Industrial Compliance

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June 11, 1992

STID 3824

Ms. Jennifer Eberle
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, California 94621

SUBJECT: Report and Workplan Submittal
Southern Pacific Transportation Company
1399 Wood Street
Oakland, California
IC Project No. 05535

Dear Ms. Eberle:

Industrial Compliance (IC), on behalf of Southern Pacific Transportation Company (SPTCo), is responding to the Alameda County Health Care Services Agency letter dated April 28, 1992, concerning an SPTCo property located at 1399 Wood Street, Oakland, California. Three underground storage tanks (USTs) were removed from the site in September 1989. As requested, attached is a copy of the report prepared by Canonie Environmental Services Corporation (Canonie) dated December 1989 (report entitled: *Final Site Report, Underground Storage Tank Removal, Southern Pacific Transportation Company, Oakland, California)*, which provides the laboratory reports, chain-of-custody forms, and hazardous waste manifests associated with the removal of the USTs at the site. Also, attached is a workplan prepared by IC which proposes further investigation of the site. → dated 6-11-92

If there are any questions, please contact either of the undersigned.

Sincerely,

Walter D. Floyd
Project Geologist

Mark S. Dockum, C.E.G.
Project Manager

WDF:MSD:ekw

Attachments

cc: Mr. Rick Hiett
Mr. John Moe

05535.LTR\D:\KEYDATA\LTR-MEM

A Workplan prepared for:

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

PRELIMINARY SOIL INVESTIGATION WORKPLAN
SOUTHERN PACIFIC TRANSPORTATION COMPANY
1399 WOOD STREET
OAKLAND, CALIFORNIA

IC Project No. 05535

Prepared by:

Walter D. Floyd
Project Geologist

Mark S. Dockum, C.E.G.
Project Manager

STATE OF CALIFORNIA
MARK STEVEN DOCKUM
No. 1675
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CERTIFIED ENGINEERING GEOLOGIST

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1.0 PURPOSE

The Alameda County Health Care Services Agency (Alameda County), in a letter dated April 28, 1992, has required Southern Pacific Transportation Company (SPTCo) to provide a workplan for further investigation of a SPTCo property which formerly had 3 underground storage tanks (USTs). The site is located at 1399 Wood Street in Oakland, California (see Figure 1).

2.0 BACKGROUND

In September 1989, Canonie Environmental Services Corporation (Canonie) removed 3 underground storage tanks (USTs) from the site (see Figure 2). The USTs that were removed included: one 12,000-gallon split-compartment diesel-gasoline tank (Tank A), one 7,300-gallon diesel Tank (Tank B), and one 550-gallon waste oil tank (Tank C). The procedures and results of this work were presented in a Canonie report dated December 18, 1989 (report entitled: *Final Site Report, Underground Storage Tank Removal, Southern Pacific Transportation Company, Oakland, California*).

Laboratory analyses performed on soil samples collected from beneath Tank A indicated up to 6,500 ppm of total extractable petroleum hydrocarbons (TEPH). The soil samples collected beneath Tank B indicated up to 210 ppm of TEPH. Soil samples collected from beneath Tank C indicated 0.064 ppm of xylenes and 37 ppm of polychlorinated biphenyls (PCBs).

also 9.9 ppm Pb, 56 ppm Zn, 36 ppm Cr, .99 ppm bis(2-ethylhexyl)phthalate, but ND 8240 (+ BTEX), ND TVH, ND TEH

Approximately 200 cubic yards (cy) of material, generated from the tank excavations, were stockpiled on site. Soil samples collected from this stockpile indicated TEPH concentrations between 830 ppm and 3,100 ppm. **The present status of the stockpile is unknown.**

3.0 PROPOSED SCOPE OF WORK

It is proposed to perform the investigation/remediation in a phased approach, as follows:

- Phase I entails a soil investigation at the site, and preparation of a report including recommendations for remediation, if required.

- Phase II entails implementation of remediation alternative based on the results of the soil investigation.

- Phase III entails implementation of a groundwater investigation, including installation of monitoring wells and quarterly groundwater monitoring as required by Alameda County.

It is proposed to postpone the groundwater investigation until after the soil has been remediated to avoid the possibility of having to excavate in an area where a monitoring well was installed, thus requiring a well to be installed twice.

Since there is much uncertainty relative to the volume of impacted soil, the scope of work presented in this Workplan includes only the first phase of work. Phase I will consist of the following tasks: Task 1) Investigative Field Activities and, Task 2) Preparation of a summary report including remediation alternatives for soil/groundwater. The procedures to be used and the details of each task follow.

3.1 Task 1 - Investigative Field Activities

It is proposed to assess the lateral and vertical extent of hydrocarbon impacted soil at the site by drilling approximately **10 exploratory borings around the perimeter of the former USTs.** Soil samples will be collected and analyzed by a state-certified analytical laboratory for Total Volatile Petroleum Hydrocarbons (TVPH) with a fuel identification and benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8260 Modified.

What about diesel? see p. 5 + W.O. constituents

3.1.1 Soil Boring Drilling and Sampling

? this is only soil characterization

The soil borings will be drilled with a truck-mounted drilling rig utilizing 6- or 8-inch diameter hollow-stem augers. **The approximate boring locations are shown in Figure 2.** Actual boring locations may vary from proposed well locations due to physical obstructions, underground utilities, and/or observations made from the first several borings. The depth of borings shall be to the first-encountered groundwater which is anticipated to be approximately 10 feet BGS. Samples for lithologic description will be collected using a 5-foot long continuous-core barrel. The core barrel will extend approximately 4 to 6 inches below the lead auger to provide for the collection of relatively undisturbed soil samples. The core barrel will be used continuously with the drilling of each 5-foot section of hollow-stem auger.

Samples for potential laboratory analysis will be collected at approximately every 5-foot interval (starting at the surface) using a California-modified split-spoon sampler lined with 3 brass liners (2-inch-diameter by 6-inch-long) inserted to help sample retention. The split-spoon sampler will be inserted through the annulus of the hollow stem augers and driven to the appropriate depth using a 140-pound drive hammer. The number of blows required to advance the sampler 6 inches at every 18-inch drive interval will be recorded on the boring logs. After the split-spoon sampler is driven to the appropriate depth, the sampler will be extracted from the borehole and the brass liners removed.

Approximately 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 caps. Each liner selected for shipment to the laboratory will be labeled with a unique sample number, boring number, depth of sample, date and time of collection, initials of collector, and any other pertinent information. After sample preparation, the brass liner will be sealed in a clean resealable plastic bag and placed in a cooled ice chest upon transportation to a state-certified laboratory. A chain-of-custody form will be filled out concurrently with sample collection and will accompany the samples upon shipment to the laboratory.

The soil samples collected in this investigation will be analyzed for TPH as gasoline and diesel and BTEX using either EPA Method 8260 Modified or EPA Method 8015 Modified.

The actual number of samples submitted to the laboratory will depend on the results of the field observations and field screening. IC anticipates that at least 1 sample per boring will be submitted for chemical analysis. The maximum number of samples submitted to the laboratory per boring is estimated to be 3.

Headspace screening for volatile constituents will be performed on soil from 1 of the remaining 2 brass liners from each 5-foot sample interval to assess hydrocarbon concentrations in the soil. This data will be a factor in selecting samples for laboratory analysis. The headspace-screening technique involves placing a portion of each sample into a clean resealable plastic bag and promptly sealing the bag. After a minimum of 5 minutes, to allow for volatilization of any constituents that may be present, a portable photoionization detection (PID) probe will be quickly inserted into the bag and a measurement will be recorded. The PID measures ionizable compounds in the air in parts per million by volume (ppmv). Field calibration of the PID will be performed using a calibration gas. Results of the headspace screening will be presented on each boring log.

After the boring is drilled to the desired depth and the appropriate samples collected, the boring will be backfilled using 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 a grout pump or mixing apparatus. The cement will then be added to the bentonite/water mixture and thoroughly mixed. The cement/bentonite mixture will then be placed through the center of the auger while the augers are in the ground. The augers will be removed at 2-foot intervals and additional grout added. This process will be repeated until the cement is at the original ground surface.

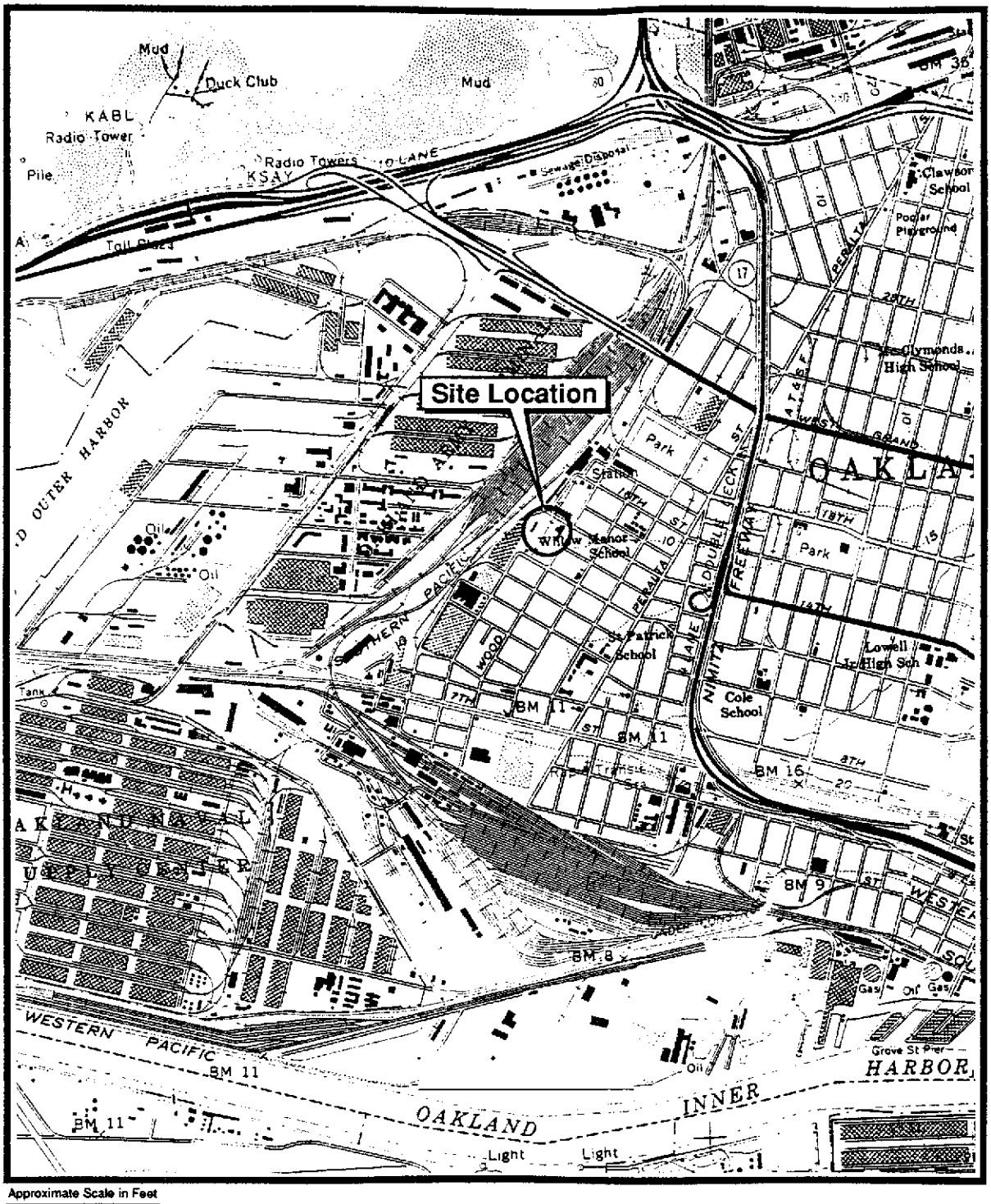
To reduce the potential for cross contamination, augers, sampling equipment, and other associated downhole equipment will be steam cleaned prior to arrival on site. This equipment

will also be steam cleaned between borings. Rinsate from steam cleaning will be contained in 55-gallon drums appropriate for the storage and transportation of hazardous wastes. The date, contents, and the boring from which the contents originated will be labelled on each drum. Sampling equipment will be cleaned between sampling intervals using a solution of Alconox detergent and potable water, followed by a triple rinse with potable water.

Residuals generated from drilling process will be stored in 55-gallon drums appropriate for the storage and transportation of hazardous wastes. The date, contents, and the boring from which the contents originated will be labelled on each drum. Analytical results from the borings will be used to evaluate an appropriate disposal option. If analytical results indicate that total BTEX constituents are below 100 ppb and TPH concentrations are below 10 ppm, the soil will be redistributed on site. If constituents are above these levels, a recommendation will be provided to Alameda County for the disposition of these soils. It is proposed that these drilling residuals be handled concurrently with the remediation effort.

3.2 Task 2 - Summary Report - Evaluation of Remedial Option for Soil

Within 8 weeks after completion of the field work, a summary report will be prepared. This report will include field procedures, analytical results, conclusions, and an evaluation of remedial option for soil.



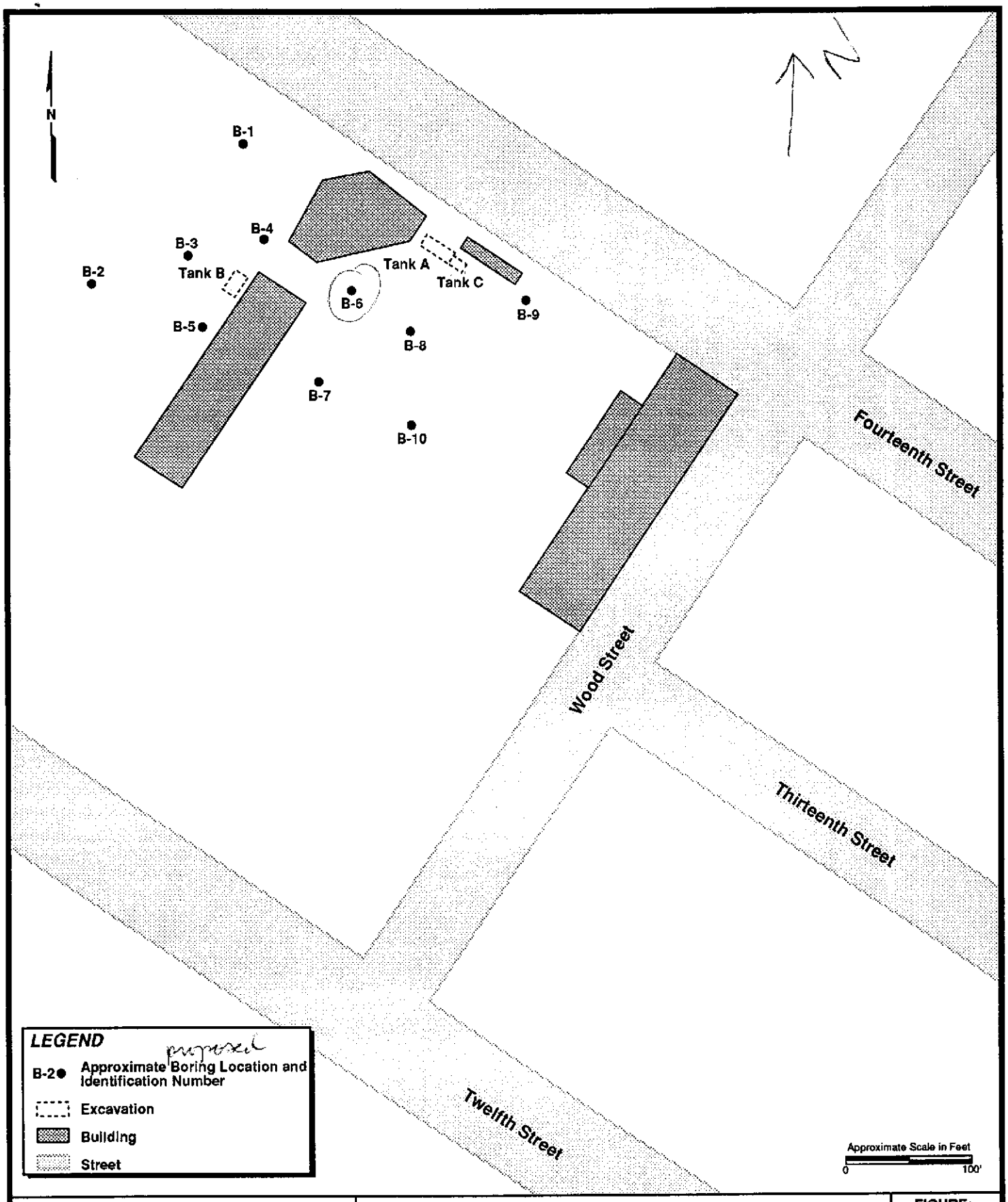
Approximate Scale in Feet

0 2000'

Reference:
USGS 7.5 Minute Series (Topographic)
Oakland West Quadrangle, California
Dated 1959, Revised 1980

Industrial Compliance A Subsidiary of SP Environmental Systems, Inc.		**SITE LOCATION MAP** **SOUTHERN PACIFIC TRANSPORTATION CO.** **1399 WOOD STREET** **OAKLAND, CALIFORNIA**	**FIGURE:** **1**
PROJECT NO: 05535	**DATE:** 05/29/92		**SCALE:** **as shown**
DRAWN BY: PD	**CHECKED BY:** WF		

05535 Fig 1/disk 118/WP 0592



Industrial Compliance A Subsidiary of SP Environmental Systems, Inc.		SITE MAP SOUTHERN PACIFIC TRANSPORTATION CO. 1399 WOOD STREET OAKLAND, CALIFORNIA	FIGURE: 2
PROJECT NO: 05535	DATE: 05/29/92		SCALE: as shown
DRAWN BY: PD	CHECKED BY: WF		

05535 Fig 2/disk 118/WP 0592