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Alameda County
Environmental Health

March 10, 2009

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Subject: Data Gap Workplan for Updated Site Conceptual Model

Fuel Leak Cases - AlcoPark Garage
165 13th Street, Oakland, California
PSI Project No. 575-8G008

- References:
1. Professional Service Industries, Inc., November 10, 2000, "Site Conceptual Model Report, Alcopark Fueling Facilities, 165 13th Street, Oakland, California," Project No 575-0G041.
 2. Alameda County Environmental Health (ACEH), June 19, 2008, "Fuel Leak Case No. RO0000401 and GeoTracker Global ID T0600100049, ALCO Park Garage, 165 13th Street, Oakland, CA 94612.

Mr. Khatri:

Professional Service Industries, Inc. (PSI) has prepared this Data Gap Workplan for the three former and current underground storage tank (UST) systems at the AlcoPark Garage, located at 165 13th Street in Oakland, California (see Figure 1). This workplan has been prepared in response to your referenced letter (ACEH, 2008) which requested an update to the Site Conceptual Model (SCM) followed by a workplan for additional characterization of the site to address data gaps. In our subsequent meeting at your office, it was stressed that identification of data gaps for the site was essential. Since then, in doing research for the project, we have identified a number of data gaps which need to be addressed in the updated SCM. Additionally, there are data that were presented in our referenced initial SCM (PSI, 2000) that should be re-checked to ensure that they are up-to-date.

Data Gaps and Updates - Proposed Work Scope

A list of the data gaps and other issues identified to date, along with an outline of the associated proposed scope of work for supplemental investigation to address them, are presented below. Since the result of any investigation performed at the site will have to be incorporated into a revised SCM, it is our opinion that rather than starting by revising the SCM, it will be more effective to first perform the outlined scope of work (to help "close" identified data gaps) and then incorporate those results into an updated SCM.

Task 1 — Updated Preferential Pathway Evaluation

- Update (or confirm) information and review available plans from City of Oakland Public Works regarding locations and depths of underground utilities (i.e. storm water, sewer).
- Call USA to mark site with existing underground private utilities (i.e. gas, electric). This needs to be performed as part of setup for Tasks 3 and 4.
- Evaluate geologic information from logs and maps to identify soil layers that may act as pathways (or barriers) to contaminant transport.
- Transfer data onto maps (if applicable) and evaluate potential preferential pathways.

Task 2 — Updated Sensitive Receptor Survey

- Obtain updated EDR database well search (½-mile radius from site).
- Contact the Alameda County Public Works Agency to review current well location maps and available well records (½-mile radius from site). Compile data (i.e. install date, construction details, decommission info., etc.) for water supply wells, if any.
- Update evaluation of ingestion, vapor inhalation and direct contact (dermal) pathways.
- Discuss Lake Merritt beneficial use (RWQCB Water Quality Control Plan) and re-state MTBE Fate/Transport study with aquatic protection conclusions.
- Evaluate the need for vapor survey, risk assessment, and/or deed restriction.

Task 3 – Evaluate Extent of Contamination at Site No. 1 (Closed-in-Place Tanks)

- Choose locations for 2 Geoprobe sampling points (See Figure 2) to obtain additional soil and groundwater data downgradient of Site No. 1.
- Collect soil (at groundwater interface) and groundwater samples and perform chemical analysis for TPH-G and VOCs.
- Evaluate residual contamination in soil / groundwater at Site No. 1 (review historic lab results).

Task 4 - Evaluation of Contaminant Plume at Site No. 2 (Active AlcoPark Fueling Facility)

- Choose locations for 3 Geoprobe groundwater sampling points (See Figure 2) to obtain additional MTBE and BTEX data downgradient of the site.
- Collect soil and groundwater samples and perform chemical analysis for TPH-G and VOCs. Other testing of the physical characteristics (i.e. total dissolved solids, porosity and permeability) of select soil and water samples may also be recommended.



- Evaluate newly generated chemical data and groundwater flow data to evaluate current downgradient limit of contaminant plume (figure).
- Evaluate available analytical data vs. time for MTBE / BTEX plume to look for trends.
- Evaluate possible risk of plume being intercepted by downgradient receptors (i.e. water wells, adjacent properties, Lake Merritt, etc.).
- Evaluate the need for additional downgradient well(s) and make recommendations as necessary.

Task 5 – Evaluate Contamination at Site No. 3 (Former Waste Oil Tank)

- Evaluate location of well MW-6 (c. 1992) to determine the position of the well with respect to the former oil tank (review groundwater gradient vs. former tank and well locations).
- Evaluate whether the historic lab results from this well adequately characterized the groundwater conditions downgradient of the former oil tank.

Task 6 - Revise the Groundwater Monitoring Program

- Change the groundwater monitoring frequency from annual to quarterly for a period of one year (frequency to be re-evaluated at the end of the year).
- Survey site and all monitoring points in accordance with State GeoTracker requirements. Prepare and upload new figures and survey data to the State GeoTracker system.
- Update groundwater monitoring methodology to include well purging and purge data sheets from the sampled wells and water level data from all wells.
- Provide updated historic groundwater data tables for all monitoring points.
- Produce improved charts of contaminants vs. time.

The scope of work outlined in the sections above is intended to address the data gaps identified to date. Information developed by this scope of work may result in additional (or continued) data gaps, resulting in the need for further investigation. Additionally, certain data generated by this scope of work will be included with the periodic groundwater monitoring reports, as applicable.

Updated Site Conceptual Model

Once the recommended scope of work has been completed, the data generated will be used, in concert with the referenced initial SCM and with subsequent documents and groundwater monitoring data, to produce an updated SCM which is to include;

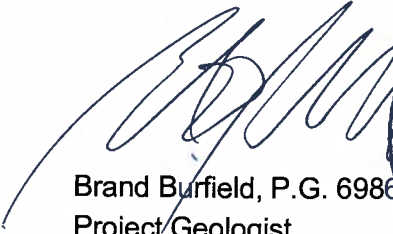
- geologic cross sections to show subsurface features;
- plots of chemical concentrations vs. time and vs. distance from contaminant source;
- summary tables of chemical concentrations in soil and groundwater;
- maps which illustrate sources and extent of contamination, preferential pathways and potential receptors;
- compilation of boring logs, well construction diagrams and well survey maps;
- discussion of groundwater beneficial use;
- proposal of water quality objectives; and
- discussion of whether alternate groundwater remediation measures may be necessary to achieve water quality objectives.

The goal of the revised SCM will be to identify any additional data gaps or other informational issues regarding risk from the contaminant plume to human health and groundwater resources. These additional issues may need to be addressed with additional site investigation or may be able to be addressed in a risk assessment, which will evaluate the impact of the residual contamination and groundwater contaminant plume on public health and the environment.


Please respond with your comments or concurrence with our plan for additional work. Once you have responded, PSI can provide a time schedule for the tasks either agreed upon or as otherwise modified or recommended by the ACEH.

Respectfully Submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.


Brand Burfield, P.G. 6986
Project Geologist

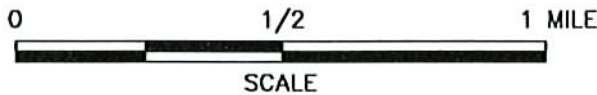
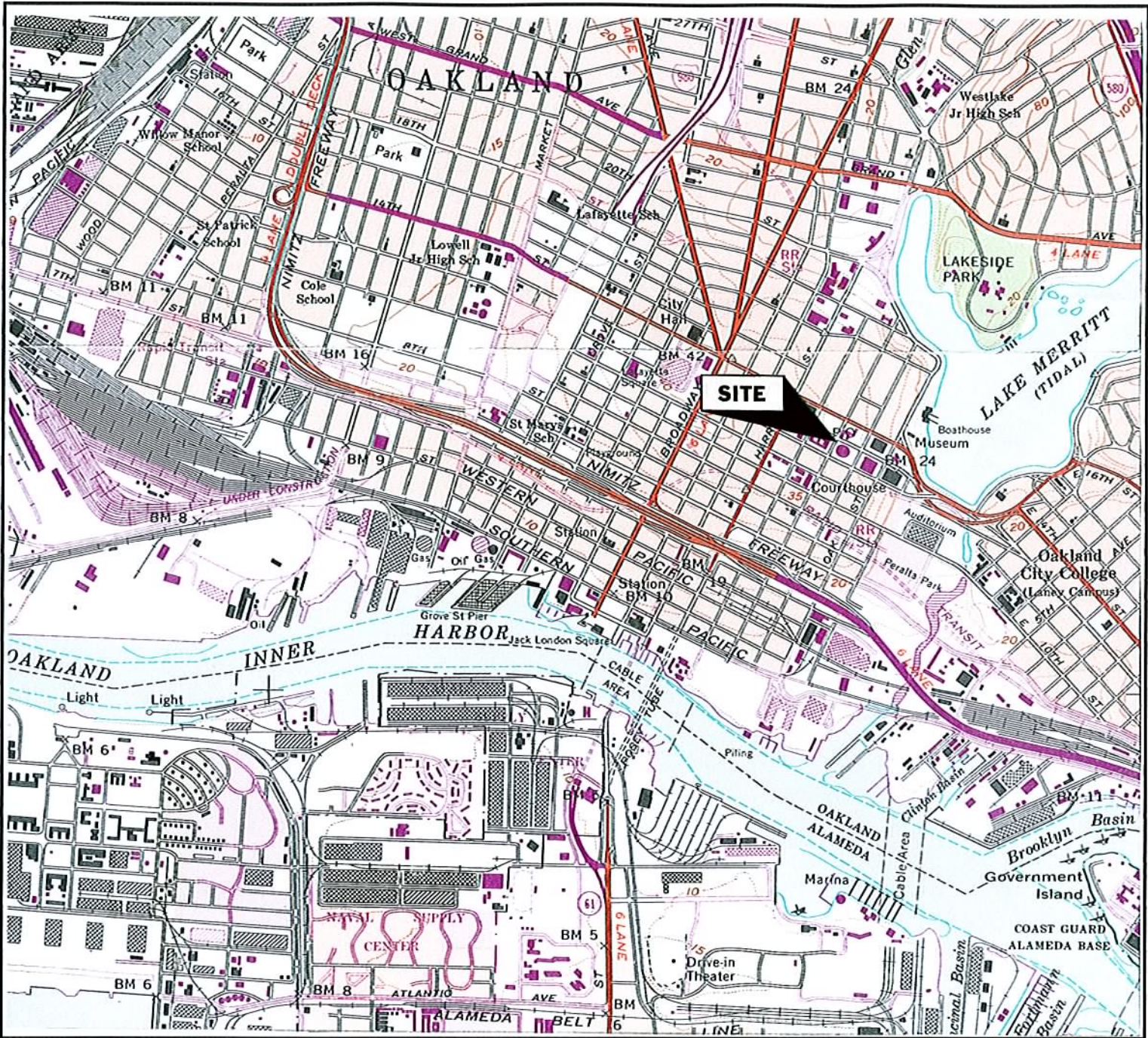



Frank R. Poss
Department Manager

cc: Rod Freitag – County of Alameda General Services Agency

Attachments: Figures 1 and 2



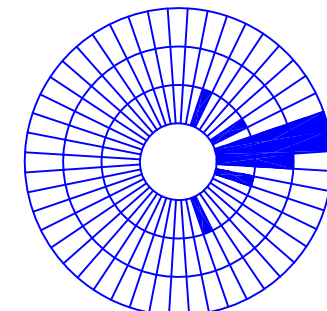
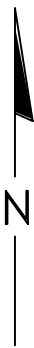
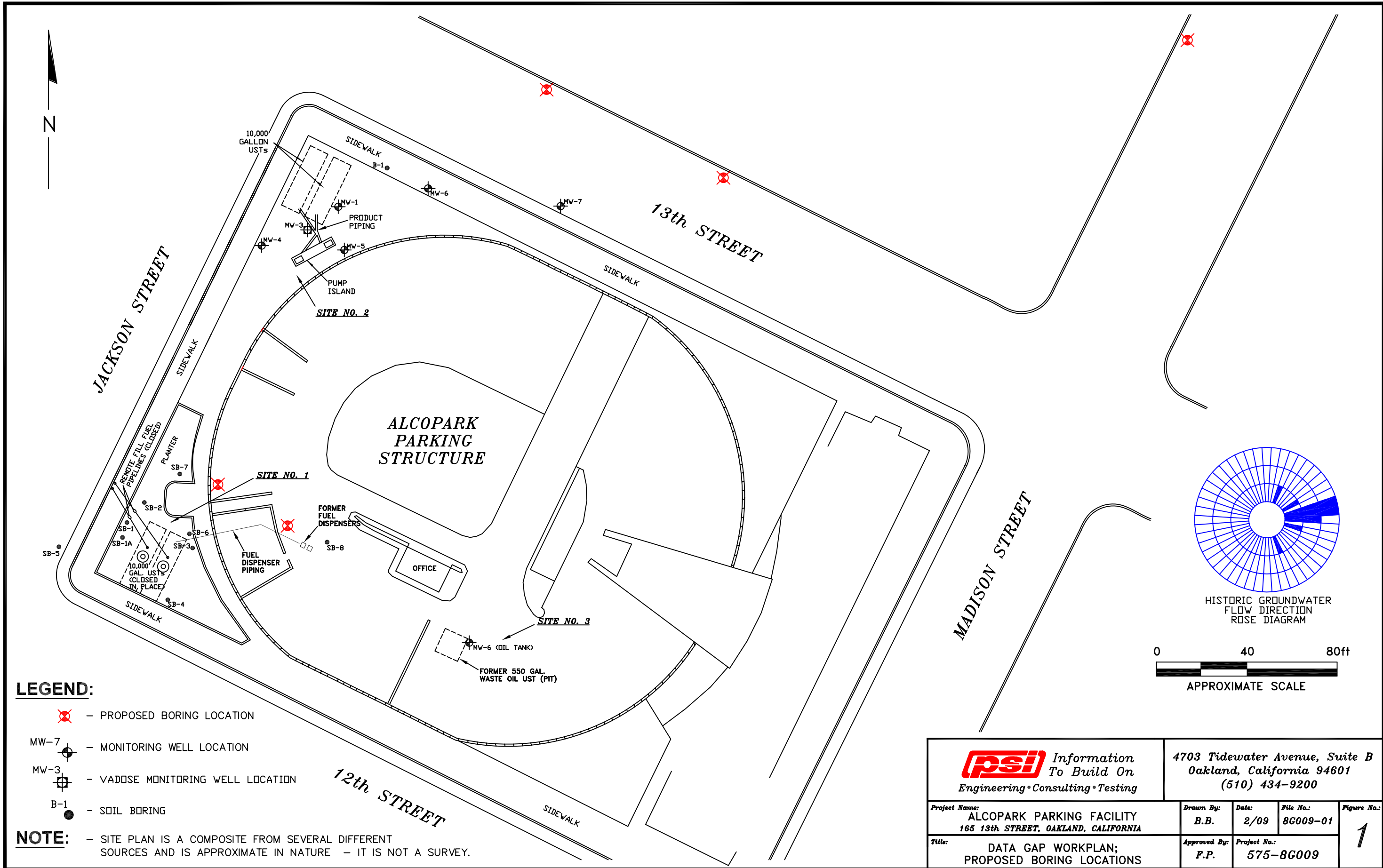


REFERENCE:
 U.S.G.S. OAKLANDWEST, CALIFORNIA, 1959
 PHOTOREVISED 1980



SITE LOCATION
 ALCOPARK FUELING STATION
 165 13TH STREET
 OAKLAND, CALIFORNIA
 PROJECT NUMBER: 575-4G009

DATE: 3/04	CKD BY: F.P.	FIGURE NO: 1
FILE NO: 4G009-1		DRAWN BY: B.S.



HISTORIC GROUNDWATER FLOW DIRECTION ROSE DIAGRAM



APPROXIMATE SCALE

LEGEND:

- PROPOSED BORING LOCATION
- MONITORING WELL LOCATION
- VADOSE MONITORING WELL LOCATION
- SOIL BORING

NOTE:

- SITE PLAN IS A COMPOSITE FROM SEVERAL DIFFERENT SOURCES AND IS APPROXIMATE IN NATURE - IT IS NOT A SURVEY.

Information To Build On Engineering • Consulting • Testing		4703 Tidewater Avenue, Suite B Oakland, California 94601 (510) 434-9200			
Project Name: ALCOPARK PARKING FACILITY 165 13th STREET, OAKLAND, CALIFORNIA		Drawn By: B.B.	Date: 2/09	File No.: 8G009-01	Figure No.: 1
Title: DATA GAP WORKPLAN; PROPOSED BORING LOCATIONS		Approved By: F.P.	Project No.: 575-8G009		