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SUBSURFACE CONDUIT INVESTIGATION WORK PLAN

JUL 08 2002

SITE LOCATION:
Oakland Truck Stop
1107 5th Street
Oakland, California

PREPARED FOR:
Mr. Reed Rinehart
Rinehart Distribution, Inc.
P.O. Box 725
Ukiah, California 95482

SUBMITTED TO:
Mr. Barney Chan
Alameda County Department of Environmental Health Services
Division of Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577
(510) 567-6774
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W. A. CRAIG, INC. PROJECT # 3628

June 28, 2002

PROFESSIONAL CERTIFICATION

Subsurface Conduit Investigation Workplan

Oakland Truck Stop
1107 5th Street
Oakland, California

Job No. 3628
June 28, 2002

This document has been prepared by the staff of W. A. Craig, Inc., under the professional supervision of the persons whose seals and signatures appear hereon. No warranty, either expressed or implied, is made as to the professional advice presented herein. The site descriptions contained in this document are based upon our current understanding of site conditions. These conditions are subject to change as W.A. Craig, Inc. evaluates additional information.

Opinions or conclusions presented in this document are professional opinions based solely upon a review of existing environmental data. We recognize that the limited scope of services performed in execution of this investigation may not be appropriate to satisfy the needs, or requirements of other state agencies, or of other users. Any use or reuse of this document or its findings, conclusions or recommendations presented herein is at the sole risk of the user.

Tim Cook, P.E.
Principal Engineer

INTRODUCTION

The purpose of this work plan is to investigate the presence of petroleum hydrocarbon constituents in conduits and other preferential pathways in the immediate vicinity of the Oakland Truck Stop. Alameda County Health Care Services (ACHCS) requested this investigation in a letter to Rinehart Distribution, Inc. dated May 23, 2002.

Site Locations and Description

The Oakland Truck Stop, located at 1107 5th Street in Oakland, California ("the Site"), is owned by Mr. Tony Muir. Rino Pacific, Inc. and Rinehart Distribution, Inc. lease the property from the owner. The Site is in a commercial and industrial district at the intersection of Adeline and 5th Streets **(Figure 1)**. A service station building, two underground storage tanks, four pump dispenser islands, a truck scale and scale house currently occupy the Site.

The Site topography is flat and is bounded on the north by the Interstate 880 overpass, on the west by Adeline Street, on the south by a restaurant and parking lot and on the east by Chestnut Street. The nearest surface water is the Oakland Estuary located approximately 2,400 feet south of the Site.

Background

The Site was developed as a truck stop approximately 40 years ago and has been in operation throughout this period. Three 10,000-gallon underground storage tanks (USTs) and one 8,000-gallon UST were formerly maintained at the Site. All four USTs were constructed of single-wall steel. Of the 10,000-gallon USTs, two contained diesel fuel and one contained mid-grade unleaded gasoline. The 8,000-gallon UST contained regular unleaded gasoline. Prior to the recent remodel of the Site, fuel product lines were constructed of single-wall fiberglass.

In mid-1995 an unauthorized release of gasoline occurred as a result of a leak in a product line. Product lines associated with this release were replaced as soon as the leak was discovered. Interim cleanup of the spill was performed by installing and operating two product recovery sumps in the vicinity of the release. The sumps recovered approximately 6.3 gallons of gasoline using a skimmer device and reduced the floating product thickness to a sheen on the water in the recovery wells. The sumps were removed during recent leaseholder improvements at the Site. The water table fluctuates seasonally between 10 inches and 4 feet below grade.

The lateral extent of hydrocarbon contamination has not yet determined. Quarterly groundwater monitoring is being conducted. The direction of groundwater flow has varied from southwest to north.

The shallow aquifer beneath the site has no beneficial use as a potential drinking water resource due to its high total dissolved solids concentration (>3,000 mg/l). Proposed Groundwater Amendments to the Water Quality Control Plan (Basin Plan), dated April 2000, specifically

states that shallow groundwater to a depth of about 100 feet in portions of the East Bay Plain is often brackish due to naturally occurring saltwater intrusion. However, well yields may be sufficient for industrial or irrigation uses.

This same document states that cleanup in areas that have no beneficial use as a drinking water resource, should be protective of ecological receptors, human health and probable non-potable uses (e.g., irrigation or industrial process supply). Pursuant to State Board Resolution No. 92-49, pollution sites will continue to be required to demonstrate that 1) reasonably adequate source removal has occurred, 2) the plume has been reasonably defined both laterally and vertically and 3) a long-term monitoring program is established to verify that the plume is stable and will not impact ecological receptors or human health (e.g., from volatilization into trenches and buildings). In the East Bay Plain there are deep aquifers that will continue to be designated as potential drinking water resources. In such a setting, the deep aquifers (defined as aquifers below the Yerba Buena Mud) are subject to protection as potential drinking water resources.

In a letter to Rinehart Distributing Inc. dated May 23, 2002, ACHCS requested that additional investigation be performed to determine if hydrocarbons are migrating offsite along preferential pathways such as buried utility conduits within the City of Oakland right-of-way along 5th Street and Chestnut Avenue.

SCOPE OF WORK

The scope of services proposed herein will be performed to determine if dissolved hydrocarbons are present in one or more buried utility trenches in the immediate vicinity of the Site. The proposed scope of services includes the following:

- Preparing this Subsurface Conduit Investigation Work Plan for submittal to the San Francisco Bay Regional Water Quality Control Board (RWQCB) and the ACHCS;
- Obtaining appropriate drilling permits and approvals;
- Obtaining encroachment permits to install temporary borings in the City of Oakland right-of-way;
- Obtaining underground utility clearance through Underground Service Alert;
- Installing and sampling up to six temporary borings within utility trenches along 5th Street and Chestnut Street in the immediate vicinity of the Site;
- Surveying the temporary boring locations per the electronic reporting requirements of AB 2886;
- Collecting and analyzing soil and groundwater samples from each temporary boring;
- Transmitting survey data, laboratory data and other investigation data to Geotracker, the SWRCB's Internet accessible database; and
- Preparing a Conduit and Preferential Pathway Investigation Report that transmits the results of this investigation.

FIELD PROCEDURES

Up to six temporary borings will be situated in the locations shown on **Figure 2**. The purpose of these borings is to collect soil and groundwater data to determine if hydrocarbons are migrating offsite through preferential pathways such as sewer trenches.

Well and Encroachment Permits and Utility Clearance

The Alameda County Department of Public Works requires that well permits be obtained prior to the installation of temporary borings. Well permit applications will be filed with Alameda County at least 14 days prior to installation of the wells. ACHCS will be given at least 48 hours notice prior to site investigation field activities.

The City of Oakland Public Works Department requires that an encroachment permit be obtained prior to installing temporary borings in the City right-of-way. In addition, a traffic control plan and a health and safety plan must be filed with and approved by the City prior to the issuance of the permit.

Per requirements of California law, underground service alert (USA) must be notified of the intent to perform subsurface investigation at the Site. USA will notify public and private utility companies and each utility will send a field representative to mark the location of underground utilities owned and maintained by each utility company. In addition, W.A. Craig will review existing utility plans to ensure that the temporary boring locations are within the backfill of the buried utility trenches.

Temporary Boring Drilling Procedures

Temporary borings within the utility trenches will be advanced using a hand auger to minimize the potential for damage to the buried utilities. [redacted]

The field geologist will observe drill cuttings and judge the depth to saturated soil. He will be responsible for determining the total depth of the boring and whether the boring is within the utility trench.

Soil cuttings from the hand auger borings will be stored on-site in 55-gallon, steel, DOT-approved drums. These investigation-derived wastes will be characterized as hazardous or non-hazardous based of the results of the investigation.

After soil and groundwater samples are collected, the borings will be backfilled with Portland type I-II cement and finished at the surface with a cold patch asphalt mix to match existing conditions and grades.

Soil and Groundwater Sample Collection

[redacted]. The hand auger will be decontaminated before each use by steam cleaning, or with laboratory grade detergent solution wash, and rinsed with tap water or de-ionized water. Immediately after removing the hand auger from the boring, 5-gram aliquots of soil will be collected from the shoe of the hand auger using an EnCore Sampler. The Encore Sampler meets all requirements for the collection of solid and waste oil samples for volatile organic analytes described in EPA Method 5030. The EnCore sampler will be pushed into the soil cores using the T-handle until the coring sampler is completely full. The cap coring body will be properly seated and locked in place to form an airtight seal. The EnCore samplers will be placed in a zipper foil pouch.

The zipper foil pouch will be labeled indicating project name (or number), sample number, sample depth, date, and collection time. The same information will be recorded on the chain of custody form. EnCore samplers will be placed in a cooler with frozen gel packs or ice. The geologist will use a photo-ionization detector (PID) to determine if hydrocarbons are present in the remaining soil cores. The geologist will record the PID reading at the appropriate depth on the boring log. [redacted]. The sample cooler will be delivered to the analytical laboratory within 48 hours of collection.

Groundwater samples will be collected with disposable polyethylene bailers. Water samples will be decanted from the bailer into laboratory prepared sample bottles appropriate for the desired analysis.

Soil and groundwater samples will be immediately placed in refrigerated storage for delivery to the laboratory. The samples will be labeled in such a manner as to maintain client confidentiality. Samples will be delivered under chain of custody control to an analytical laboratory that is certified by the State of California to perform the requested analyses.

Surveying

A state licensed land surveyor will survey the temporary borings for horizontal and vertical control. The vertical datum of the survey will be a benchmark referencing mean sea level (msl). The borings will be measured in a manner consistent with the GEOTRACKER requirements. Latitudes and longitudes will be in decimal degrees, to nine significant digits, and based on monument from the North American Datum of 1983 (NAD83).

Field Equipment Decontamination Procedures

Soil equipment will be decontaminated before and after each use by washing in a laboratory grade detergent solution, followed by tap water rinses. Potable water will be used for

decontamination of drilling equipment.

Rinseate water used in the decontamination process and purge water and soil cuttings from the new monitoring well borings will be stored on-site in steel DOT approved drums. Drums will be labeled as to contents, date container filled, company name, and sealed. The drums will be left on-site for subsequent disposal pending analytical results.

LABORATORY ANALYSIS

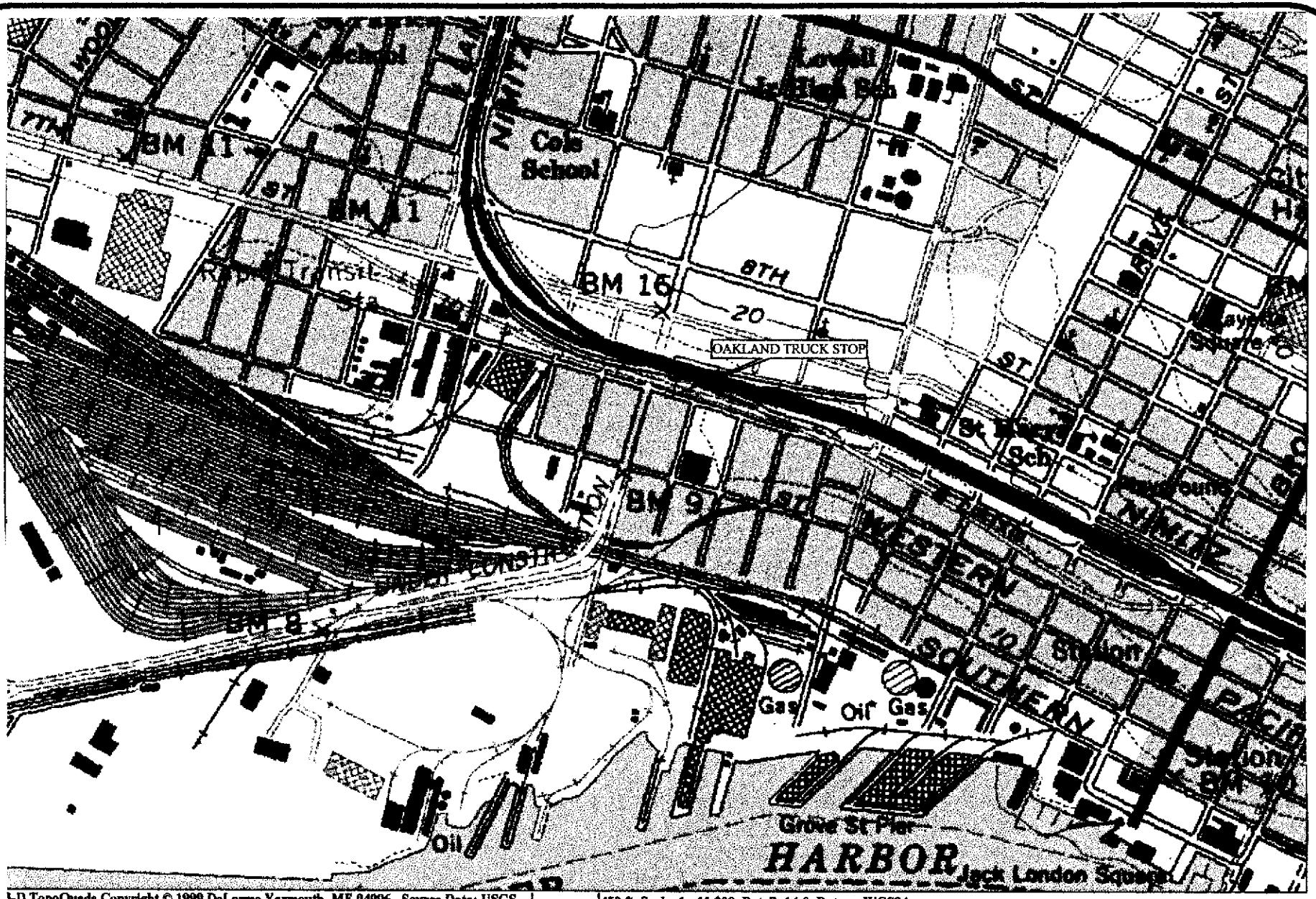
Soil and groundwater samples will be analyzed by McCampbell Analytical, Inc. for total petroleum hydrocarbons as gasoline (TPH-g) and total petroleum hydrocarbons as diesel (TPH-d) by EPA method 8015 modified; for benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA method 8020; and for MtBE and other fuel oxygenates using EPA method 8260b. McCampbell Analytical is certified by the State of California to perform these analyses.

SITE INVESTIGATION REPORT

A Conduit and Preferential Pathway Report will be prepared and submitted to the ACHCS and the RWQCB. The report will include a site history, figures identifying sample locations, laboratory analytical reports, a summary of all work performed, a tabulation of analytical results, conclusions and recommendations for additional investigation or remediation work, if necessary.

PROJECT SCHEDULE

Approval of this work plan, obtaining permits and scheduling of subcontractor services could be completed in approximately 3 weeks. The drilling and sampling activities should be completed in one week. Soil and groundwater sample analytical results should be available approximately 2 weeks after sample collection. The results of the conduit and preferential pathway investigation would be presented in a report approximately 2 weeks after the receipt of the final laboratory analytical results. WAC estimates this scope of work could be completed in approximately 7 weeks; in time to submit the report by the August 31, 2002 deadline set by the ACHCS.



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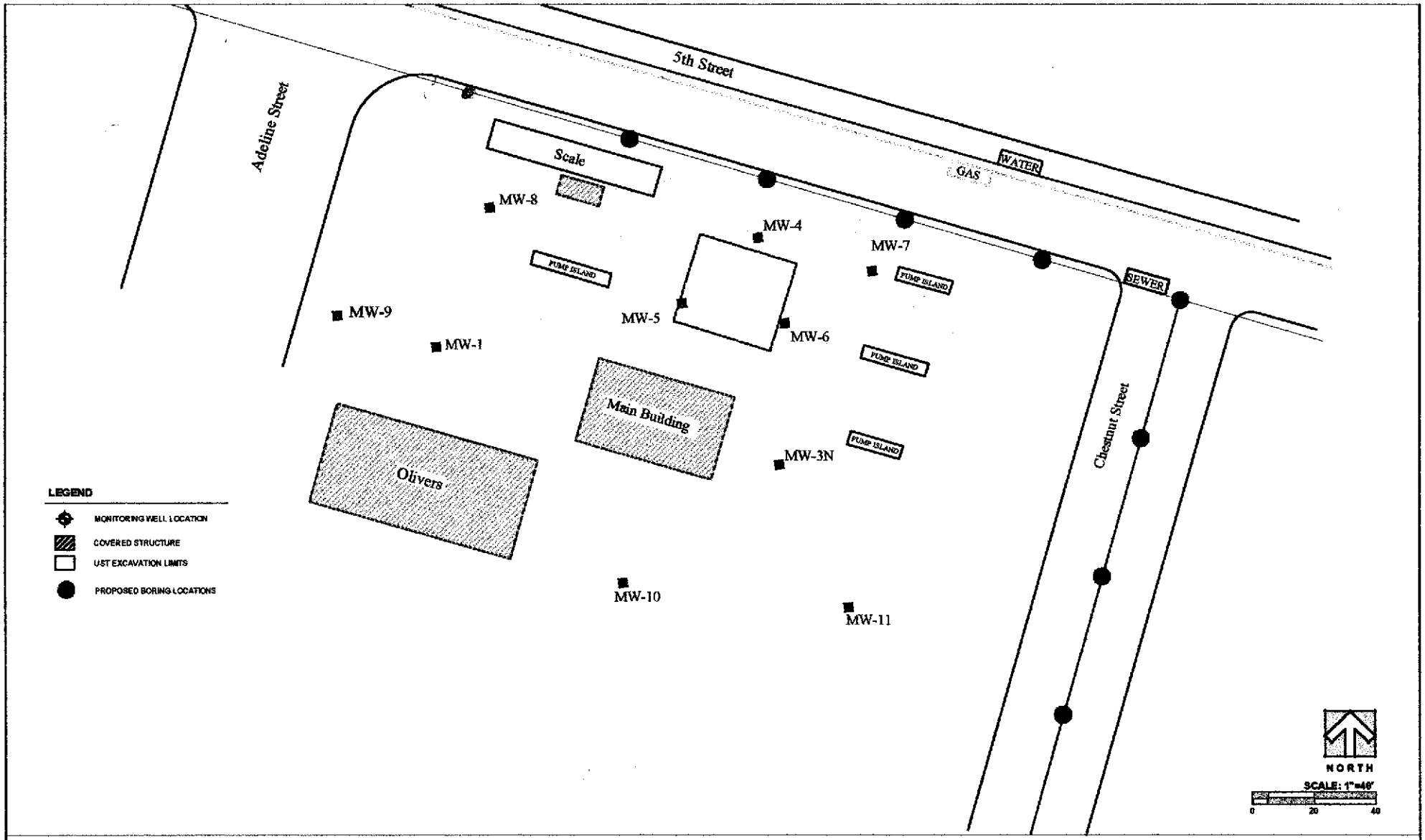
Site Map

OAKLAND TRUCK STOP
1107 FIFTH STREET
OAKLAND, CA

Project #: 3628	Figure:
Date: 06/18/02	1



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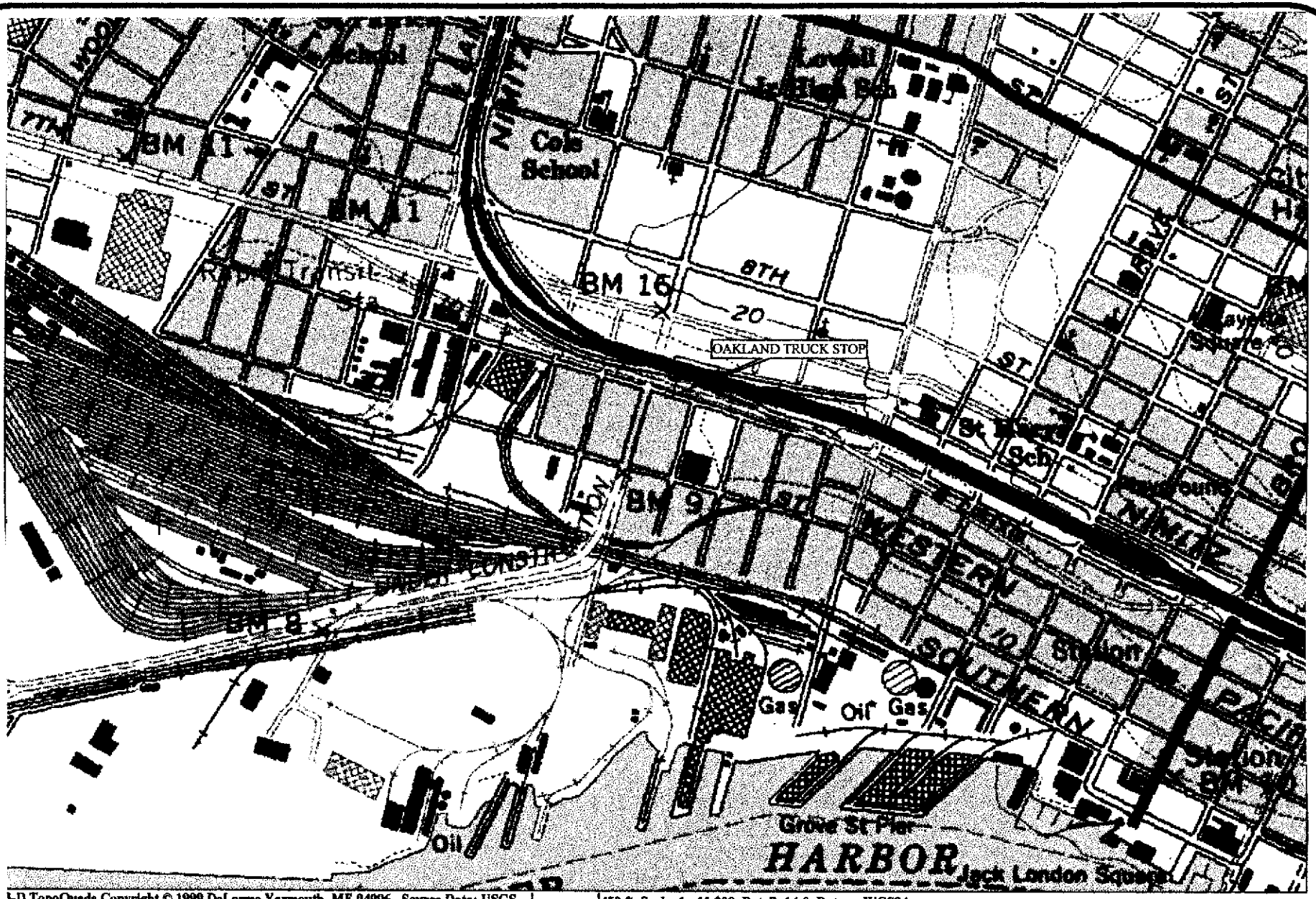
PROPOSED BORING LOCATIONS

1107 5th Street
Oakland, California

Project #: 3628	Figure: 2
Date: 6/24/02	
Scale:	



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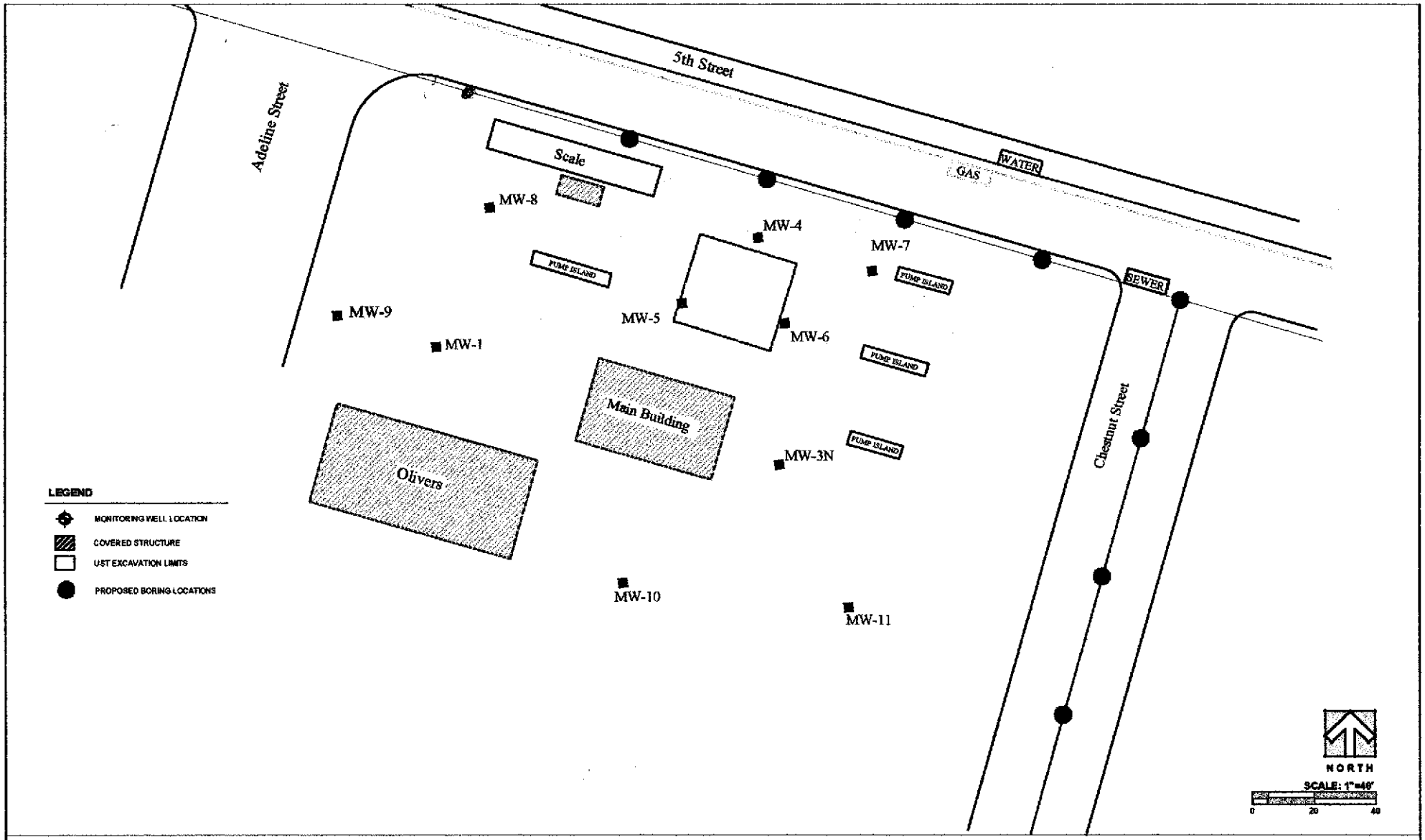

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