

**WORK PLAN FOR
PRELIMINARY SITE ASSESSMENT
3924 MARKET STREET
OAKLAND, CALIFORNIA**

Job No. #70007-005-01

**Submitted by:
Science & Engineering Analysis Corporation**

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Prepared for:

**Mr. Peter Sher
San Francisco French Bread
7801 Edgewater Dr.
Oakland, California 94621**

Prepared by:

Paul D. Horton

**Paul D. Horton, R.G.
Principal Hydrogeologist**



Reviewed by:

Neal A. Farrar

**Neal A. Farrar, R.E.A., #03477
Principal Geologist
Business Development Manager**

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1.0 INTRODUCTION

Science & Engineering Analysis Corporation (*SEACOR*) has prepared the following work plan for a groundwater investigation on behalf of San Francisco French Bread Company (SFFB). The groundwater investigation has been requested by the Alameda County Health Care Services Agency Department of Environmental Health (ACDEH) in a letter dated January 7, 1993. In the letter the ACDEH requests that a work plan for groundwater investigation be prepared. The work will adhere to: 1) the Tri-Regional Board staff recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites, dated August 10, 1990; 2) the State Water Resources Control Board LUFT Field Manual; and 3) Article 11 of Title 23, California Code of Regulations.

2.0 BACKGROUND

The subject site located at 3924 Market Street in Oakland, California (see Figure 1) is the former Toscana Baking Company facility. The site was formerly used to produce and distribute baked food products. A small 500 gallon underground diesel storage tank was utilized at the property to fuel distribution vehicles. On June 6, 1991 the tank and associated piping was removed by Paradiso Construction Company. Representatives of Kappraelian Engineering Inc. were present during tank removal operations to document the tank removal, collect soil samples and if necessary, direct soil excavation activities.

The results of soil sampling conducted at the time of tank removal by Kappraelian Engineering Inc., indicated the presence of Diesel and Gasoline hydrocarbons in the soil beneath the tank pit. However, the initial concentrations detected were at a maximum of 26 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPH-g) and 4.7 ppm total petroleum hydrocarbons as diesel TPH-d.

On June 21, 1991, the tank-pit was over-excavated to a depth of 14 feet below grade to remove any hydrocarbon impacted soil. Following this excavation, five soil samples were collected from the excavation sidewalls and bottom. No TPH-as-Diesel was detected in any of these samples. Gasoline hydrocarbons were detected in all of these samples. Benzene was detected at a maximum of .01 ppm and TPH-as-Gasoline was detected at a maximum of 210 ppm in one side-wall sample from 13 feet below grade. Tank pit over-excavation was documented by Groundwater Technology Inc. in their report "Underground Storage Tank Closure, July 1991" (GTI, 1991).

3.0 SCOPE OF WORK

This proposed environmental assessment program is based upon preliminary characterization data provided from the Tank Closure Report (GTI, 1991). Preliminary groundwater characterization work will involve the preparation of a Health and Safety Plan, permitting, and the installation and sampling of one groundwater monitoring well located within 10 feet of the former tank location in the downgradient direction. Gradient direction at the site will be determined through review of existing monitoring data from sites in the immediate area. The following sections detail the specific work steps to be conducted.

3.1 HEALTH AND SAFETY PLAN

Prior to conducting any field work, a site-specific health and safety plan as required by 29 CFR 1910.120 will be prepared. The health and safety plan will detail field procedures regarding various potential safety hazards and potential chemical hazards that may be encountered during site activities.

3.2 FILE REVIEW

Prior to selection of a well location, *SEACOR* will conduct a review of available files for sites in proximity to the SFFB site. The available data will be utilized to determine the groundwater gradient in the immediate area of the site. The data and rationale for well location will be presented in a letter under separate cover to ACDEH prior to proceeding with well installation.

3.3 UTILITY CLEARANCE

Prior to conducting any field work, a utility clearance survey will be conducted in the drilling area to ensure that the drilling activities do not encounter any subsurface utilities. Additionally, Underground Service Alert (USA) will be notified at least 48 hours prior to drilling on site.

3.4 SOIL BORING AND MONITORING WELL INSTALLATION

One soil boring will be drilled at or near the location shown on Figure 2 using a truck mounted drill rig equipped with 8.5 inch outside diameter hollow stem augers. The boring will be drilled to a total depth of approximately 25-feet below grade, or 15-feet below first encountered groundwater, unless a competent aquitard is intercepted. During drilling, continuous cores will be collected from the boring using a 3.5

inch diameter by 5-foot long core barrel. The cores will be logged in the field by a geologist in accordance with the Unified Soil Classification System (USCS) to produce an accurate lithologic and stratigraphic profile.

Samples from the cores will be field screened using a photo-ionization detector (PID) equipped with a 10.2 eV lamp. Soil samples will be collected from the 5-foot cores in 6-inch long brass tubes and sealed with teflon tape, plastic caps and duct tape. The soil samples will be labeled with the appropriate borehole information, time and date of collection, and placed on ice for subsequent transport and analysis at a State of California certified analytical laboratory. Chain-of-custody procedures will be followed at all times. Selected soil samples will be analyzed using U.S. Environmental Protection Agency (EPA) Methods 5030/8015/8020 for total petroleum hydrocarbons (TPH)-as-gasoline with distinctions for benzene, toluene, ethylbenzene, and xylenes (BTEX), and for total diesel hydrocarbons by GC/FID EPA Method 3550.

A monitoring well will be constructed in the boring consisting of 2-inch diameter, 0.020-inch machine slotted, schedule 40 polyvinylchloride (PVC) well screen. The well screen will be installed from the bottom of the borehole to approximately 5-feet above the discovered groundwater surface. A 2-inch diameter blank PVC casing will complete the well from the top of the screened interval to within 1-foot of surface grade. A gravel pack consisting of #2/12 Lonestar sand will be placed in the annular space from the bottom of the boring to approximately 2-feet above the screened interval. A sanitary seal consisting of 2-feet of hydrated bentonite pellets will be placed on top of the gravel pack, and cement/bentonite grout will fill the remaining annulus to surface grade. The monitoring well will be completed at surface grade with water tight traffic rated street boxes set in cement, and a water tight, locking well cap.

3.5 MONITORING WELL DEVELOPMENT AND SURVEYING

Monitoring well development will be achieved using a surge block and a bailer to alternately surge the screened portion of the well bore and purge the sediment laden water. Development will continue until the water produced is relatively sediment free.

3.6 GROUNDWATER MONITORING AND SAMPLING

Depth-to-groundwater elevations will be obtained from the top-of-casing in the monitoring well using a water level indicator graduated to 0.01 foot.

Groundwater samples will be collected from the new monitoring well subsequent to well development and purging. The well will be purged prior to sampling by hand bailing at least four well volumes. After allowing the water level in the monitoring well to recover adequately for sampling, groundwater samples will be collected using a clean teflon bailer and will subsequently be decanted in laboratory supplied sample vessels. Samples will be tightly capped with zero headspace, then labelled with the sample number, sample time and date, and immediately placed on ice in an insulated cooler. All samples will be logged onto a chain of custody manifest for delivery to a state certified laboratory.

Groundwater samples will be chemically analyzed by EPA Methods 5030/8015/8020 for TPH-as-gasoline and BTEX and for TPH as Diesel. One rinsate blank will also be analyzed by the same methods as part of the quality assurance/quality control (QA/QC) program.

3.7 DECONTAMINATION PROCEDURES

During drilling operations, all augers, sampling tools, and down hole equipment will be decontaminated by steam cleaning prior to use. Rinsate water will be contained during drilling operations and will be stored in 55 gallon drums. All soil cuttings generated during the drilling operations will be contained in 55 gallon drums on site pending laboratory analysis for a determination of proper disposal. Prior to using any equipment in a monitoring well, the equipment will be decontaminated by double washing with a laboratory grade detergent in clean water, and rinsing using deionized water. All purge water generated during groundwater sampling procedures will be contained on site in 55 gallon drums pending proper disposal.

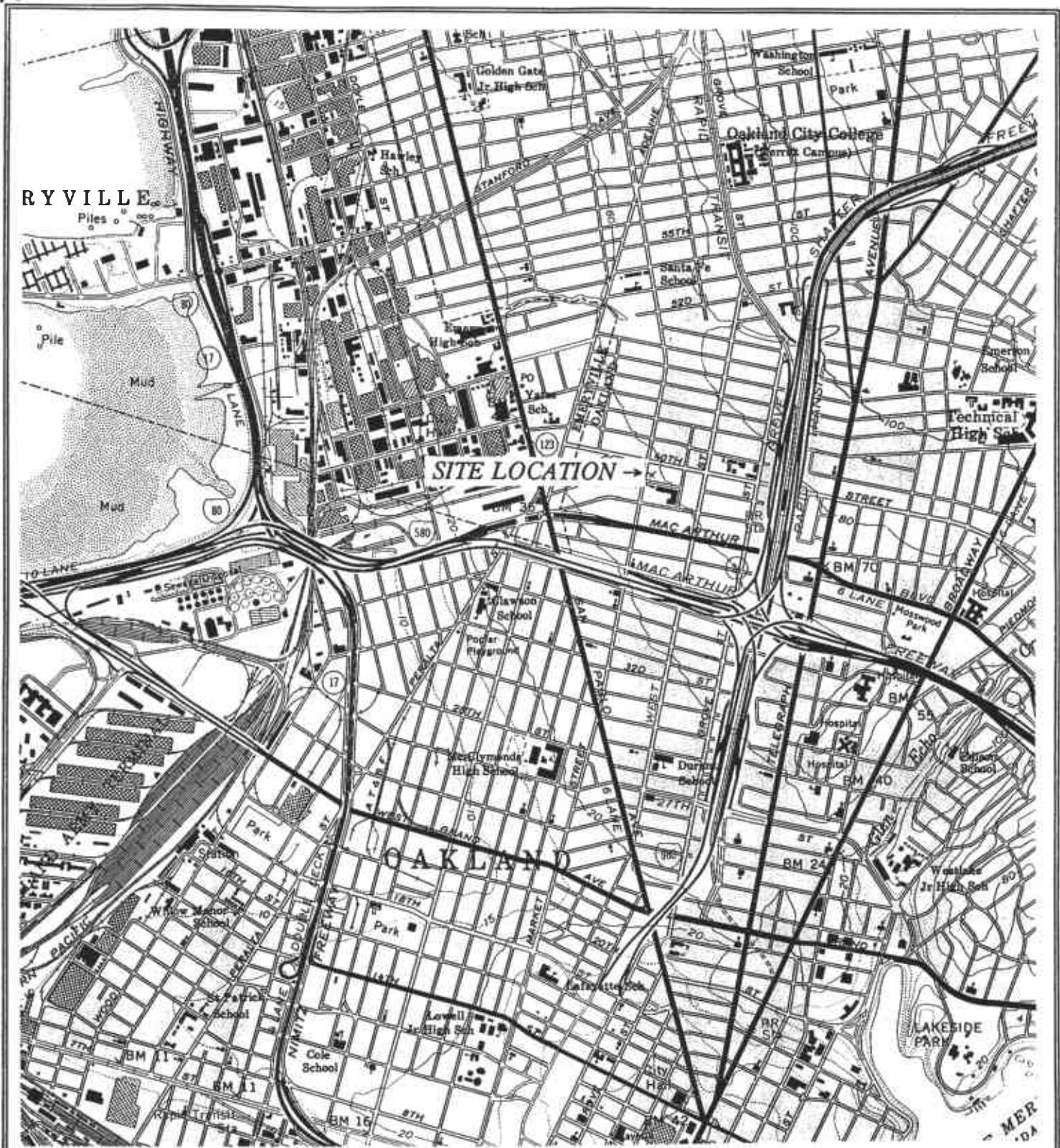
3.8 FINAL REPORTING

A preliminary assessment report will be prepared based on data from the newly installed groundwater monitoring well. At a minimum, the report will contain the following:

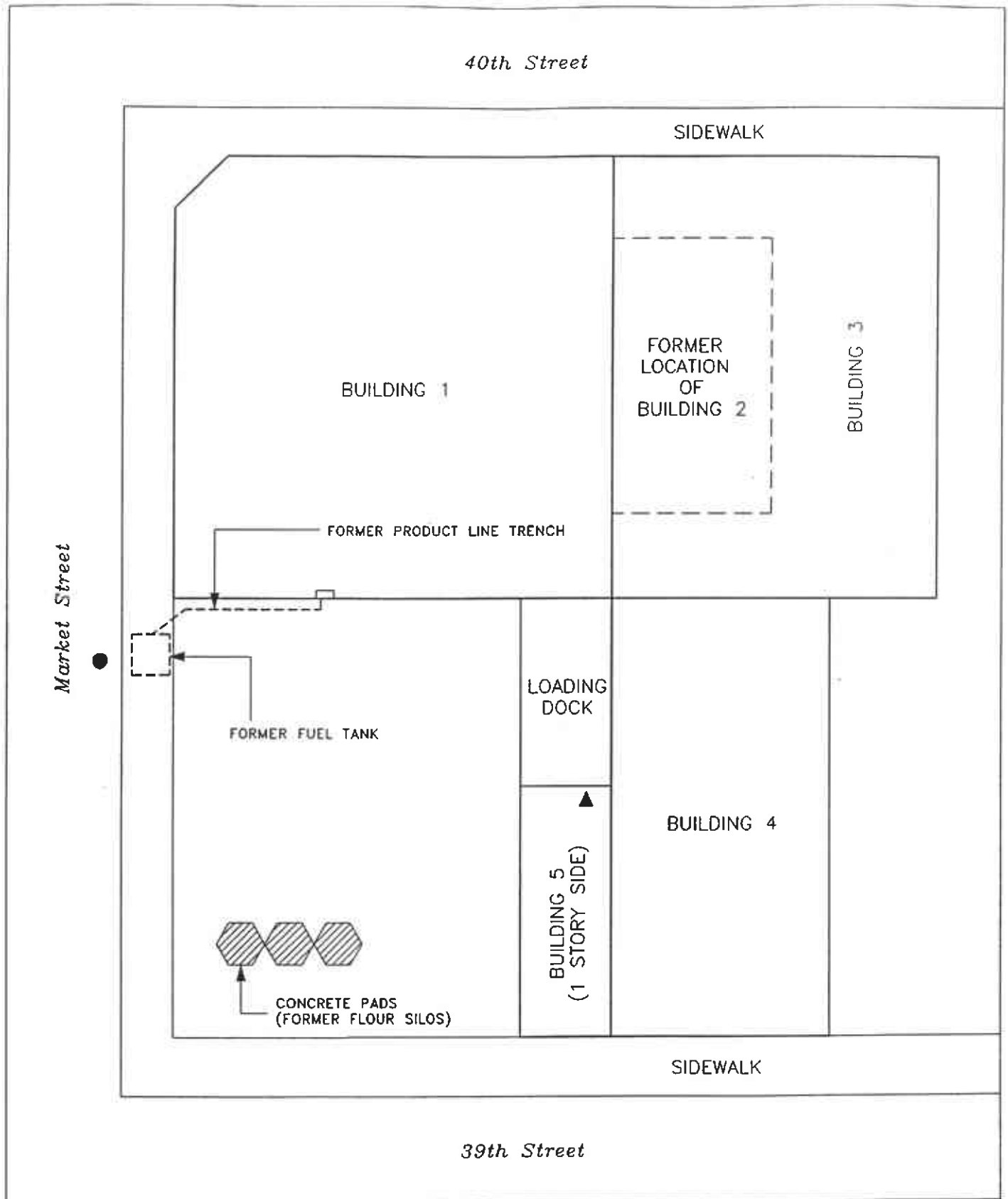
- details of field procedures and operations;
- boring logs with as-built well construction details;
- tabular results of soil and groundwater analysis results; and
- conclusions and discussion of results.

4.0 CLOSURE

SEACOR is pleased to have prepared this work plan on behalf of San Francisco French Bread. If you have any questions or require further information, please feel free to contact us at our Concord office at (510) 686-9780.



DRAFTED BY: TS	CHECKED BY: PDH	PROJECT NO. 70007-005-01	FIGURE 1	SEACOR 1390 Willow Pass Road Suite 360 Concord, CA 94520
DWG. DATE: 02/22/93	REV. DATE: 02/22/93			
FILE NAME: SFFBOAKL.F01				



LEGEND:

- PROPOSED MONITORING WELL
- ▲ DOMESTIC WELL



**FIGURE 2
PROPOSED WELLS
3924 MARKET ST., OAKLAND, CA**

Client:
San Francisco French Bread Co.

Project: 70007-005-01 **Date:** 2/22/93

SEACOR
1360 Willow Pass Rd. #360 Concord, CA