



# Industrial Compliance

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April 1, 1992

Mr. Dick Jones  
California Environmental Protection Agency  
Department of Toxic Substance Control - Region 2  
700 Heinz Avenue, Building F  
Berkeley, CA 94710

*5th + Kirkham  
STID 3725*

**Subject: Site Investigation and Remediation Workplan  
Southern Pacific Transportation Company Property  
Bobo's Junkyard  
1401 Third Street  
Oakland, California  
IC Project No. 05465**

*does not address  
gw contam.*

Dear Mr. Jones:

Industrial Compliance (IC), on behalf of Southern Pacific Transportation Company (SPTCo), has prepared the attached Site Investigation and Remediation Workplan, for remedial and investigative activities to be performed at the above referenced site. The Health and Safety Plan for the above referenced site activities is also attached.

Previous work on the subject property identified soil impacted with heavy metals, chlorinated pesticides, polychlorinated biphenyls, and petroleum hydrocarbons. This information was presented to the California Environmental Protection Agency - Department of Toxic Substance Control (DTSC) in IC's letter (under the former name SP Environmental Systems, Inc.) dated January 10, 1992.

An expedited review of the attached workplan would be appreciated since IC is currently scheduled to begin site activities on April 13, 1992.

If there are any questions or concerns please do not hesitate to contact either of the under signed.

Sincerely,

*Walter Floyd*

Walter Floyd  
Project Geologist

*Mark Dockum*

Mark Dockum, C.E.G.  
Project Manager

WDF:MSD:ekw

Attachments

cc: Mr. Dennis Byrne  
Mr. Lester Feldman  
Mr. Greg Shepherd  
Mr. Darrel Maxey  
Ms. Irene Itamura

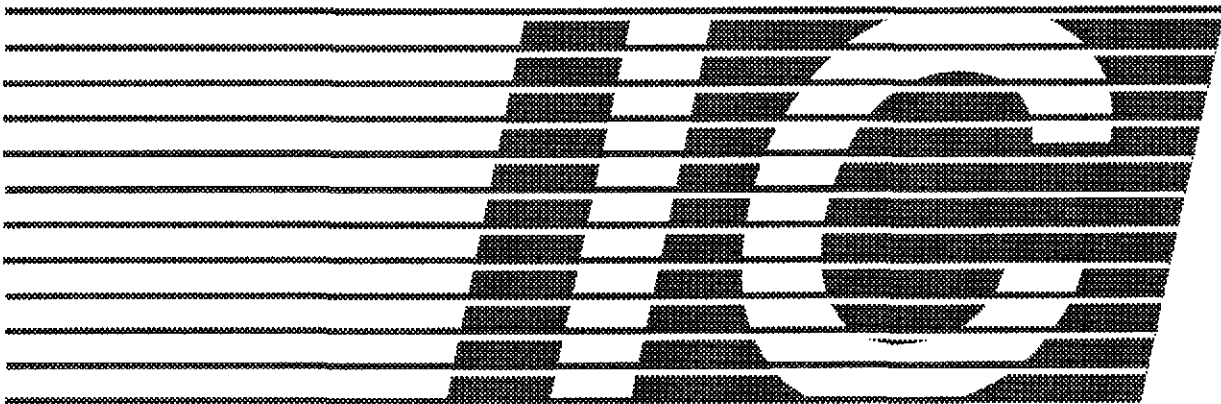
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STID 3725



*Industrial Compliance*

**SITE INVESTIGATION AND REMEDIATION WORKPLAN  
SOUTHERN PACIFIC TRANSPORTATION COMPANY  
BOBO'S JUNKYARD  
1401 THIRD STREET  
OAKLAND, CALIFORNIA**

*IC Project No. 05465*

*Prepared for:*

***Southern Pacific Transportation Co.***

One Market Plaza  
San Francisco, California 94105

*Prepared by:*

***Industrial Compliance***

9719 Lincoln Village Dr., Suite 310  
Sacramento, California 95827

March 30, 1992

A Subsidiary of SP Environmental Systems, Inc.



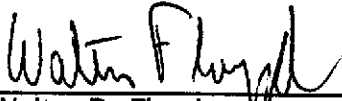
A Workplan for:

Southern Pacific Transportation Company  
One Market Plaza  
San Francisco, CA 94105

**SITE INVESTIGATION AND REMEDIATION WORKPLAN  
SOUTHERN PACIFIC TRANSPORTATION COMPANY  
BOBO'S JUNKYARD  
1401 THIRD STREET  
OAKLAND, CALIFORNIA**

IC Project No. 05465

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March 30, 1992

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|---|-----------------------------------|

## 1.0 INTRODUCTION

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### 1.1 Site Description

The site is located at **1401 Third Street in Oakland, California** (see Figures 1 and 2). There are presently no buildings or other structures located on the site; however, a concrete slab from a former structure covers approximately 80% of the 1.84 Acre site. A Southern Pacific Transportation Company (SPTCo) railyard is located west of the site. A **vacant SPTCo property (the 5th and Kirkham Streets Property) is located south of the site.** A mixed residential and industrial neighborhood is located north and east of the site.

### 1.2 Site History

*4 USTs removed in Feb. 90  
(3 w. oil, 1 diesel)*

Prior to 1976, the property was owned by Occidental Chemical Company (OCC), and Best Fertilizer, a subsidiary of OCC, occupied the property. SPTCo purchased the property in 1976, and leased it to Mr. John Bobo, who used the property for an automobile dismantling operation (Bobo's Junkyard). A large amount of junkyard debris was abandoned onsite by Mr. Bobo <sup>when?</sup> when the property was returned to SPTCo. In October 1990, Industrial Compliance (IC), under the name SP Environmental Systems, Inc. (SPEvS), started the cleanup of the junkyard debris and conducted a preliminary soil investigation on the property, on behalf of SPTCo. A total of 9 exploratory borings were advanced for the purpose of collecting soil samples for chemical analyses (see Figure 2). The results of this investigation are presented in SPEvS' January 10, 1992, letter to the California Environmental Protection Agency (CEPA), Department of Toxic Substance Control (DTSC). Tables of past analytical results are presented as Appendix A.

Chlorinated pesticides (chlordane, toxaphene, lindane, DDT, DDD, DDE, endrin, and dieldrin) and polychlorinated biphenyls (PCBs) were detected in samples collected from the site. Four out of 9 surface samples contained pesticide or PCB concentrations greater than the applicable Total Threshold Limit Concentrations (TTLC), indicating the soil from these areas would be considered a hazardous waste by the State of California (California-regulated waste).

Approximately 450 cubic yards (cy) of debris mixed with soil (debris piles) remain on the site. This debris could not be disposed of at a Class III landfill without first separating the debris from the affected soil. Analytical results for soil samples collected from the debris piles indicate these piles contain oil and grease in concentrations ranging from less than 50 parts per million (ppm) to 20,000 ppm. The mean lead concentration in the debris piles was 2,100 ppm, which is greater than the TTLC of 1,000 ppm. The mean PCB concentration in the waste piles was 228 ppm, which is greater than the TTLC of 50 ppm. One of the debris piles contained DDT at a concentration of 3.5 ppm, which is over the TTLC of 1 ppm.

### 1.3 Geologic Setting and Hydrogeology

The site is located on a relatively flat plain approximately 0.75 miles east of the San Francisco Bay. Geologic units that have been encountered at the site include a black sand, which often included bricks, bottles, and ashes. This unit overlies a yellow, clayey sand at a depth of 3 to 7 feet below ground surface (bgs). The yellow sand has been interpreted as the Merritt Sand.

There are currently 2 groundwater monitoring wells on the property (**MW-3 and MW-4**). At the time these wells were installed, groundwater was encountered at a depth of between 6 to 12 feet bgs. Subsequently potentiometric forces brought the **static water level to a depth of 4 to 6 feet bgs**.

## 2.0 PROPOSED SCOPE OF WORK

---

This scope of work covers disposal of the **remaining debris piles currently at the site**. This will entail the following tasks: Task 1) Dispose of Pesticide and PCB-affected Surface Soil and Debris; Task 2) Remove Concrete Slab; Task 3) Site Characterization; and Task 4) Evaluate Remedial Options for Deeper Soils. The following is a description of each of the tasks.

### 2.1 Task 1 - Dispose of Pesticide and PCB-Affected Surface Soil and Debris.

The disposal of the debris piles and the PCB affected surface soil on the property will be conducted in 3 steps: 1) Surface Soil Sampling; 2) Waste Segregation; and 3) Waste Disposal.

#### 2.1.1 Step 1 - Surface Soil Sampling

Soil samples will be collected from the vicinity of previous sampling locations that contained elevated concentrations of pesticides (MW-3 and EB-2). This further investigation is proposed so that the pesticide-affected soil at these locations may be disposed of contemporaneously with the disposal of Class I material segregated from the debris piles.

Three samples will be collected from the surface soils around the vicinity of MW-3 and 3 samples from around EB-2 (see Figure 3). The samples will be analyzed for PCBs and organo-chlorine pesticides using EPA Method 8080. Section 3.1 details the field methods that will be used to collect the samples.

Pesticide-affected soil was also encountered beneath the concrete slab (boring EB-5). The extent of this affected soil will not be further characterized until after the concrete slab has been removed (Task 3). Likewise, the extent of PCBs encountered in EB-3 will not be further characterized until after the slab has been removed, even though soil from this approximately 2-foot wide, unpaved break in the concrete slab is proposed to be excavated for disposal (see Step 3).



They assume that the debris > 3" diameter is non-hazardous. OK

### 2.1.2 Step 2 - Waste Segregation

The nonhazardous Class III debris will be separated from the affected soil by running the debris through a vibrating screen to remove that fraction of the debris with a diameter larger than 3 inches. It is estimated that this process will reduce the volume of material to be transported to a Class I landfill by approximately 250 to 350 cy. A water truck will be present onsite to wet the material as it is being screened to control air-borne dust that may result from the screening process.

### 2.1.3 Step 3 - Waste Disposal

The nonhazardous screened debris will be transported to a local County landfill. The hazardous material from the debris piles will be transported to the Chemical Waste Management Inc. (Chem-Waste) facility in Kettleman City, California, under hazardous waste manifest procedures. A profile for this material has already been approved by Chem-Waste. The proposed haul-route through Oakland is shown on Figure 4.

It is proposed to also scrape approximately 6 inches from the surface in the vicinity of EB-3, the only surface sample that contained PCBs.

It is also proposed to scrape approximately 6 to 8 inches of soil from the surface in the vicinity of MW-3 and EB-2. The extent of the scraping will largely be dependent upon the analytical results for the soil samples collected in Step 1. Scraping this soil should remove the majority of the known pesticide-affected soil at the site. Confirmation samples will be collected as outlined in Task 3 (Section 2.3).

## 2.2 Task 2 - Remove Concrete Slab

A large slab of concrete, which covers approximately 80% of the site, will be broken into manageable pieces and hauled to a local facility that will recycle the material into roadbase and asphalt products. It is estimated that 2,000 cubic yards of concrete are present on the site.

### 2.3 Task 3 - Site Characterization

It is proposed to further characterize the site after the debris piles and concrete slab have been removed to evaluate the effectiveness of removing the pesticide and PCB-affected soil (Task 1) and to further characterize the site to evaluate the remedial options that exist for the remaining material.

The characterization will be accomplished by advancing *400 many?* 25 exploratory borings in the approximate locations shown on Figure 5. Soil samples will be collected at the surface and from depths of 1.5 and 3 feet below ground surface (bgs). The soil samples will be analyzed for organo-chlorine pesticides and PCBs using EPA Method 8080, volatile organic compounds (VOCs) using EPA Method 8240, and the 8 RCRA metals using appropriate EPA 6000 and 7000 series Methodology. Section 3.2 details the field methods that will be used to advance the borings and collect the soil samples.

### 2.4 Task 4 - Evaluate Remedial Options

After the additional characterization described in Task 3 is completed, the type of waste remaining at the site will be assessed. This assessment will make it possible to evaluate remedial options. The options being considered at this time include; stabilization, containment, bioremediation, and off-site disposal.

### 2.5 Summary Report

A report will be prepared and submitted to the DTSC summarizing the completion of the debris pile disposal. This report will also present the results of the site investigation and, if necessary, will propose the next phase of work at the site.

## 3.0 FIELD METHODS

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### 3.1 Surface Soil Sampling

A total of 6 surface soil samples will be collected from the site; 3 from the vicinity of MW-3 and 3 from the vicinity of EB-2 (see Figure 3). The samples will be collected by digging into the soil with a pre-cleaned shovel approximately 3 inches. The soil at this depth will be packed into an 8-ounce, laboratory supplied, glass jar. The samples will be labeled and stored in a cooled ice chest until delivery to a state-certified laboratory. Samples will be logged on a chain-of-custody form which will accompany the samples to the laboratory.

### 3.2 Waste Segregation

The debris piles, which contain various types of debris mixed with soil, will be transported to a vibratory inclined screen, or "screenall", via a front-end loader. The material will immediately be placed onto the screen. The 3-inch mesh screen will separate the material into two piles based on the diameter of the material. The material passing through the screen, with a diameter less than 3 inches, will be loaded into trucks and transported to a disposal facility. The miscellaneous debris, with a diameter larger than 3 inches, will be regarded as municipal debris and will be loaded into trucks for disposal at an appropriate Class III facility. Since the debris piles are scattered over the entire site, the location of the screen will be moved as appropriate to facilitate waste segregation activities.

*what type?*  
*why?*

A water truck will be stationed by the screen to wet each load of material being placed on the screen, to minimize airborne dust. An air monitoring program, as described in the Site Health and Safety Plan, will monitor the amount of dust resulting from the screening process on a daily basis to assess potential exposures relative to Permissible Exposure Limits (PELs).

### **3.3 Waste Transport**

The material will be loaded into 18-wheel dump trucks via a front-end loader. Each truck will have a tarp placed over the contents of the load to prevent the release of material during transit.

Trucks leaving the site will be weighed on a certified truck scale. Trucks will leave the site on Third Street, follow Cypress Street to 7th Street to the I-880 on-ramp. This haul route is shown on Figure 4.

### **3.4 Exploratory Borings**

Approximately 25 exploratory borings will be installed on the site to assess the lateral and vertical distribution of organic compounds present at the site (refer to Figure 5 for proposed boring locations). Soil borings will be drilled with a truck-mounted drilling rig utilizing 6 or 8-inch (nominal outside diameter) hollow stem augers as the drilling method. Soil samples will be collected by driving a split-spoon sampler lined with three 2-inch diameter by 6-inch long brass sleeves into the undisturbed soil at depths of 6 inches below ground surface (bgs), 1.5 feet bgs, and 3 feet bgs. After the split-spoon is extracted and the brass liners removed, the soil exposed at the ends of the brass liners will be examined and logged by an IC Geologist. One brass liner from each drive interval will be preserved for shipment to the laboratory. Preservation will consist of covering both ends of the brass liner with Teflon Sheeting and tight-fitting plastic end caps. Each liner selected for shipment to the laboratory will be labeled with a unique sample number, date of collection, time of collection, initials of collector, boring number, depth of sample, and any other pertinent information. After sample preparation, liners will be placed in a cooled ice chest until delivered to a state-certified analytical laboratory. A chain-of-custody form will be filled out concurrently with sample collection and accompany the samples upon shipment to the laboratory.

After drilling and sampling is completed, borings will be backfilled with a cement/bentonite grout. The cement/bentonite grout will consist of approximately 2 pounds of powdered bentonite (measured in the field), 6.5 to 7 gallons of water obtained from the site, and 94

pounds (1 bag) of cement. The bentonite will be added to the water and allowed to hydrate by circulating the mixture through the grout pump or mixing apparatus; after which, the cement will be added to the bentonite/water mixture and thoroughly mixed.

Drilling residuals generated from advancing the exploratory borings will be stored in 55-gallon drums appropriate for the storage and transportation of hazardous materials. Each drum will be labeled as to date and boring from which the soil originated. Disposition of soils from all borings will be based on analytical results.

Any sampling or drilling equipment that has come in contact with potentially affected material will be thoroughly steam cleaned on site to reduce the potential for cross-contamination. The rinsate will be collected within a trough and transferred to 55-gallon drums appropriate for the storage and transportation of hazardous materials. Each drum will be labeled as to date and boring from which the rinsate originated.

## 4.0 ANALYTICAL SCHEDULE

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### 4.1 Surface Soil

The soil samples collected from the vicinity of MW-3 and EB-2 will be analyzed for PCBs and organo-chlorine pesticides using EPA Method 8080.

### 4.2 Exploratory Borings

The soil samples from the exploratory borings will be analyzed for organo-chlorine pesticides and PCBs using EPA Method 8080, volatile organic compounds (VOCs) using EPA Method 8240, and the 8-RCRA metals using appropriate EPA 6000 and 7000 series Methodology.

## 5.0 SCHEDULE DISCUSSION

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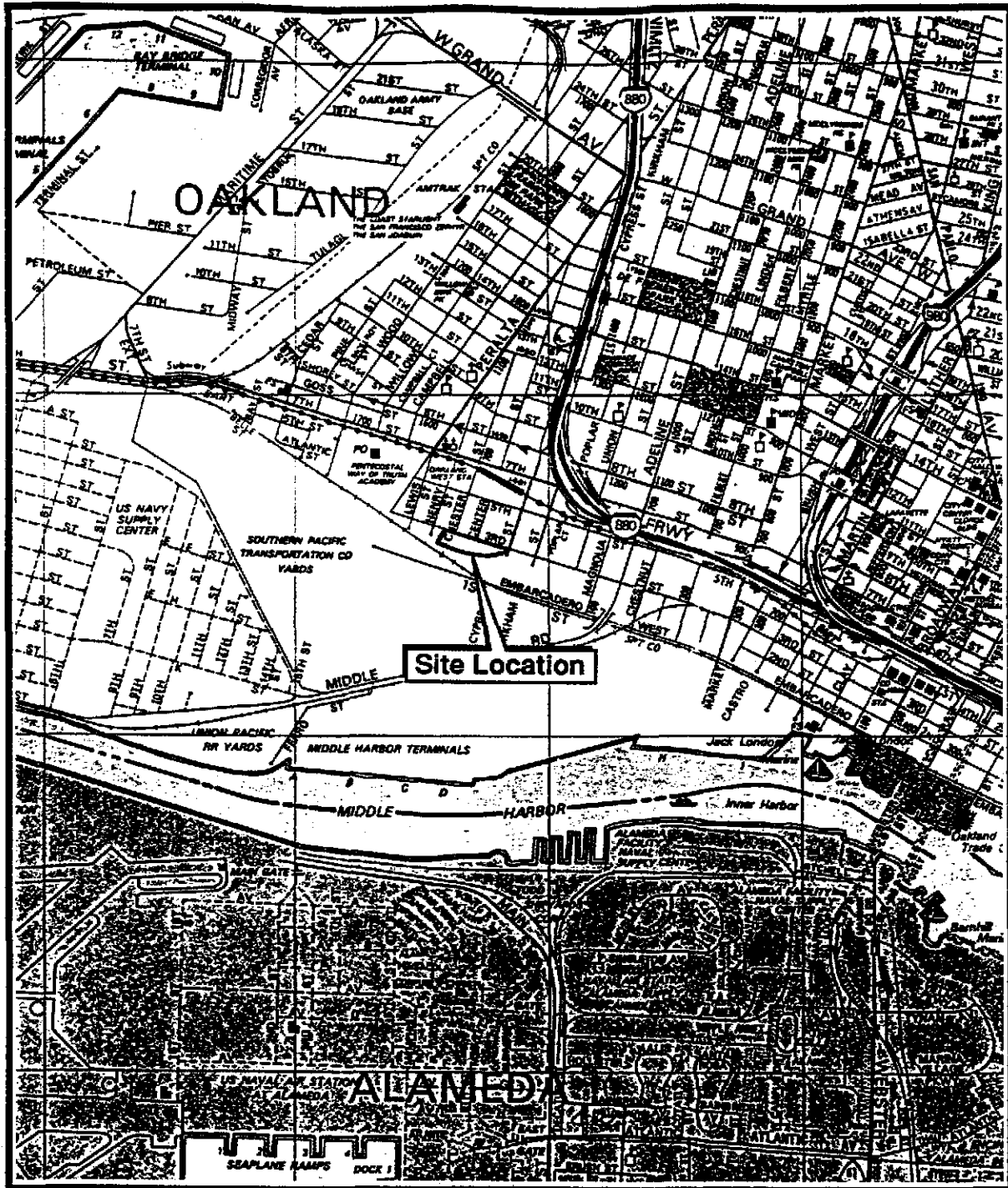
The following is a breakdown of the anticipated amount of time required to complete each task.

<b>Task 1 - Dispose of the Pesticide and PCB-affected Surface Soil and Debris</b>	
Step 1 - Site Sampling	2 Weeks <sup>1</sup>
Step 2 - Waste Segregation	2 Weeks
Step 3 - Waste Disposal	1 Week
<b>Task 2 - Remove Concrete Slab</b>	2 Weeks
<b>Task 3 - Site Characterization</b>	4 Weeks <sup>1</sup>
<b>Task 4 - Evaluate Remedial Options</b>	<u>1 Week</u>
<b>PROJECT TOTAL</b>	<b>12 Weeks</b>

As of May 8, 1990, soil affected with the pesticides that are encountered at the site were restricted from land disposal in California (Land Ban); however, a capacity variance was effective until May 8, 1992. To get through Task 1 and dispose of the majority of the known pesticide wastes at the site, an estimated 5 weeks are needed. This infers that to complete the scope of work through Task 1 before the May 8, 1992 deadline, that work would have to start on or before April 13, 1992.

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1. This assumes a 5-day turn around time for the analyses.



Approx. Scale in Miles  
 0 1/2

Reference:  
 Thomas Brothers map of California  
 Page 157



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PROJECT NO: 05465	DATE: 03/03/92
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**SITE LOCATION MAP  
 SOUTHERN PACIFIC TRANSPORTATION CO.  
 BOBO'S JUNKYARD  
 OAKLAND, CALIFORNIA**

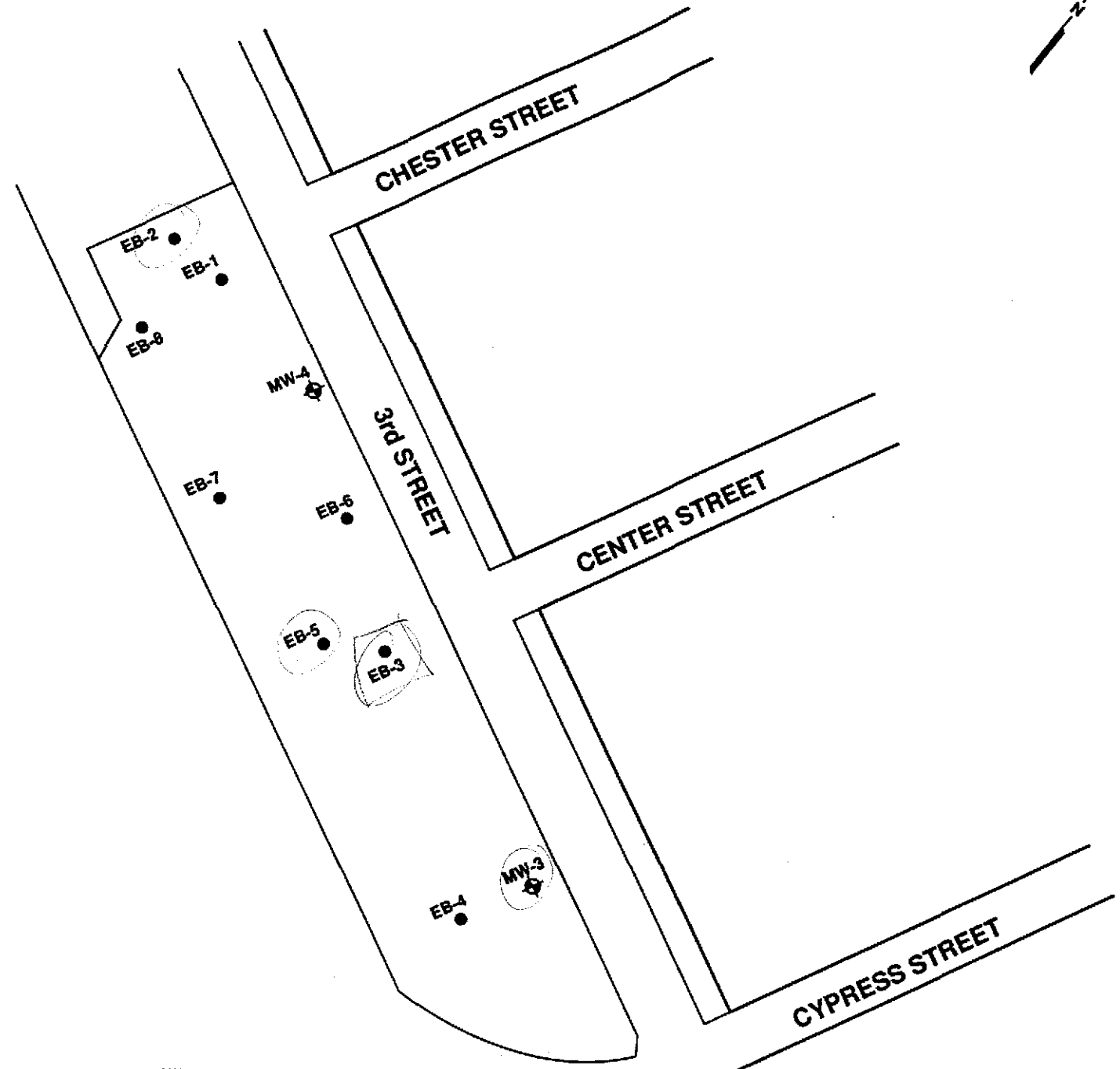
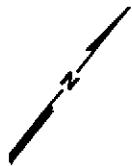
FIGURE:

1



SCALE:

as shown





**LEGEND**

-  Monitoring Well Location
-  Exploratory Boring Location

*○ Pesticide - affected*  
*□ PCB - affected*

Approx. Scale in Feet  
 0 ————— 100'



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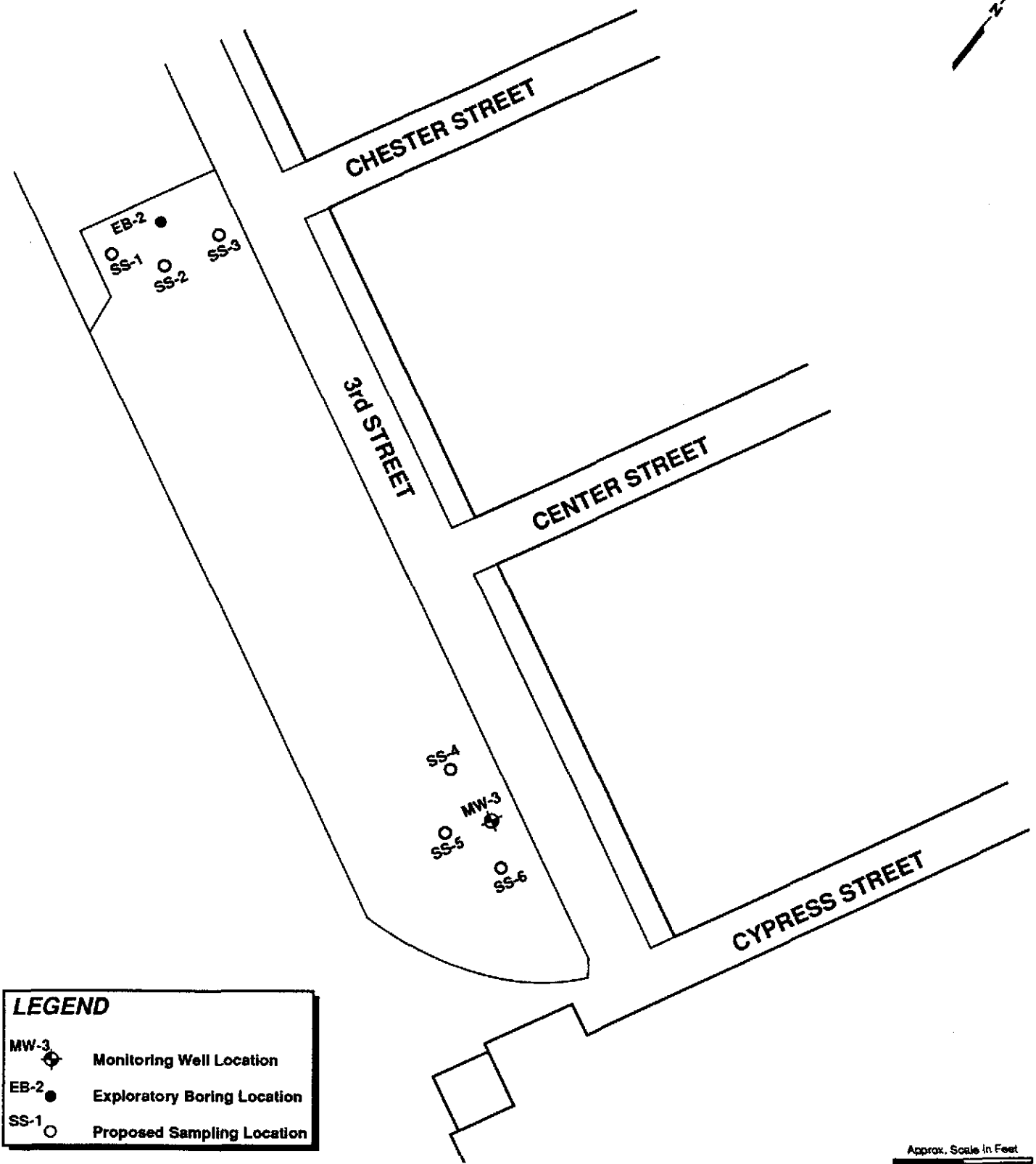


**LOCATION OF PREVIOUSLY INSTALLED  
 MONITORING WELLS  
 SOUTHERN PACIFIC TRANSPORTATION CO.  
 BOBO'S JUNKYARD  
 OAKLAND, CALIFORNIA**

**FIGURE:  
 2**

**SCALE:  
 as shown**

PROJECT NO: 05465	DATE: 02/27/92
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**LEGEND**

- MW-3 Monitoring Well Location
- EB-2 Exploratory Boring Location
- SS-1 Proposed Sampling Location

Approx. Scale in Feet  
 0 100'



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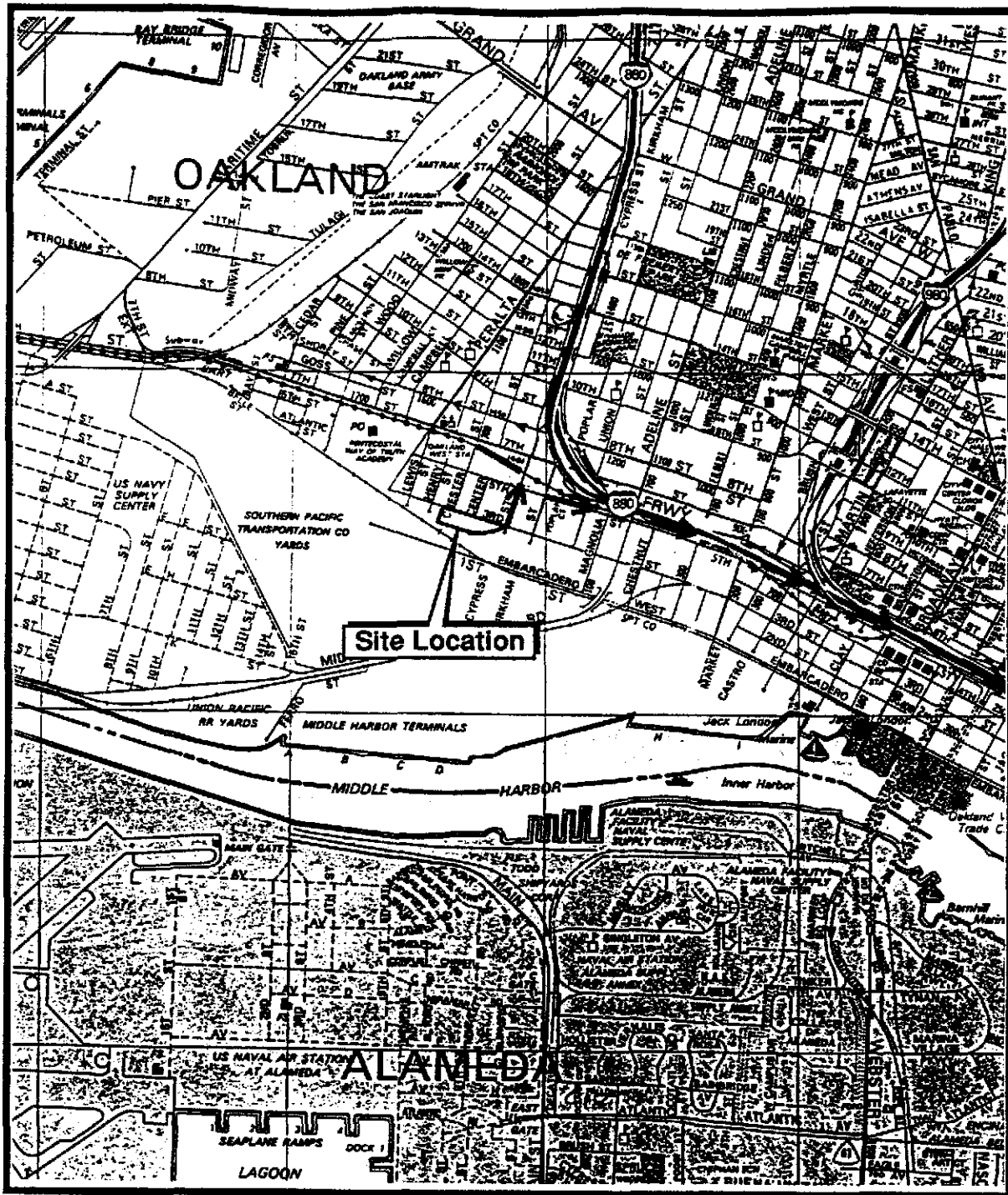


**PROPOSED TASK 1  
 SURFACE SAMPLING LOCATIONS  
 SOUTHERN PACIFIC TRANSPORTATION CO.  
 BOBO'S JUNKYARD  
 OAKLAND, CALIFORNIA**

**FIGURE:  
 3**

**SCALE:  
 as shown**

PROJECT NO: 05465	DATE: 02/27/92
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Approx. Scale in Miles  
 0 1/2

Reference:  
 Thomas Brothers map of California  
 Page 157



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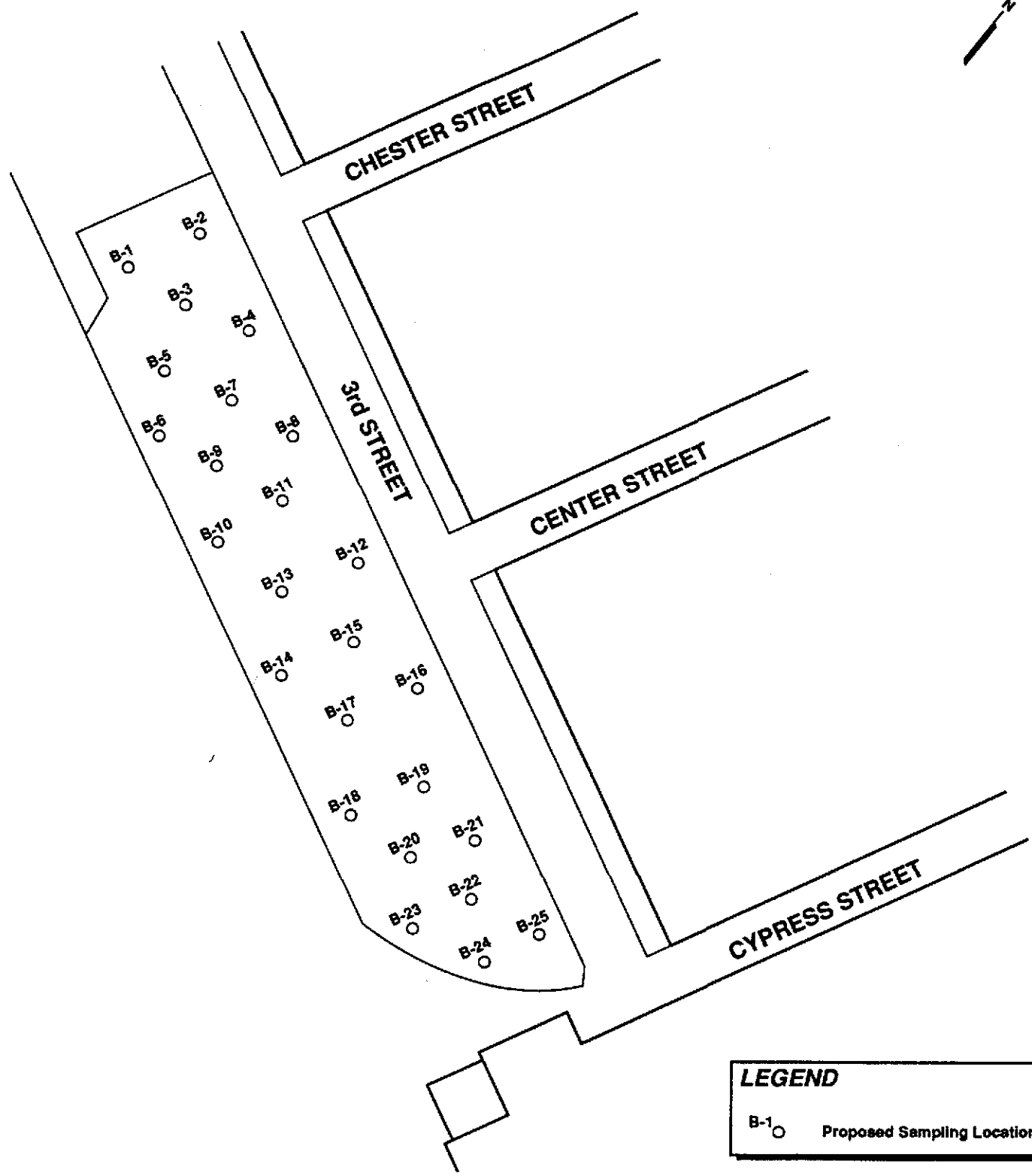
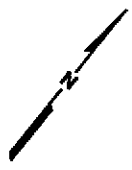


PROJECT NO: 05465	DATE: 03/03/92
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**PROPOSED HAUL ROUTE  
 SOUTHERN PACIFIC TRANSPORTATION CO.  
 BOBO'S JUNKYARD  
 OAKLAND, CALIFORNIA**

FIGURE:  
 4

SCALE:  
 as shown



**LEGEND**

B-1 ○ Proposed Sampling Location

Approx. Scale in Feet  
 0 ————— 100'

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**PROPOSED EXPLORATORY BORING LOCATIONS  
 SOUTHERN PACIFIC TRANSPORTATION CO.  
 BOBO'S JUNKYARD  
 OAKLAND, CALIFORNIA**

**FIGURE:**  
 5

**SCALE:**  
 as shown

PROJECT NO: 05465	DATE: 02/27/92
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**APPENDIX A**  
**TABLES OF PAST ANALYTICAL RESULTS**  
**SOUTHERN PACIFIC TRANSPORTATION COMPANY PROPERTY**  
**BOBO'S JUNKYARD**  
**OAKLAND, CALIFORNIA**  
**IC PROJECT NO. 05465**

**Table 1**  
**Summary of TPH and VOC Analyses**  
**Southern Pacific Transportation Company**  
**Exploratory Borings - Bobo's Junkyard**  
**Oakland, California**  
**IC Project No. 05465**

Boring <sup>a</sup> Number	Depth	Petroleum Hydrocarbons (mg/kg)			VOCs (mg/kg) <sup>e</sup>		
		TPH-G <sup>b</sup>	TPH-D <sup>c</sup>	O & G <sup>d</sup>	DCE	TCE	Xylene
EB-1	Surface	NA	<10	<50	NA	NA	NA
	4'	<10	<10	160	0.023	0.017	<.005
EB-2	Surface	NA	<10	1400	NA	NA	NA
	4'	<10	<10	<50	<0.005	<0.005	0.0081
EB-3	Surface	NA	290	3300	NA	NA	NA
	4'	<10	<10	<50	<0.005	<0.005	<0.005
EB-4	Surface	NA	15	1300	NA	NA	NA
	4'	<10	<10	64	<0.005	<0.005	<0.005
EB-5	Surface	NA	270	7200	NA	NA	NA
	4'	<10	56	<50	<0.025	<0.025	<0.005
EB-6	Surface	NA	220	1000	NA	NA	NA
	4'	<10	<10	<50	<0.005	<0.005	<0.005
EB-7	1.5'	NA	<10	170	NA	NA	NA
	4'	<10	<10	96	<0.005	<0.005	<0.005
EB-8	Surface	NA	<10	<50	NA	NA	NA
	4'	<10	<10	4000	<0.005	<0.005	<0.005
MW-3	Surface	NA	210	<50	NA	NA	NA
	4'	<10	<10	<50	<0.005	<0.005	<0.005
	8'	<10	<10	7400	<0.005	<0.005	<0.005

- a See Figure 2 for approximate boring locations
- b TPH as gasoline analyzed by EPA Method 8015 Modified
- c TPH as diesel analyzed by EPA Method 8015 Modified
- d Oil and Grease analyzed by EPA Method 413.1
- e Volatile organic compounds analyzed by EPA Method 8240
- < Indicates the analyte was not detected at or above the method detection limits

**Table 2**  
**Summary of Metal Analyses**  
**Southern Pacific Transportation Company**  
**Exploratory Borings - Bobo's Junkyard**  
**Oakland, California**  
**IC Project No. 05465**

Boring <sup>a</sup> Number	Metals <sup>b</sup> (mg/kg)							
	Depth <sup>c</sup>	Cd	Cr	Cu	Pb	Hg	Ni	Zn
EB-1	Surface	<0.5	27.9	40.3	250	0.84	18.7	112
	4	<0.5	26.4	14.8	28.5	<0.1	14.8	33.9
EB-2	Surface	13.2	44.4	1,140	740	0.84	39	939
	4	<0.5	33.5	27.5	7.6	0.59	23.4	36.5
EB-3	Surface	3.0	69.9	3,440	953	0.31	68.8	636
	4	<0.5	29.6	46.1	<5	<0.1	17.2	22.9
EB-4	Surface	1.8	30.7	175	378	0.44	21.9	259
	4	<0.5	27.3	44.4	<5	<0.1	16.6	29.9
EB-5	Surface	<0.5	39.2	54.6	80.5	0.17	37.7	86.2
	4	<0.5	28.4	21	<5	<0.1	17.4	21.1
EB-6	Surface	1.3	42.9	194	228	1.9	36.1	307
	4	<0.5	23.1	10.2	<5	<0.1	14	14
EB-7	1.5	0.8	42	70.1	340	0.48	11.4	157
	4	<0.5	24.2	17.5	<5	<0.1	12.8	18.7
EB-8	Surface	<0.5	20.1	47.4	210	0.6	17	132
	4	<0.5	19	11	61.9	0.1	12.8	26.3
MW-3	Surface	6.3	49.2	262	603	1.2	32.7	623
	4	<0.5	26.3	9.9	<5	<0.1	16.7	15.7

a See Figure 2 for approximate location of borings.

b Analyzed using EPA 6000 and 700 series Methodology.

c Depth in feet below ground surface

Cd Cadmium

Cr Chromium

Cu Copper

Pb Lead

Hg Mercury

Ni Nickel

Zn Zinc

< Indicates the analyte was not detected at or above the method detection limits.

**Table 3**  
**Summary of PCB and Chlorinated Pesticide Analyses**  
**Southern Pacific Transportation Company**  
**Exploratory Borings on Bobo's Junkyard**  
**Oakland, California**  
**IC Project No. 05465**

Sample <sup>a</sup> Number	Depth	Chlordane (mg/kg)	Toxaphene (mg/kg)	Lindane (mg/kg)	DDT (mg/kg)	DDD (mg/kg)	DDE (mg/kg)	Endrin (mg/kg)	Dieldrin (mg/kg)	PCB (mg/kg)
EB-1	Surface	<0.08	<0.16	<0.008	<0.016	<0.016	<0.016	<0.016	<0.016	<0.08
	4'	1.8	<1	<0.012	<0.05	<0.05	<0.025	<0.025	<0.025	<0.5
EB-2	Surface	66	42	<0.012	5	<0.5	<2.5	<2.5	<2.5	<5
	4'	0.98	0.49	<0.008	<0.05	<0.05	<0.025	<0.025	<0.025	<0.08
EB-3	Surface	<2.5	<10	0.26	<0.5	<0.5	<1.2	<1.2	<0.25	188
	4'	<0.08	<0.16	<0.008	<0.016	<0.016	<0.016	<0.016	<0.016	<0.08
EB-4	Surface	<0.12	<0.5	<0.008	<0.12	<0.12	<0.062	<0.062	<0.062	<0.25
	4'	<0.12	<0.16	<0.008	<0.016	<0.025	<0.016	<0.016	<0.016	<0.25
EB-5	Surface	<0.25	<1	<0.012	0.098	1.7	0.26	0.046	1.5	<0.5
	4'	<0.25	<1	<0.012	<0.05	<0.05	<0.025	<0.025	<0.025	<0.5
EB-6	Surface	<0.62	<0.5	<0.008	0.1	<0.12	<0.062	<0.062	<0.062	<0.25
	4'	<0.08	<0.16	<0.008	<0.016	<0.016	<0.016	<0.016	<0.016	<0.08
EB-7	1.5'	<0.08	<0.16	<0.008	<0.016	<0.016	<0.016	<0.016	<0.016	<0.08
	4'	<0.08	<0.16	<0.008	<0.016	<0.016	<0.016	<0.016	<0.016	<0.08
EB-8	Surface	<0.12	<0.5	<0.008	<0.025	<0.025	<0.012	<0.012	<0.012	<0.25
	4'	<0.12	<0.5	<0.008	<0.025	<0.025	<0.012	<0.012	<0.012	<0.25
MW-3	Surface	<2.5	<10	<0.12	5.3	<0.5	1.5	<0.25	0.40	<5
	4'	<0.08	<0.16	<0.008	<0.016	<0.016	<0.016	<0.016	<0.016	<0.08

<sup>a</sup> See Figure 2 for approximate boring locations

< Indicates the analyte was not detected at or above the method detection limit. Detection limits were adjusted to account for matrix interferences.

Analyzed by EPA Method 8080



**Table 4**  
**Summary of Analyses**  
**Southern Pacific Transportation Company**  
**Debris Piles on Bobo's Junkyard**  
**Oakland, California**  
**IC Project No. 05465**

Sample Number	Petroleum Hydrocarbons (mg/kg)		Metals <sup>a</sup> (mg/kg)							Organochlorine Compounds <sup>a</sup> (mg/kg)					
	TPH-D <sup>b</sup>	O & G <sup>c</sup>	Cd	Cr	Cu	Pb	Hg	Ni	Zn	PCB	DDT	DDD	DDE	Endrin	Dieldrin
P <sub>1</sub>	3,700	20,000	8.7	91.9	629	911	17.3	115	1,210	4.5	3.5	1.0	0.86	0.22	0.34
P <sub>2</sub>	7,500	13,000	17.7	187	8,570	3,480	1.5	118	3,400	230	<5	<5	<2.5	<2.5	<5
P <sub>3</sub>	2,900	13,000	10.5	104	7,320	2,140	0.76	715	4,840	87	<2.5	<2.5	<1.2	<1.2	<1.2
P <sub>4</sub>	4,400	<50	10.7	80.4	559	1,860	0.51	77	1,210	550	<5	<5	<2.5	<2.5	<2.5

<sup>a</sup> Samples were collected from 4 different debris piles located on the site.

<sup>b</sup> TPH as diesel analyzed by EPA Method 8015 Modified.

<sup>c</sup> Oil and Grease analyzed by EPA Method 413.1

<sup>d</sup> Analyzed by EPA 6000 and 7000 Series Methodology

<sup>e</sup> Analyzed by EPA Method 8080.

< Indicates the analyte was not detected at or above the method detection limits. Detection limits were adjusted to account for matrix interferences.