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To: Amir Ghoulami **From:** Tim Cook

Company/Agency: Alameda County Health Care Services

Fax: (510) 337-9335 **Pages (including this one):** 14

Phone: (510) 567-6876 **Date:** May 12, 2004

Re: A-Paratransit, 829 54th St, Oakland

☑ **Urgent** ☑ **For Review** ☐ **Please Comment** ☑ **Please Reply** ☐ **Please Recycle**

• **Comments:**

Amir,

Attached are the work plan and the work plan addendum for the referenced site. Please call me after you have had a chance to look these over.

Regards,
Tim Cook, P.E.
Principal Engineer

W. A. Craig, Inc.

Construction & Engineering

RO 2570

SITE INVESTIGATION WORK PLAN

PROJECT SITE:
A-Paratransit Corporation
829 54th Avenue
Oakland, California

PREPARED FOR:
Mr. Shiv Kumar, President
A-Paratransit Corporation
22990 Clawiter Road
Hayward, California 94545

SUBMITTED TO:
Amir Gholami
Alameda County Department of Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

PREPARED BY:
W.A. Craig, Inc.
6940 Tremont Road
Dixon, California 95620
A, B, & Haz Lic. No. 455752

Project No. 4104

December 30, 2003

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A-Paratransit Corporation
829 54th Street
Oakland, California

W.A. Craig, Inc., Project No. 4104
December 30, 2003

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The conclusions presented in this document are professional opinions based solely upon visual observations of the site and vicinity and interpretation of available information as described in this document. W.A. Craig, Inc. recognizes 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 said user.

Tim Cook, P.E.
Principal Engineer

INTRODUCTION

Site Location and Description

A-Paratransit Corporation owns and operates a taxicab repair facility ("the Site") located at 829 54th Street in Oakland, California **(Figure 1)**. The Site is located in a commercial/industrial area at the corner of San Leandro Avenue and 54th Street. The Site formerly used underground storage tanks (USTs) to store fuel and waste oil.

The regional topography gently slopes southwesterly from the Oakland Hills to the east to San Leandro Bay to the west. Groundwater beneath the Site occurs at 15 to 20 feet below grade (fbg). Site features and former UST locations are depicted on **Figure 2**.

Objectives

The objective of this *Site Investigation Work Plan* is to describe methods and procedures to delineate the extent of petroleum hydrocarbon contamination released from the former USTs).

Background

The Site is presently used as a repair facility for taxicabs. Formerly, the Site was an automobile service station. On February 5th and February 7th, 2003 five USTs were removed from the Site. All five USTs were located in a common tank pit at the front of the property. Fours USTs (three gasoline and one diesel) had a capacity of 1,800-gallons. The waste oil tank had a 300-gallon capacity. All five USTs were single wall steel construction and were more than 30 years old. Upon removal, all five USTs were found to be in good condition with no visible holes. However, soils surrounding the waste oil UST were heavily contaminated. Approximately 40 cubic yards of soil was excavated from the waste oil UST pit and stockpiled on-site.

During the removal of the USTs, seven soil samples were collected from the base of the tank pit. A composite sample was also collected from the soil stockpile. TPH-g was as high as 1,600 milligrams per kilogram (mg/kg). TPH-d was as high as 290 mg/kg and benzene was as high as 11 mg/kg. The composite soil sample from the soil stockpile yielded a total lead concentration of 600 mg/kg. This same soil sample was analyzed for soluble lead and yielded 20 milligrams per liter (mg/L) using the STLC method and 1.6 mg/L using the TCLP method. Based on these results the soil is a California hazardous waste. Soil sample results are summarized in **Table 1**.

The UST pit was dewatered during removal of the USTs. The water was stored in a 22,000-gallon temporary tank. The water was transported and disposed of at the Seaport Inc. treatment facility in Redwood City. The *Final Closure Report for Underground Storage Tank Removal*, dated March 25, 2003, was submitted to the City of Oakland Fire Services Agency. Upon review of the report, the City referred the matter to Alameda County Environmental Health (ACEH). The ACEH is the local oversight program (LOP) agency for leaking underground fuel tank cases in Oakland. A notice of unauthorized release was filed with the ACEH in February 2003.

The ACEH opened leaking UST case (Case #RO0002570) and requested the submittal of a work plan to define the extent of soil and groundwater contamination at the Site in a letter to the owner dated October 14, 2003. This work plan is submitted in response to this request.

The owner submitted a claim application to the State Water Resources Control Board (SWRCB) UST Cleanup Fund. This application is currently under review.

SCOPE OF WORK

The scope of services proposed herein will be performed to delineate the extent of hydrocarbons in shallow groundwater related to a leak from a former UST at the site. The investigation will include advancing exploratory soil borings and converting the borings to groundwater monitoring wells. The proposed scope of services includes installing four monitoring wells to sample soil and groundwater. Upon completion of the proposed scope of services, a report will be submitted to the ACEH describing the investigation, transmitting results of the investigation and providing conclusions and recommendations regarding further investigation, if necessary.

Specific tasks to be completed for this site investigation include the following tasks:

- Prepare this *Site Investigation Work Plan* and a *Site-Specific Health and Safety Plan* for submittal to the ACEH;
- Obtain a drilling permit from the Alameda County Public Works Department;
- Obtain an encroachment permit from the City of Oakland to install one monitoring well in 54th Street;
- Profile and dispose of stockpiled soil at an appropriate disposal facility;
- Advance four soil borings to a depth of approximately 20 fbg;
- Log the borings to describe and correlate subsurface geology;
- Collect one soil sample from each boring;
- Analyze soil samples for total petroleum hydrocarbons as gasoline (TPH-g); total petroleum hydrocarbons as diesel (TPH-d); total petroleum hydrocarbons as motor oil (TPH-mo); benzene, toluene, ethylbenzene and xylenes (BTEX); and methyl tert-butyl ether (MtBE) and other fuel oxygenates;
- Convert the four soil borings to monitoring wells;
- Develop each monitoring well;
- Collect groundwater samples from each monitoring well;
- Analyze groundwater samples for TPH-g, TPH-d, TPH-mo, BTEX, MtBE and other fuel oxygenates;
- Survey each monitoring well for horizontal and vertical control;
- Profile and dispose of soil cuttings at appropriate disposal facility;
- Submit survey control data and analytical data to the SWRCB GeoTracker database; and
- Prepare a *Site Investigation Report* describing the results of the investigation.

FIELD PROCEDURES

Monitoring wells will be located as shown on **Figure 2**. Monitoring well MW-1 will be placed southwest (immediately downgradient) of the former UST pit. Monitoring well MW-2 will be placed northeast of the former UST pit. Well MW-3 will be placed northwest of the former UST pit. Well MW-4 will be placed southwest (downgradient) of the former UST pit, in 54th Street.

Well Permits and Utility Clearance

Well permits must be obtained prior to the installation of monitoring wells or temporary borings. Well permit applications will be filed with the Alameda County Public Works Department at least 14 days prior to installation of the wells. The county will be given at least 48 hours notice prior to the installation of wells so that they may observe the installation of the annular seal. An encroachment permit will be filed with the City of Oakland for drilling in 54th Street.

Per requirements of California law, Underground Service Alert (USA) will 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, Inc. will review existing utility plans to ensure that buried utilities are not within two feet of the proposed monitoring well locations.

Drilling Procedures

All soil borings will be drilled using a truck-mounted 8.5" diameter hollow-stem auger drill rig. A California Registered Geologist or a field geologist under the direct supervision of a registered geologist will supervise drilling and sampling operations. Drilling will cease approximately 10 feet below the first encountered water-bearing zone.

Borings will be continuously logged in the field using the Unified Soil Classification System. The field geologist will observe significant changes in material penetrated, changes in drilling conditions, record lithologic changes, the relative moisture content of soils and note water-producing zones. This record will be used to prepare detailed boring logs. Lithologic descriptions will include soil type, color, grain, size, texture, presence of hydrocarbons and other pertinent information. A photo-ionization detector (PID) will be used to detect the presence of volatile chemicals in the soil cores. PID measurements will be recorded on the boring logs.

Soil cuttings from the drilling operations 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 and disposed of accordingly.

Soil Sample Collection

One soil sample will be collected from each of the four soil borings at the soil-groundwater interface. The sample will be collected using a modified California sampler lined with three 6-inch long brass tubes. The sampler will be decontaminated prior to each use by washing with a laboratory grade detergent solution and triple rinsing with tap water. The sampler will be driven to the desired sampling depth using a 140-pound hammer dropped approximately 30 inches. The blow counts for each 6-inch interval will be recorded on the boring log for each sample. Immediately after opening the modified California sampler, 5-gram aliquots of soil will be removed from the brass tubes in the sampler using an EnCore sampler and a T-handle. This sampling device meets all the 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 brass tube 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 number, sample ID, and date. 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 sample cooler will be delivered to the analytical laboratory within 24 hours of collection. Soil samples will be extracted within 48 hours of receipt by the lab and will be kept at 4 degrees Centigrade pending analysis. All samples will be analyzed for TPH-g, TPH-d, TPH-mo, BTEX, MtBE, and other fuel oxygenates.

Monitoring Well Construction

Monitoring wells will be constructed of two-inch diameter, flush-threaded, Schedule-40 PVC well casing. The wells will be constructed through the hollow-stem augers, with materials placed from the bottom of the borehole to the ground surface. The screened interval of the well will be factory slotted with a slot size of 0.020 inches. The well screen will be installed to approximately 10-feet below the first encountered groundwater, or as conditions warrant. The screened section annulus will be packed with clean #2/12 graded sand. The monitoring well sand filter pack will extend two feet above the well screen as per section 2649(d)(5) of the California Code of Regulations.

Hydrated bentonite pellets will be placed above the sand as a sealing material. The well will be sealed from the bentonite seal to the ground surface using a Portland cement/bentonite grout mixture. No glues or other solvents will be used in the construction of the wells. The wells have not been designed to provide optimum flow but are intended to provide water samples that are representative of water quality in the first water-bearing zone.

The wellheads will be protected from vandalism using a locking expansion-plug cap and will be housed within traffic-rated boxes to protect the wells from traffic and surface water runoff. The well sealing material will be allowed to set for a period of 72 hours prior to development or sampling.

Monitoring Well Development

Monitoring wells will be developed by surging and pumping, if necessary. A minimum of five well casings will be purged. Field parameters including color, odor, free-phase liquid, turbidity, specific-conductance, temperature, and pH, will be monitored during the development of the wells. Development will continue until field parameters stabilize and the water is relatively clear and free of silt and sand.

Monitoring Well Surveying

A California-licensed land surveyor will survey the monitoring wells for horizontal and vertical control. The datum of the survey will be a permanent benchmark referencing mean sea level (msl). The top of well casing elevations will be accurate to within 0.01 foot. All horizontal and vertical data will be submitted to the SWRCB GeoTracker database. A permanent mark on the top of the well casing such as an indelible mark or notch will reference the surveyed point on the casing. All subsequent water level measurements will be tied to this reference point.

Groundwater Sample Collection

The following description relates to each groundwater-monitoring event. Prior to sampling, water levels will be measured using an electronic water level indicator. The depth-to-water measurements will be used along with the surveyed elevations to determine groundwater elevations in each well.

At least three well volumes will be purged from the well to ensure that the groundwater sample is representative of groundwater quality in the water-bearing zone. Field parameters including temperature, pH, specific conductance, and turbidity will be monitored during purging. A sample will be collected after these parameters have stabilized. The wells will be purged using an electric submersible pump or a disposable polyethylene bailer. Should the well become completely evacuated during purging, samples will be collected after the well has recovered to 80 percent of its initial water level.

Groundwater samples will be decanted from a disposable polyethylene bailer into laboratory supplied containers, approved for the analyses required. Groundwater samples will be labeled with the project number, sample ID, and date. The same information will be recorded on the chain-of-custody form. After collection, the groundwater samples will be placed in a cooler with frozen gel packs or ice. The sample cooler will be delivered to a California certified analytical laboratory within two days of collection.

LABORATORY ANALYTICAL METHODS

Groundwater and soil samples will be analyzed for TPH-g, TPH-d and TPH-mo by EPA method 8015 modified; for BTEX by EPA method 8021B, and for MtBE, and other fuel oxygenates by

EPA method 8026B. The analytical laboratory will be certified by the State of California to perform these analyses.

SITE INVESTIGATION REPORT

A Site Investigation Report will be prepared and submitted to the ACEH and the California Regional Water Quality Control Board (RWQCB). The report will include a site history, a description of monitoring well installation, figures showing monitoring well locations, groundwater elevations and flow direction, a tabulation of analytical results, laboratory analytical reports, boring logs, well sampling logs, conclusions and recommendations for additional investigation or remedial work, if necessary.

SCHEDULE

W.A. Craig, Inc. will obtain well permits and schedule subcontractor services upon approval of this work plan by the ACEH. Well installation and sampling activities could be completed in approximately ten working days (allowing for 72 hours curing of the well sealant and sampling 48 hours after well development). The results of soil sample analyses will be completed within 30 days of sample collection. The *Site Investigation Report* will be submitted no later than the last day of the month following the completion of fieldwork.

Table 1. Soil Sample Analytical Results

Sample ID	Location	TPH-g	TPH-d	POG	benzene	toluene	ethyl-benzene	xylenes	MtBE	total lead TTLC	soluble lead STLC	soluble lead TCLP
F01	west end gas tank	730	240	NA	6.7	1.0	11	18	<2.0	6.1	NA	NA
F02	east end gas tank	1,600	290	NA	11	3.7	30	5.6	<10	9.3	NA	NA
F03	east end diesel tank	590	130	NA	3.8	2.2	11	6.1	<10	6.3	NA	NA
F04	west end diesel tank	150	NA	NA	2.1	0.32	4.0	0.63	<2.0	9.0	NA	NA
F05	west end gas tank	840	200	NA	5.6	2.9	18	21	<2.0	11	NA	NA
F06	east end gas tank	490	64	NA	4.0	0.49	1.4	1.6	<2.0	6.4	NA	NA
W01	waste oil tank	300	54	53	1.5	1.1	0.60	1.2	<2.0	13	NA	NA
SP-1-4 SP-4-4	soil stockpile	150	170	600	0.12	0.28	0.24	1.5	<0.5	600	20	1.6

Notes:

units for soil samples are miligrams per kilogram (mg/kg)

units for STLC and TCLP soil sample is milligrams per liter (mg/L)

NA = not analyzed

POG = petroleum oil & grease with silica gel cleanup

< = less than the specified laboratory detection limit

see soil sample locations on **Figure 2**

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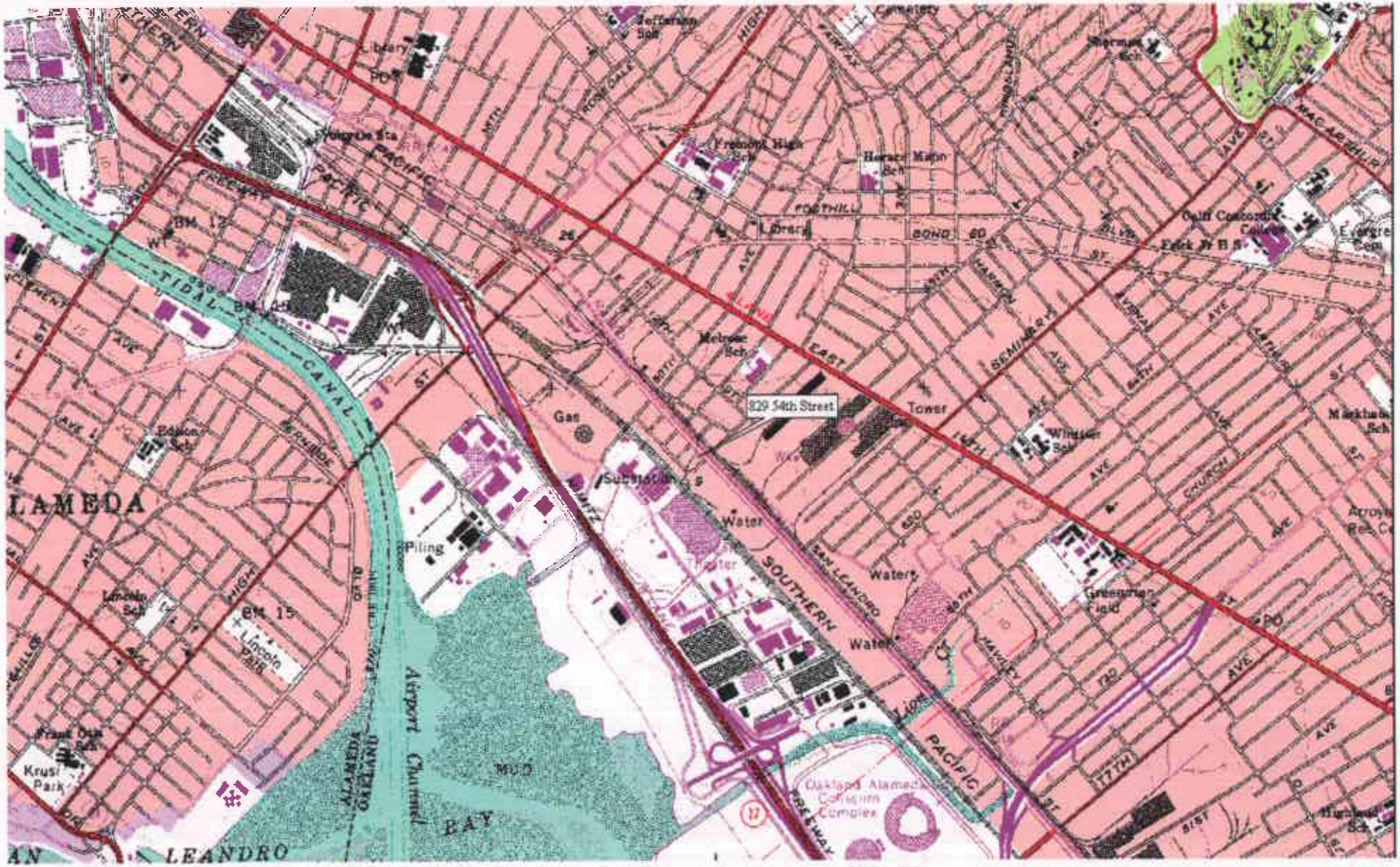


W. A. CRAIG, INC.

Environmental Contracting and Consulting

6940 Tremont Road

Dixon, California 95620

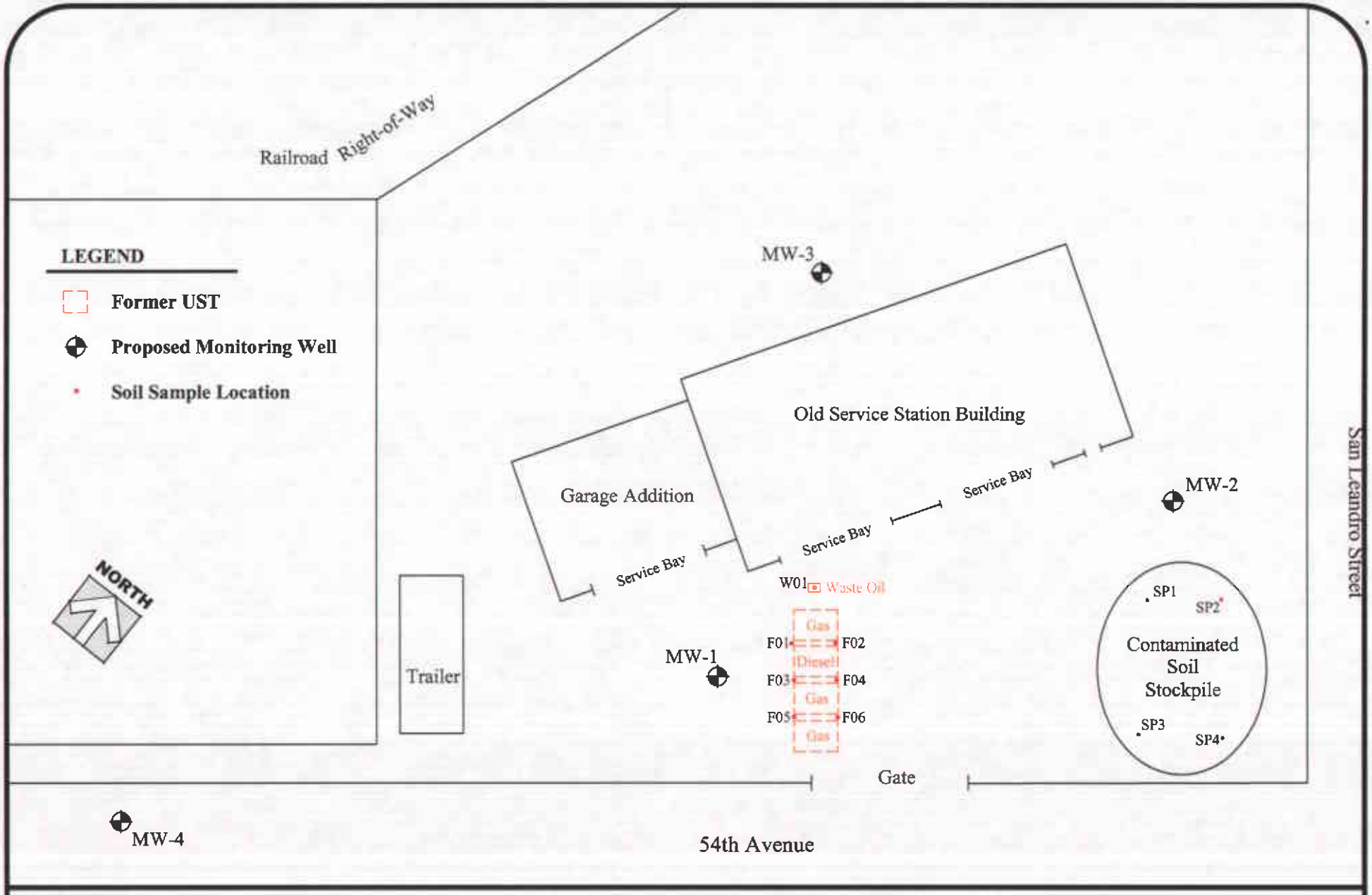
Site Location Map

A-Paratransit Corporation

829 54th Street, Oakland, California

FIGURE 1

Job No4104



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Site Plan and Proposed Monitoring Well Locations

A-Paratransit Corporation
829 54th Avenue
Oakland, California

Project #: 4104	Figure: 2
Date: 12/19/03	
Approx. Scale: 1" = 40'	