lead (1000)	Nickel (2000)	Zinc (5000)
SP-D @ 12.5'	ND	62	14	78	45

1 - Total Threshold Limit Concentration (TTLC) for classification as hazardous waste, California.

TABLE 2A - WATER RESULTS

ORGANIC COMPOUNDS (µg/l)

	CONSTITUENTS (Action Level* - PPB)									
SAMPLE LOCATION	Benzene (1)	Toluene (100,)	Ethylbenzene (680)	Xylenes (1750)	TPH-Gas (NA)	TPH-Diesel (100,)	Oil & Grease (NA)	EPA 601 (Compound Specific)	EPA 8015 (Compound Specific)	EPA 8015M (Compound Specific)
SP-A	-	--	--	--	--	--	--	cis-1,2-Dichloroethene - 6.7(6.0) vinyl chloride - 14(0.5)	--	ND
SP-B	ND	ND	ND	ND	ND	--	--	--	--	--
SP-C	ND	ND	ND	ND	ND	-	--	ND	--	--
SP-D	ND	ND	ND	ND	ND	ND	110.000	ND	--	--
SP-E	--	--	--	--	--	--	--	ND	ND	--
SP-F	ND	ND	ND	ND	ND	ND	ND	ND	--	ND
SP-G	ND	ND	ND	ND	ND	ND	3.000	ND	--	ND

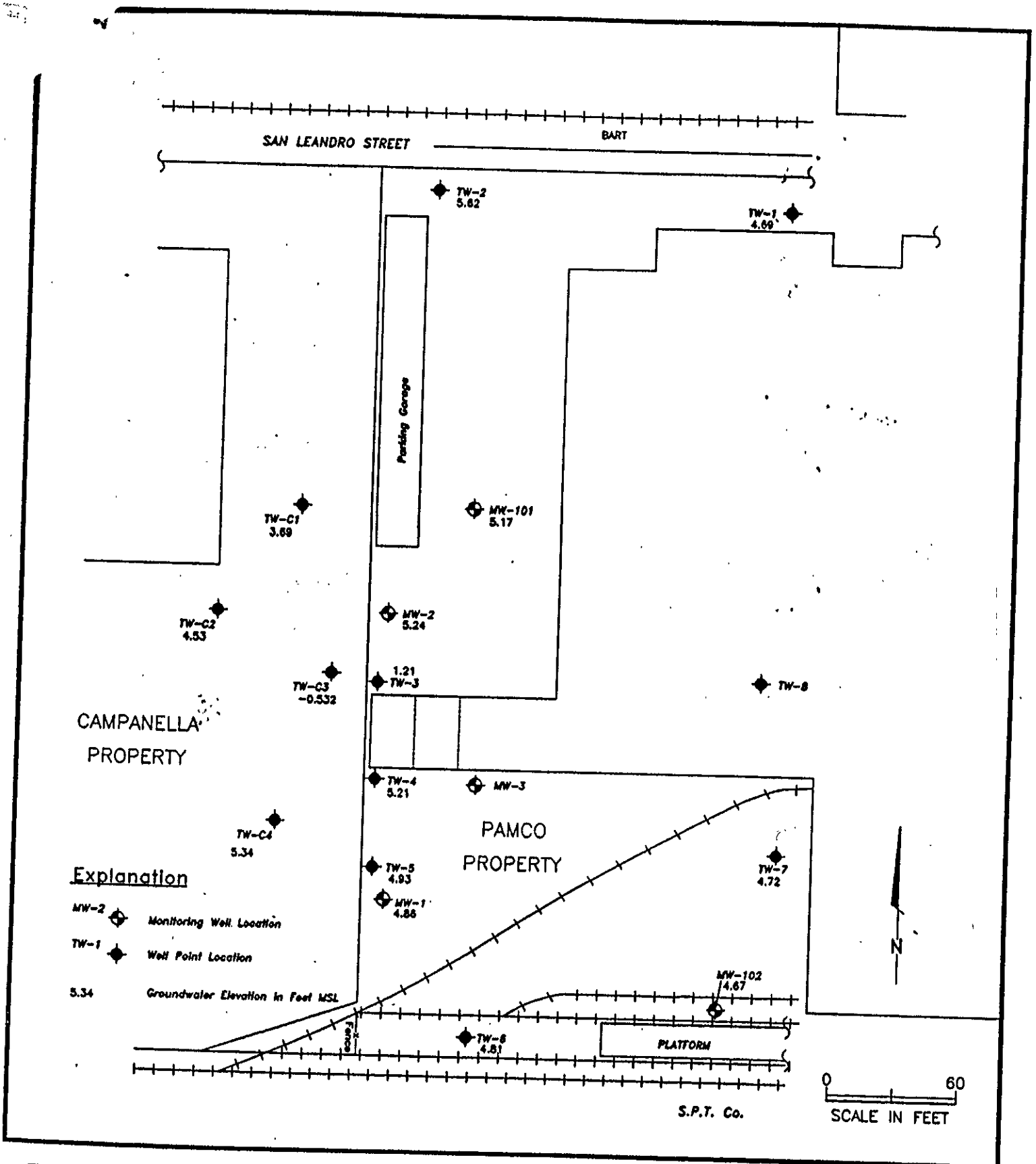
ND - None Detected
-- - Not Tested
NA - None Available
* - Primary Drinking Water Standard, California Department of Health Services, 10/23/91
1 - Action Level, CaDHS, 7/1/92
2 - EPA Suggested No Adverse Response Level (SNARL), 1980
(M) - Suite of non-routine compounds specific to the Site

TABLE 1B- WATER RESULTS

INORGANICS (µg/l)

	CONSTITUENTS				
SAMPLE LOCATION (Action Level)	Cadmium (10)	Chromium (50)	Lead (50)	Nickel (NA)	Zinc (5000,)
SP-D	ND	200	ND	100	100

1 - California Department of Health Primary Drinking Water Standard
2 - California Department of Health Secondary Drinking Water Standard

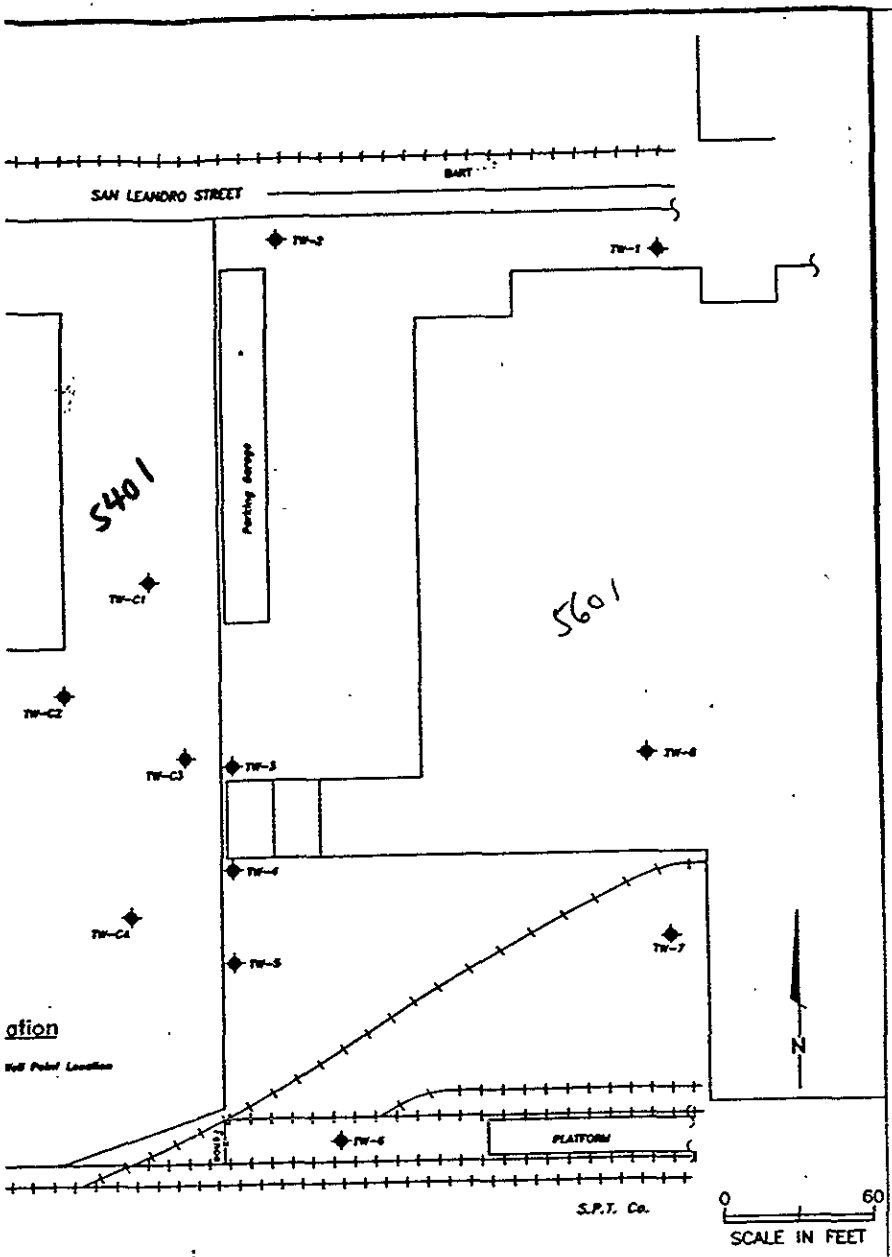


PES Environmental, Inc.
Engineering & Environmental Services

Water-Level Elevations – April 26, 1996
Off-site Groundwater Evaluation
5401 San Leandro Street
Oakland, California

PLATE
3

125.0502.001	02001029.DWG		6/96
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



	Results in mg/L		Results in µg/L												
	TPH-G	TPH-D	Benzene	Toluene	Ethyl Benzene	M & P-xylene	O-xylene	1,1-DCE	1,1-DCA	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	TCE	PCE	Vinyl Chloride
TW-1															
4/3/96	<0.05	NA	<0.50	<0.50	<0.50	<0.50	<0.50	18.0	2.84	2.32	0.735	<0.50	4.63	71.1	<0.50
TW-2															
4/3/96	<0.05	NA	<0.05	<0.50	<0.50	<0.50	<0.50	0.535	<0.50	<0.50	<0.50	<0.50	3.49	<0.50	<0.50
TW-3															
4/3/96	.587	NA	12.6	3.50	<0.50	.637	.626	2.67	<0.50	1,840	117	8.04	484	1.06	70.9
TW-4															
4/3/96	3.01	NA	14.7	1.21	1.73	<0.50	2.67	<0.50	<0.50	34.6	2.37	1.17	2.42	<0.50	2.34
TW-5															
4/3/96	<0.05	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5
TW-6															
4/3/96	<0.05	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3.35	1.81	<0.50	46.7	105	<0.5
TW-7															
4/3/96	<0.05	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5
TW-8															
4/3/96	<0.05	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5
TW-C1															
4/3/96(BP)	<0.05	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5
4/3/96	<0.05	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5
TW-C2															
4/3/96(BP)	<0.05	NA	0.508	2.24	<0.50	1.13	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5
4/3/96	<0.05	NA	<0.50	1.27	<0.50	0.628	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5
TW-C3															
4/3/96(BP)	<0.05	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5
4/3/96	<0.05	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5
TW-C4															
4/3/96(BP)	<0.05	NA	2.29	1.22	<0.50	0.868	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5
4/3/96	<0.05	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5

Note:

NA = Not Analyzed
<0.05 = concentration less than detection limit.
1,1-DCE = 1,1-Dichloroethene
1,1-DCA = 1,1-Dichloroethane
cis-1,2-DCE = cis-1,2-Dichloroethene
trans-1,2-DCE = trans-1,2-Dichloroethene
1,2-DCA = 1,2-Dichloroethane
TCE = Trichloroethene
PCE = Tetrachloroethene
BP = Sample taken before Standard Protocol Presample Purging Event

Environmental, Inc.

Groundwater Analytical Results – April 1996
5601 San Leandro Street
Oakland, California

from 8240 results

	Results in mg/L		Results in µg/L													
	TPH-G	TPH-D	Benzene	Toluene	Ethyl Benzene	M & P-xylene	O-xylen	1,1-DCE	1,1-DCA	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	TCE	PCE	Vinyl Chloride	DBCM
								B2	B2	B2	A	C				
								6	5	6	10	0.5	5	5	.5	80-100 TBA
TW-1																
6/13/95	<0.05	<0.05	<0.05	<0.50	<0.50	<0.50	<0.50	8.68	5.22	4.15	<0.50	0.551	5.23	59	<1.00	<0.50
TW-2																
6/13/95	<0.05	<0.05	<0.05	<0.50	<0.50	<0.50	<0.50	0.678	<0.50	<0.50	<0.50	<0.50	4.06	<0.50	<1.00	<0.50
TW-3	monthly T?															
6/13/95	120	0.751	90	17,000	<5.00	19.2	16.7	2.66	<0.50	514	7.7	<0.50	741	4.1	.07	<0.50
TW-4																
6/13/95	3.39	0.12+	788	23.4	233	145	67.5	0.528	<0.50	47.6	4.9	4.31	4.96	0.557	2.44	<0.50
TW-5																
6/13/95	<0.05	0.114+	0.877	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50
TW-6																
6/13/95	<0.05	0.112+	0.877	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	7.15	0.802	51.8	83.9	<1.00	<0.50
TW-7																
6/13/95	<0.05	0.074+	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50
TW-8																
6/13/95	<0.05	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50
MW-1																
6/13/95	0.267	0.135+	1.49	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	43.6	15.2	<0.50	61.6	51.4	0.898	<0.50
MW-2																
6/13/95	182	0.450+	524	125,000	27.5	78.5	21.6	<0.50	<0.50	1.46	<0.50	<0.50	0.584	<0.50	1.29	2.04
MW-3																
6/13/95	0.165	0.136+	3.85	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	36.3	1.0	<0.50	5.53	<0.50	D(5.06)	<0.50
MW-101																
6/13/95	1.42	NA	7.45	5.11	2.31	20.8	9.92	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50
MW-102																
6/13/95	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50

Assumptions:
1) Sig(T) release MW-2 prob tank zone or piping
2) highest [B] in TW-4, source ?, also in MW-2
3) gradient is southerly
4) several sources of PCE TW-1, TW-6, TW-3 ?
5) VC significant in TW-3.

:

= Not Analyzed
)5 = concentration less than detection limit.
·DCE = 1,1-Dichloroethene
·DCA = 1,1-Dichloroethane
1,2-DCE = cis-1,2-Dichloroethene
s-1,2-DCE = trans-1,2-Dichloroethene
M = Dibromochloromethane
)8) = Concentration below laboratories reporting limit
DCA = 1,2-Dichloroethane
= Trichloroethene
= Tetrachloroethene
petroleum lighter than diesel with unknown extractables pattern
unknown extractables pattern

Groundwater Analytical Results – June 1995
5601 San Leandro Street
Oakland, California

8/95
DATE

Table 3. Groundwater Analytical Results
PAMCO Site Groundwater Investigation
5601 San Leandro Street, Oakland, California

Sample Name	Date Sampled	Results in mg/L		Results in micrograms per liter (µg/l)											
		TPH as gas	TPH as diesel	Benzene	Toluene	Ethyl benzene	Total Xylenes	1,1-DCE	cis 1,2-DCE	trans 1,2-DCE	1,2-DCA	TCE	PCE	Vinyl Chloride	Other
TW-1	6/13/95	<0.05	<0.05	<0.50	<0.50	<0.50	<0.50	8.68	4.15	<0.50	0.551	3.23	59.1	<1.00	1,1-DCA: 5.22
TW-2	6/13/95	<0.05	<0.05	<0.50	<0.50	<0.50	<0.50	0.678	<0.50	<0.50	<0.50	4.06	<0.50	<1.00	
TW-3	6/13/95	20.8	0.751*	90.1	17,600	<5	35.9	2.66	514	71.1	<0.50	741	4.1	107	
TW-4	6/13/95	3.39	5.12+	765	23.4	233	212.3	0.528	47.6	4.91	4.31	4.96	0.557	2.44	
TW-5	6/13/95	<0.05	0.114+	0.877	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	
TW-6	6/13/95	<0.05	0.112+	<0.50	<0.50	<0.50	<0.50	<0.50	7.13	1.76	0.808	31.8	83.9	<1.00	
TW-7	6/13/95	<0.05	0.071+	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	
TW-8	6/13/95	<0.05	<0.05	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	
MW-1	6/13/95	0.287	0.113*	1.49	<0.50	<0.50	<0.50	<0.50	42.8	15.2	<0.50	61.6	51.4	0.896	
MW-2	6/12/95	182	0.450*	54.9	123,000	27.8	100.4	<0.50	1.46	<0.50	<0.50	0.584	<0.50	1.29	DCMB: 2.04
MW-3	6/12/95	0.165	0.136*	8.85	<0.50	<0.50	<0.50	<5	36.3	11	<5	5.53	<5	D(5.08)	
MW-101	6/13/95	1.42	NA	4.45	8.11	2.51	30.72	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	
MW-102	6/12/95	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	

Notes:
NA = not analyzed
<0.50 = concentration less than indicated reporting limit
mg/L = milligrams per liter
TPH = total petroleum hydrocarbons
1,1-DCE = 1,1-Dichloroethene
1,1-DCA = 1,1-Dichloroethane
cis-1,2-DCE = cis-1,2-Dichloroethene
trans-1,2-DCE = trans-1,2-Dichloroethene
1,2-DCA = 1,2-Dichloroethane
DBCM = Dibromochloromethane
TCE = Trichloroethene
PCE = Tetrachloroethene
D(5.08) = Concentration detected below reporting limits
* = petroleum lighter than diesel with unknown extractable pattern
+ = unknown extractable pattern

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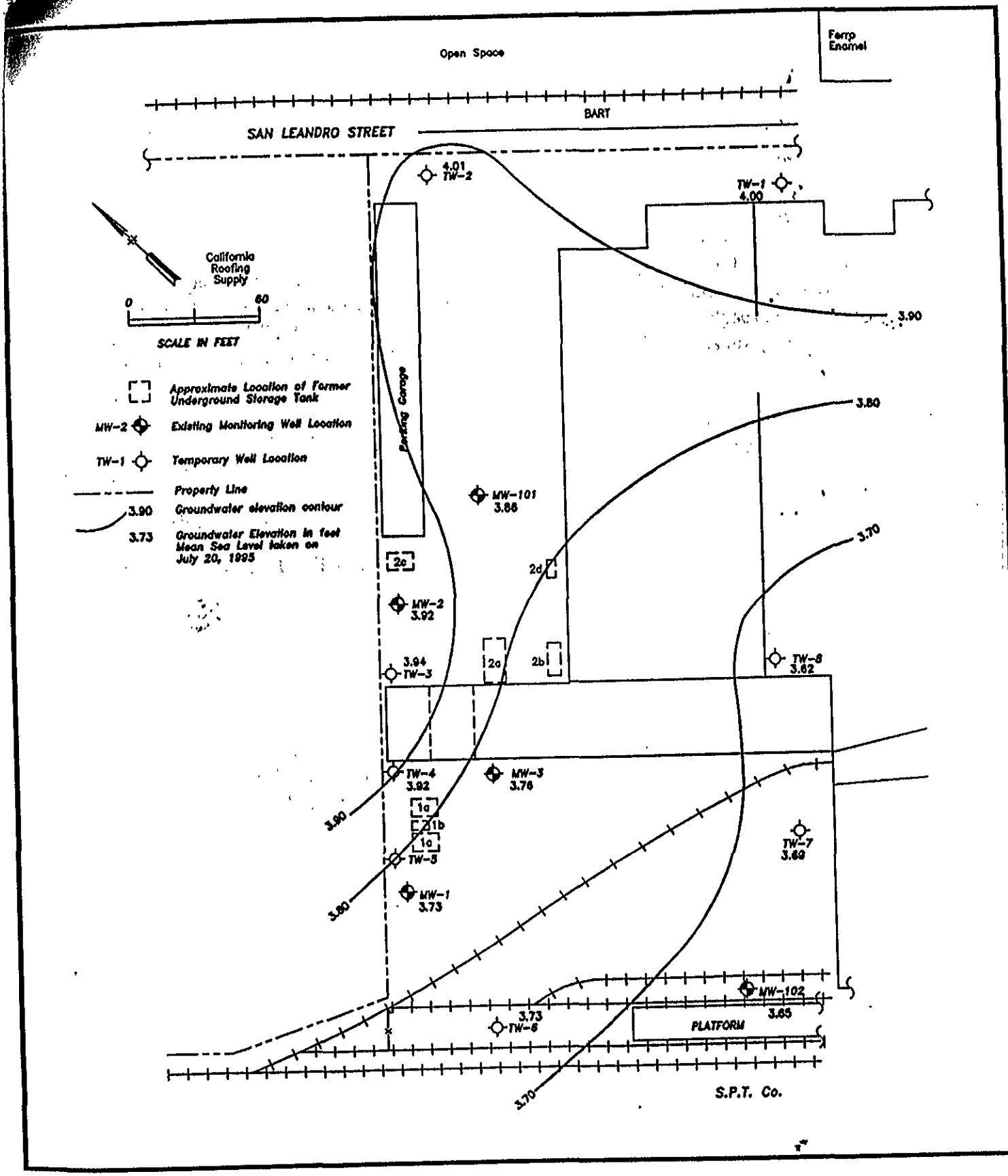
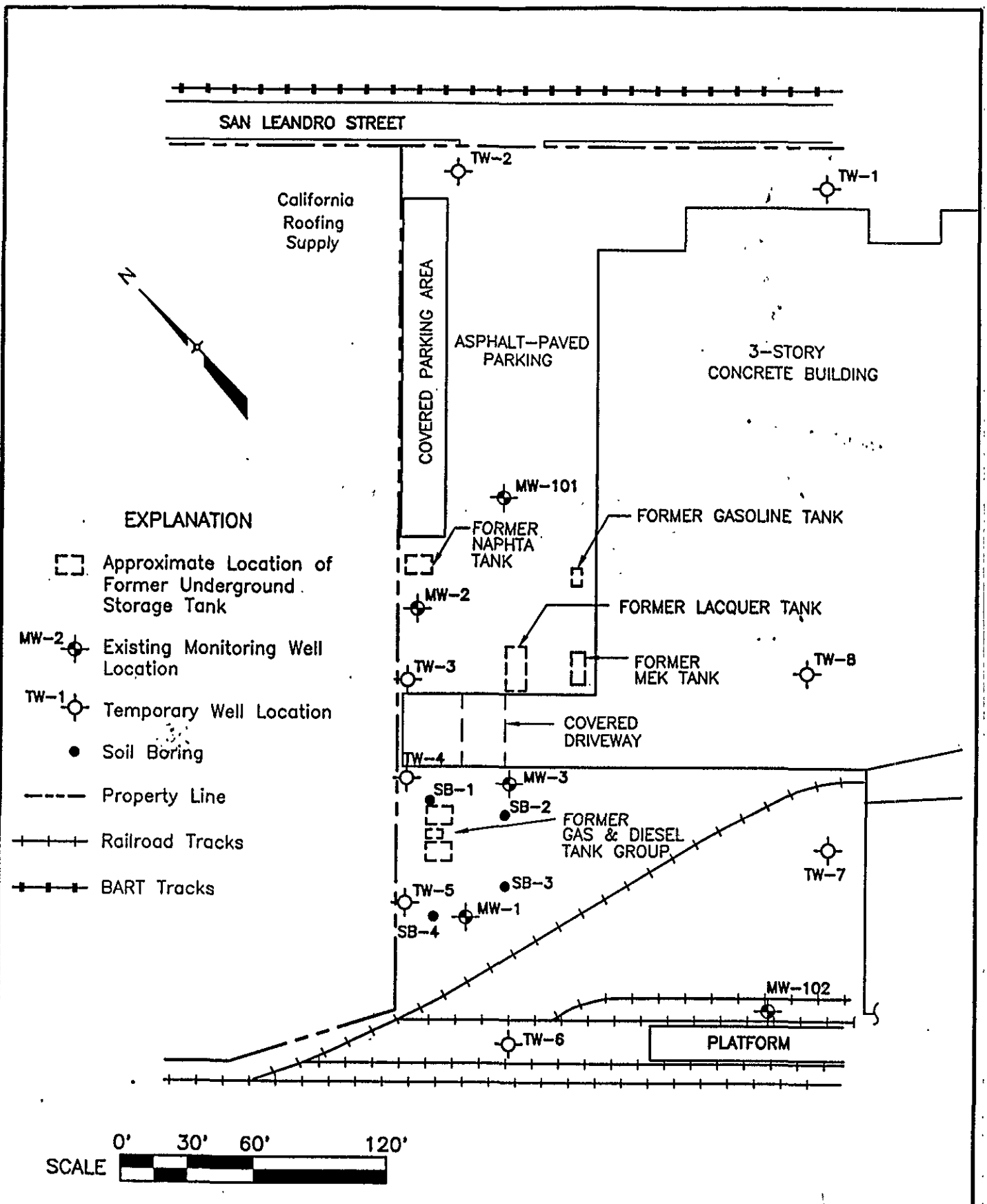


PES Environmental, Inc.
Engineering & Environmental Services

Groundwater Elevations – August 2, 1995
5601 San Leandro Street
Oakland, California



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RUST

Rust Environment & Infrastructure Inc.

FIGURE 7.
SITE MAP

5601 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

JANUARY 1997

33653.200

TABLE 1
VOCs DETECTED IN SHALLOW SOIL SAMPLES
5601 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Sample ID	Date Collected	Sample depth (Feet bgs)	EPA 8010 (µg/Kg)
SB-1-2	11/12/96	1.5-2.0	11 1,1-Dichloroethane
SB-1-4	11/12/96	3.5-4.0	ND
SB-1-6	11/12/96	5.5-6.0	ND
SB-2-2	11/12/96	1.5-2.0	ND
SB-2-4	11/12/96	3.5-4.0	ND
SB-2-6	11/12/96	5.5-6.0	ND
SB-3-2.5	11/12/96	2.0-2.5	ND
SB-3-4	11/12/96	3.5-4.0	ND
SB-3-6	11/12/96	5.5-6.0	ND
SB-4-2	11/12/96	1.5-2.0	ND
SB-4-4	11/12/96	3.5-4.0	ND
SB-4-6	11/12/96	5.5-6.0	ND

Versar INC.

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Results presented in Parts Per Billion (μg/liter)
(continued)

	CONSTITUENTS							
Sample Location (Action Level)	Benzene $(1)_1$	Toluene $(100)_2$	Ethylbenzene $(680)_1$	Xylenes $(1750)_1$	TPH-gas (NA)	TPH-diesel $(100)_3$	Total Lead $(50)_4$	Volatile Halocarbons & Organic Compounds (CS)
First Quarterly Monitoring - October 1993								
MW-1	20	1.9	ND	2	940*	89**	ND	t-1,2-DCE - 86(10) c-1,2-DCE - 480(6) TCE - 590(5) PCE - 330(5)
MW-2	190	370,000	31	120	680,000*	550**	--	--
MW-3	2.2	2.1	ND	0.4	140*	89**	--	t-1,2-DCE - 27(10) c-1,2-DCE -63(6) TCE - 110(5) PCE - 38(5)
Initial Well Sampling - July 1993								
MW-1	79	ND	ND	0.7	1,100*	ND	ND	--
MW-2	380	500,000	17	69	720,000*	150**	--	--
MW-3	16	ND	ND	ND	450*	ND	--	1,1-DCE - 2.3(6) t-1,2-DCE - 52(10) c-1,2-DCE -89(6) TCE - 150(5) PCE - 72(5) VC - 5.0(0.5)

Versar INC.

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Results presented in Parts Per Billion (μg/liter)
(continued)

CONSTITUENTS								
Sample Location (Action Level)	Benzene $(1)_1$	Toluene $(100)_2$	Ethylbenzene $(680)_1$	Xylenes $(1750)_1$	TPH-gas (NA)	TPH-diesel $(100)_3$	Total Lead $(50)_4$	Volatile Halocarbons & Organic Compounds (CS)
Fourth Quarterly Monitoring - July & September 1994								
MW-1	4.1	ND	ND	0.5	710*	ND	ND	1,2-DCA - 0.6(0.5) 1,1-DCE - 2.0(6) t-1,2-DCE - 41(10) c-1,2-DCE -76(6) TCE - 130(5) PCE - 94(5) VC - 4.3(0.5)
MW-2	75	150,000	20	83	220,000*	ND	--	--
MW-3	ND	930	ND	0.8	1,000*	ND	--	t-1,2-DCE - 22(10) c-1,2-DCE -64(6) TCE - 59(5) PCE - 15(5) Toluene - 830(100)
MW-101	29	25,000	40	170	3,200	110	--	1,2-DCA - 0.6(0.5)
MW-102	ND	ND	ND	ND	ND	ND	--	Chloromethane-0.6(NA)

Versar INC.

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Results presented in Parts Per Billion (μg/liter)
(continued)

	CONSTITUENTS							
Sample Location (Action Level)	Benzene $(1)_1$	Toluene $(100)_2$	Ethylbenzene $(680)_1$	Xylenes $(1750)_1$	TPH-gas (NA)	TPH-diesel $(100)_3$	Total Lead $(50)_4$	Volatile Halocarbons & Organic Compounds (CS)
Sixth Quarterly Monitoring - June 1995								
MW-1	6.9	ND	ND	ND	210	ND	--	t-1,2-DCE - 22(10) c-1,2-DCE - 42(6) TCE - 61(5) PCE - 56(5) VC - 1.4(0.5)
MW-2	ND	130,000	ND	ND	280,000	230	--	c-1,2-DCE - 5.2(6) TCE - 1.2(5) PCE - 1.6(5) VC - 4.3(0.5)
MW-3	13	ND	ND	ND	120	ND	--	t-1,2-DCE - 10(10) c-1,2,DCE - 33(6) TCE - 5(5)
MW-101	21	510	13	46	2,900	--	--	ND
MW-102	--	--	--	--	--	--	--	Toluene - 4.9(100)

Versar INC.

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Results presented in Parts Per Billion (μg/liter)
(continued)

	CONSTITUENTS							
Sample Location (Action Level)	Benzene $(1)_1$	Toluene $(100)_2$	Ethylbenzene $(680)_1$	Xylenes $(1750)_1$	TPH-gas (NA)	TPH-diesel $(100)_3$	Total Lead $(50)_4$	Volatile Halocarbons & Organic Compounds (CS)
MW-2	ND	68,000	ND	ND	150,000	ND	--	c-1,2 - DCE - 3.6(6) TCE - 1.1(5) PCE - 0.7(5) VC - 8.0(0.5)
MW-3	7.8	23	ND	ND	50	ND	--	t-1,2-DCE - 4.4(10) c-1,2 - DCE - 276(6) TCE - 1.7(5) VC - 2.8(0.5)
MW-101	3.1	3.9	1.7	3.9	570	ND	--	ND
MW-102	ND	ND	ND	ND	--	--	--	ND
Eighth Quarterly Monitoring - December 1995								
MW-1	1.4	ND	ND	ND	160	620	--	t-1,2-DCE - 19(10) c-1,2-DCE - 41(6) TCE - 62(5) PCE - 55(5)
MW-2	ND	140,000	ND	ND	260,000	ND	--	Toluene - 160,000(100) Benzene - 63(1) Ethylbenzene - 131(680) Xylenes - 550(1750)
MW-3	2.4	ND	ND	ND	80	390	--	t-1,2-DCE - 13(10) c-1,2 - DCE - 66(6) TCE - 6.9(5)

Versar INC.

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Results presented in Parts Per Billion (μg/liter)

	CONSTITUENTS							
Sample Location (Action Level)	Benzene $(1)_1$	Toluene $(100)_2$	Ethylbenzene $(680)_1$	Xylenes $(1750)_1$	TPH-gas (NA)	TPH-diesel $(100)_3$	Total Lead $(50)_4$	Volatile Halocarbons & Organic Compounds (CS)
Twelfth Quarterly Monitoring - January 1997								
MW-1	2.1	ND	ND	ND	170	ND	--	t-1,2-DCE - 3.8 (10) PCE - 33 (5) TCE - 25 (5)
MW-2	ND	130,000	ND	ND	600,000*	ND	--	Chloroform - 64 $(100)_4$
MW-3	7.0	3.1	ND	ND	150	ND	--	t-1,2 DCE - 2.6 (10) TCE - 1.7 (5) VC - 5.1 (0.5)
MW-101	2.8	5.2	1.4	1.4	510	--	--	ND
MW-102	--	--	--	--	--	--	--	ND
MW-101EB	--	--	--	--	--	--	--	ND
Eleventh Quarterly Monitoring - October 1996								
MW-1	0.88	ND	ND	ND	180	870[5]	--	t-1,2-DCE - 3.6 (10) c-1,2-DCE - 12 (6) TCE - 37 (5) PCE - 35 (5)
MW-2	ND	98,000	ND	570	230,000	360[6]	--	VC - 2.3 (0.5)
MW-3	2.9	ND	ND	ND	180	580[5]	--	c-1,2-DCE - 30 (6) VC - 6.2 (0.5)
MW-101	17	17	2.6	7.8	2,300	--	--	ND

Versar INC.

Notes:

ND	None Detected
NA	Not Available
CS	Compound Specific
--	Not Tested
( )	California Maximum Contaminant Level
1	California Department of Health Services Primary Drinking Water Standard, Revised 10/23/91
2	California DOHS Action Level, 7/1/92
3	EPA 1980 Suggested No Adverse Response Level (SNARL)
4	EPA Drinking Water Standard, Revised 7/1/92
5	Hydrocarbon reported is in the late diesel range and does not match a pattern characteristic the laboratory diesel standard (Chromalab, Inc.)
6	Compounds reported are in the diesel range. They do not have a pattern characteristic the laboratory diesel standard (Chromalab, Inc.)
7	Equipment blank
*	Chromatography of this sample is described as inconsistent with the gasoline standard
**	Chromatography of this sample is described as inconsistent with the diesel standard (BSK Analytical Labs)
D	Compound was quantitated on a diluted sample.

RBCA Info

TABLE 2
VOCs IN GROUNDWATER IN EXCESS OF MCLs
Pacific American Management Company Facility
5601 San Leandro Street
Oakland, California

Well Number	VOLATILE ORGANIC COMPOUNDS								
	Benzene	Toluene	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	PCE	TCE	Vinyl Chloride
MW-1	3.48	<150	<0.5	<6	29	<10	36	36	<0.5
MW-2	<1	**130,000**[a]	<0.5	<6	<6	<10	<5	<5	<0.5
MW-3	7.5	<150	<0.5	<6	**276**[b]	<10	<5	<5	5.4
MW-101	3.6	<150	<0.5	<6	<6	<10	<5	<5	<0.5
TW-1	<1	<150	<0.5	18.0	<6	<10	71.1	<5	<0.5
TW-3	12.6	<150	8.04	<6	<6	117	<5	484	<0.5
TW-4	14.7	<150	1.17	<6	34.6	2.37	<5	<5	2.34
TW-6	<1	<150	<0.5	<6	<6	<10	105	46.7	<0.5
TW-C4	2.29	<150	<0.5	<6	<6	<10	<5	<5	<0.5

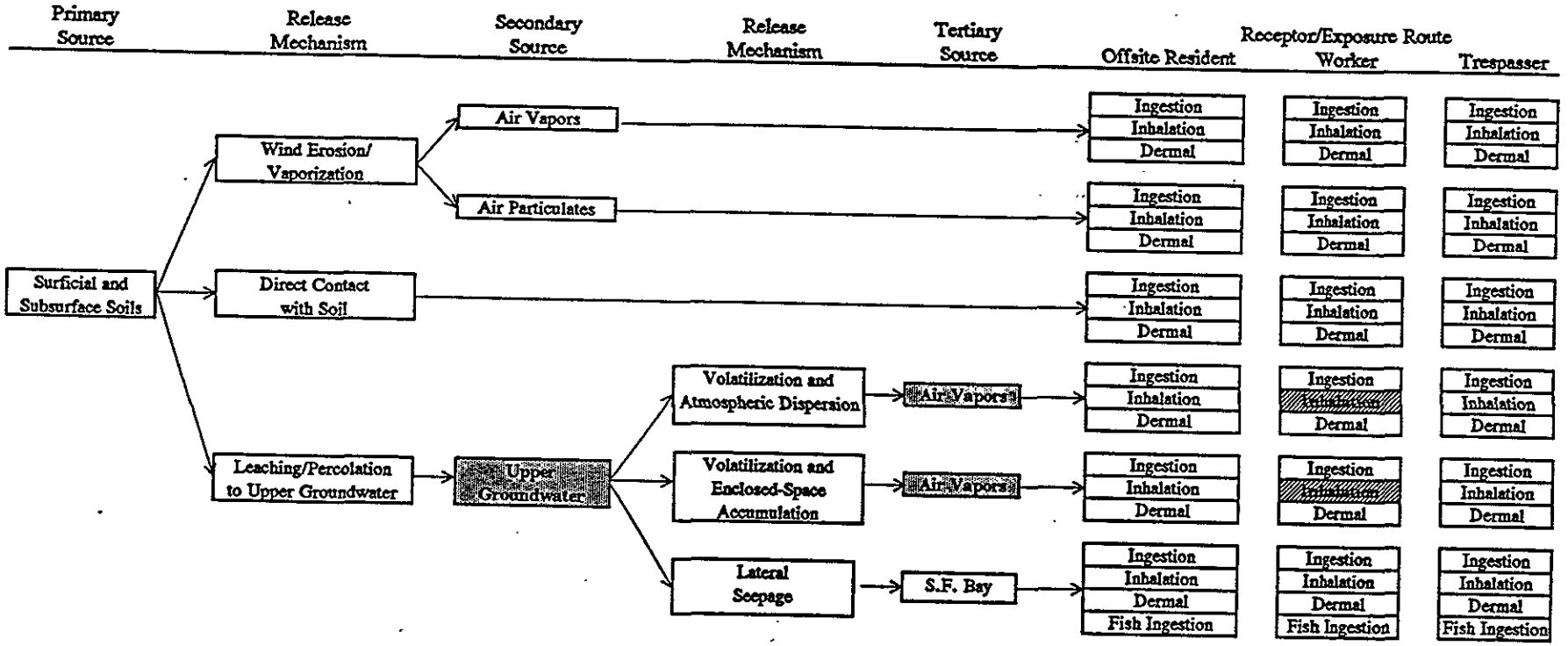
Notes:
Concentrations presented in micrograms per liter.
Values in bold are maximum concentrations detected and were used in Tier 1 and 2 RBCA analysis.
Groundwater analytical results for wells MW-1, MW-2, MW-3, and MW-101 from the June 1996 and January 1997 quarterly groundwater monitoring events conducted by Versar (Versar, 1996b, 1997).
Groundwater analytical results for temporary wells TW-1 through TW-6 and TW-C4 from the April 1996 supplemental groundwater evaluation conducted by PES (PES, 1996).
MCLs = State of California Maximum Contaminant Levels
1,2-DCA = 1,2-dichloroethane
1,1-DCE = 1,1-dichloroethylene
cis-1,2-DCE = cis-1,2-dichloroethylene
trans-1,2-DCE = trans-1,2-dichloroethylene
PCE = tetrachloroethylene
TCE = trichloroethylene
<150 = not detected at concentrations greater than the MCL
a = Toluene concentration from samples collected in January 1997.
b = cis-1,2-DCE concentration from samples collected in March 1996

TABLE 2
MAXIMUM VOC CONCENTRATIONS AND APPLICABLE RBSLs AND SSTLs
Pacific American Management Company
5601 San Leandro Street
Oakland, California

Well Number	VOLATILE ORGANIC COMPOUNDS								
	Benzene	Toluene	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	PCE	TCE	Vinyl Chloride
MW-1									
MW-2		130,000							
MW-3					276				5.4
MW-101									
TW-1				18.0					
TW-3			8.04			117		484	
TW-4	14.7								2.34
TW-6							105		
TW-C4									
RBSL	21.5	85,000	69	66	2,000	19,000	320	140	0.52
SSTL		330,000						3,900	23

Notes:
Concentrations presented in micrograms per liter.
VOCs = Volatile organic compounds
MCLs = State of California Maximum Contaminant Levels
1,2-DCA = 1,2-dichloroethane
1,1-DCE = 1,1-dichloroethylene
cis-1,2-DCE = cis-1,2-dichloroethylene
trans-1,2-DCE = trans-1,2-dichloroethylene
PCE = tetrachloroethylene
TCE = trichloroethylene
RBSL = Applicable Risk-Based Screening Level
SSTL = Applicable Site-Specific Target Level

PLATE 3
SITE CONCEPTUAL MODEL FOR PRESENT CONDITIONS
Pacific American Management Company Facility
5601 San Leandro Street
Oakland, California



Site Name: PAMCO
Site Location: 5601 San Leandro St.

Job Identification: 125.0502.001
Date Completed: 3/28/97
Completed By: ksf

Software: GSI RBCA Spreadsheet
Version: v1.0

DEFAULT PARAMETERS

NOTE: values which differ from Tier 1 default values are shown in bold italics and underlined.

Exposure Parameter	Definition (Units)	Residential Adult	Residential (1-6yrs)	Residential (1-16 yrs)	Commercial/Industrial Chronic	Commercial/Industrial Constrctn
ATc	Averaging time for carcinogens (yr)	70				
ATn	Averaging time for non-carcinogens (yr)	30	6	16	25	1
BW	Body Weight (kg)	70	15	35	70	
ED	Exposure Duration (yr)	30	6	16	25	1
EF	Exposure Frequency (days/yr)	350			250	***250***
EF.Derm	Exposure Frequency for dermal exposure	350			250	
IRgw	Ingestion Rate of Water (l/day)	2			1	
IRs	Ingestion Rate of Soil (mg/day)	100	200		50	100
IRadj	Adjusted soil ing. rate (mg-yr/kg-d)	1.1E+02			9.4E+01	
IRa.in	Inhalation rate indoor (m^3/day)	15			20	
IRa.out	Inhalation rate outdoor (m^3/day)	20			20	10
SA	Skin surface area (dermal) (cm^2)	5.8E+03		2.0E+03	5.8E+03	5.8E+03
SAadj	Adjusted dermal area (cm^2-yr/kg)	2.1E+03			1.7E+03	
M	Soil to Skin adherence factor	1				
AAFs	Age adjustment on soil ingestion	FALSE			FALSE	
AAFd	Age adjustment on skin surface area	FALSE			FALSE	
tox	Use EPA tox data for air (or PEL based)	TRUE				
gwMCL?	Use MCL as exposure limit in groundwater?	FALSE				

Matrix of Exposed Persons to Complete Exposure Pathways		Residential	Commercial/Industrial Chronic	Commercial/Industrial Constrctn
Groundwater Pathways:				
GW.I	Groundwater Ingestion	FALSE	FALSE	
GW.v	Volatilization to Outdoor Air	FALSE	TRUE	
GW.b	Vapor Intrusion to Buildings	FALSE	TRUE	
Soil Pathways				
S.v	Volatiles from Subsurface Soils	FALSE	FALSE	
SS.v	Volatiles and Particulate Inhalation	FALSE	FALSE	FALSE
SS.d	Direct Ingestion and Dermal Contact	FALSE	FALSE	FALSE
S.l	Leaching to Groundwater from all Soils	FALSE	FALSE	
S.b	Intrusion to Buildings - Subsurface Soils	FALSE	FALSE	

Matrix of Receptor Distance and Location on- or off-site		Residential Distance	Residential On-Site	Commercial/Industrial Distance	Commercial/Industrial On-Site
GW	Groundwater receptor (cm)	3.7E+04	FALSE	3.7E+04	FALSE
S	Inhalation receptor (cm)		FALSE		FALSE

Matrix of Target Risks		Individual	Cumulative
TRab	Target Risk (class A&B carcinogens)	***1.0E-05***	
TRc	Target Risk (class C carcinogens)	1.0E-05	
THQ	Target Hazard Quotient	1.0E+00	
Opt	Calculation Option (1, 2, or 3)	3	
Tier	RBCA Tier	2	

Surface Parameters	Definition (Units)	Residential	Commercial/Industrial Chronic	Commercial/Industrial Construction
t	Exposure duration (yr)	30	25	1
A	Contaminated soil area (cm^2)	2.2E+06		1.0E+06
W	Length of affected soil parallel to wind (cm)	1.5E+03		1.0E+03
W.gw	Length of affected soil parallel to groundwater (c	1.5E+03		
Uair	Ambient air velocity in mixing zone (cm/s)	2.3E+02		
delta	Air mixing zone height (cm)	2.0E+02		
Lss	Definition of surficial soils (cm)	1.0E+02		
Pe	Particulate areal emission rate (g/cm^2/s)	2.2E-10		

Groundwater	Definition (Units)	Value
delta.gw	Groundwater mixing zone depth (cm)	
I	Groundwater infiltration rate (cm/yr)	
Ugw	Groundwater Darcy velocity (cm/yr)	***1.8E+01***
Ugw.tr	Groundwater Transport velocity (cm/yr)	***7.6E+02***
Ks	Saturated Hydraulic Conductivity(cm/s)	3.0E-04
grad	Groundwater Gradient (cm/cm)	2.0E-03
Sw	Width of groundwater source zone (cm)	
Sd	Depth of groundwater source zone (cm)	
BC	Biodegradation Capacity (mg/L)	
BIO?	Is Bioattenuation Considered	FALSE
phi.eff	Effective Porosity in Water-Bearing Unit	2.5E-02
foc.sat	Fraction organic carbon in water-bearing unit	

Soil	Definition (Units)	Value		
hc	Capillary zone thickness (cm)	***3.0E+01***		
hv	Vadose zone thickness (cm)	***9.1E+01***		
rho	Soil density (g/cm^3)	1.7		
foc	Fraction of organic carbon in vadose zone	0.01		
phi	Soil porosity in vadose zone	0.38		
Lgw	Depth to groundwater (cm)	***1.2E+02***		
Ls	Depth to top of affected soil (cm)	1.0E+02		
Lsubs	Thickness of affected subsurface soils (cm)	2.0E+02		
pH	Soil/groundwater pH	6.5		
		capillary	vadose	foundation
phi.w	Volumetric water content	0.342	0.12	0.12
phi.a	Volumetric air content	0.038	0.26	0.26

Building	Definition (Units)	Residential	Commercial
Lb	Building volume/area ratio (cm)	2.0E+02	3.0E+02
ER	Building air exchange rate (s^-1)	1.4E-04	2.3E-04
Lcrk	Foundation crack thickness (cm)	1.5E+01	
eta	Foundation crack fraction	***0.005***	

Dispersive Transport Parameters	Definition (Units)	Residential	Commercial
Groundwater			
ax	Longitudinal dispersion coefficient (cm)		
ay	Transverse dispersion coefficient (cm)		
az	Vertical dispersion coefficient (cm)		
Vapor			
dcy	Transverse dispersion coefficient (cm)		
dcz	Vertical dispersion coefficient (cm)		

Site Name: PAMCO
Site Location: 5601 San Leandro St.

Completed By: ksf
Date Completed: 3/28/1997

GROUNDWATER SSTL VALUES

Target Risk (Class A & B) 1.0E-5
Target Risk (Class C) 1.0E-5
Target Hazard Quotient 1.0E+0

☐ MCL exposure limit?
☐ PEL exposure limit?

Calculation Option: 3

SSTL Results For Complete Exposure Pathways ("X" if Complete)

CONSTITUENTS OF CONCERN		Representative Concentration	Groundwater Ingestion			X	Groundwater Volatilization to Indoor Air		X	Groundwater Volatilization to Outdoor Air		Applicable SSTL	SSTL Exceeded ?	Required CRF
CAS No.	Name	(mg/L)	Residential (on-site)	Commercial (on-site)	Regulatory(MCL) (on-site)		Residential (on-site)	Commercial (on-site)		Residential (on-site)	Commercial (on-site)	(mg/L	"■" if yes	Only if "yes" left
108-88-3	Toluene	1.3E+2	NA	NA	NA		NA	3.3E+2		NA	>Sol	3.3E+2	☐	<1
79-01-6	Trichloroethene	4.8E-1	NA	NA	NA		NA	3.9E+0		NA	9.1E+2	3.9E+0	☐	<1
75-01-4	Vinyl chloride	5.4E-3	NA	NA	NA		NA	2.3E-2		NA	8.5E+0	2.3E-2	☐	<1