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October 28, 1991

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Oakland, CA 94621

**Subject:** Proposed Site Assessment  
FAA Oakland Airport TRACON Facility

Dear Mr. Chan:

This letter presents a proposed site investigation plan with a schedule and anticipated costs for petroleum hydrocarbons in groundwater and soil near a former underground diesel tank at the Federal Aviation Administration (FAA) Oakland Airport Terminal Radar Approach Control (TRACON) facility. Analytical results of a soil sample collected within the diesel tank backfill may indicate total petroleum (TPH) concentrations of 375 milligrams per kilogram (mg/kg), though this sample was analyzed from a broken container. In addition, a groundwater sample collected with the tank pit indicates a TPH concentration of 36.6 milligrams per liter (mg/l); but also represented hydrocarbons generally above the diesel range. To obtain site closure, the FAA must demonstrate that a potential off-site or previous source area is upgradient of the former FAA TRACON tank location and that this source has similar properties to the higher carbon range petroleum hydrocarbons detected in the groundwater beneath the TRACON tank. Also, the FAA must demonstrate that the former TRACON diesel tank did not contribute to the TPH concentration detected in the groundwater at the site.

## BACKGROUND

The site is located at 8250 Earhart Road, Oakland in the northeast quarter of the southwest quarter of Section 20, Township 2 South, Range 3 West of the San Leandro 7 1/2 minute quadrangle, Alameda County, California (Figure 1). The FAA Oakland Airport TRACON facility consists of a control building with an emergency generator and former underground 1,000-gallon-capacity diesel tank (Figure 2). The site is located in a portion of a former Naval fuel storage area. The land is owned by the Port of Oakland and leased by the FAA. The

facility is at an elevation of approximately 7 feet above mean sea level (MSL). The FAA contracted with Advanced Sciences, Inc. (ASI) to conduct soil sampling following the removal of the tank by the FAA.

The 1,000-gallon-capacity diesel tank was removed by the FAA on May 2, 1991, under a permit issued by Alameda County Health Agency, Department of Environmental Health (DEH). Upon excavation, the tank appeared intact with no visible leaks or holes. ASI field personnel observed no soil staining and detected no hydrocarbon odors adjacent to or in the soil beneath the tank. The presence of hydrocarbon odors was not detected by the PID in the excavated soil or in the tank excavation.

TPH and BTEX were not detected in soil samples collected beneath the tank. A soil sample collected in the tank backfill was received by the laboratory in a broken container; thus sample integrity had been compromised and analytical results were not valid.

Groundwater was observed and sampled in the tank pit excavation at a depth of approximately 5 feet below ground surface. This groundwater sample (TRACON-1) had a TPH concentration of 36.6 mg/l, with the majority of hydrocarbons slightly less than, at, and greater than  $C_{23}$ , indicating the presence of hydrocarbons heavier than the diesel fuel previously stored in the FAA tank. The analytical results also indicate BTEX was not detected in the groundwater beneath the tank. These petroleum hydrocarbons may be fuel oil. Because laboratory analysis indicates that the petroleum in groundwater may not be diesel, the FAA notified the landowner, the Port of Oakland, of their concern for potential past releases associated with other tanks near or at the site.

Based upon analytical results and tank observations presented and on behalf of the FAA, site closure was requested in an August 30, 1991 letter submitted by ASI to the Alameda County DEH.

In a letter to Mr. Jim Williams of the FAA dated September 16, 1991, Mr. Barney Chan of the Alameda County DEH disagreed that the petroleum hydrocarbons found in the groundwater are not from the former FAA TRACON 1,000-gallon diesel tank.

Further, Mr. Chan requested that the FAA provide:

- chromatograms of diesel fuel and any and all fuel oil standards;
- chromatogram of the soil stockpile sample (Sample TRACON 5)
- evidence of potential off-site sources of fuel oil or potential upgradient sources of the petroleum hydrocarbons found in the groundwater beneath the TRACON tank; and
- a complete history of the fuel contents used in the tank with inventory reconciliation and tank tightness test results.

## PROPOSED SCOPE OF WORK

This section presents a proposed work plan to:

- assess potential on-site and off-site sources of petroleum hydrocarbons;
- assess the existence and location of U.S. Navy fuel oil tank(s) at or near the site;
- further assess the type and nature of hydrocarbons within groundwater beneath the site through record research; and
- assess the type and nature of potential hydrocarbons within the tank backfill soil and excavation.

A Phase I site assessment will be conducted to identify potential sources of petroleum hydrocarbons within 1/2 mile of the site and to possibly identify the location(s) of U.S. Navy fuel oil tank(s). In addition, two soil samples will be collected within the tank backfill to assess the type and concentrations of potential petroleum hydrocarbons within the tank backfill.

### Phase I Site Assessment

A Phase I Site Assessment will be conducted by reviewing available city, county, federal, and U.S. Navy records for former and existing underground storage tanks, fueling areas, hydraulic gradient information, and aboveground storage tanks within 1/2 mile of the site.

The following sources will be searched for records:

- Federal Superfund Sites (CERCLIS)
- National Priority List Sites (NPL)
- Hazardous Waste and Substances Site List (CORTESE)
- Sites Authorized for Cleanup Under California Bond Expenditure Plan (BEP)
- Hazardous Waste Properties (HWP)
- Abandoned Site Program (ASPIS)
- Leaking Underground Storage Tanks (LUST)
- Alameda County Department of Health

U.S. Navy records also will be searched in an attempt to identify any fuel oil tanks formerly or currently beneath the site.

### Soil Sampling and Fuel Identification

In addition to the record search, up to eight soil samples will be collected within the tank backfill and excavation sidewalls during reexcavation of the tank backfill. The samples collected will be placed in 250-milliliter (ml) glass jars. Existing diesel fuel in a replacement aboveground

diesel tank also will be sampled and placed into one 40-ml glass vial. The jars and vial will be sealed with a teflon-lined cap, labeled, logged, placed into a sealable plastic bag, and put into insulated coolers with ice. (The fuel sample will be kept separate from the soil samples.) The samples will be taken under strict chain-of-custody protocol to an on-site mobile laboratory from Mobile One Laboratories of San Diego, California. Soil samples selected for fuel fingerprint will be sent under strict chain-of-custody protocol to Calscience Environmental Laboratories, Inc. of Stanton, California.

The soil samples will be analyzed for TPH and BTEX using California Department of Health Services methodology. If petroleum hydrocarbons are detected, then the type of fuel will be identified (fuel fingerprint) by Calscience Environmental Laboratories, Inc.

## SCHEDULE

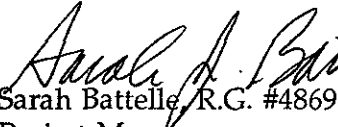
The Phase I Site Assessment can begin in November, contingent upon County DEH approval.

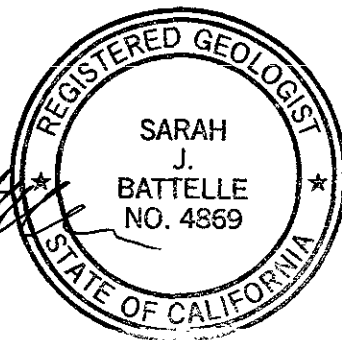
Three to four weeks following receipt by ASI of the tank backfill soil analytical results, a Phase I Site Assessment report will be submitted to the Alameda County DEH and the California Regional Water Quality Control Board. The Site Assessment Report will present results of the record searches as well as the tank backfill soil analytical results with chromatograms to identify the hydrocarbon range for each sample.

ASI will perform and oversee all work in accordance with generally accepted standards of professional engineering and geologic practice. Our recommendations, specifications, or professional opinions would conform with these same standards. No other warranty is either expressed or implied.

If you have any questions or comments, please contact Len Sinfield or me at (619) 560-8552.

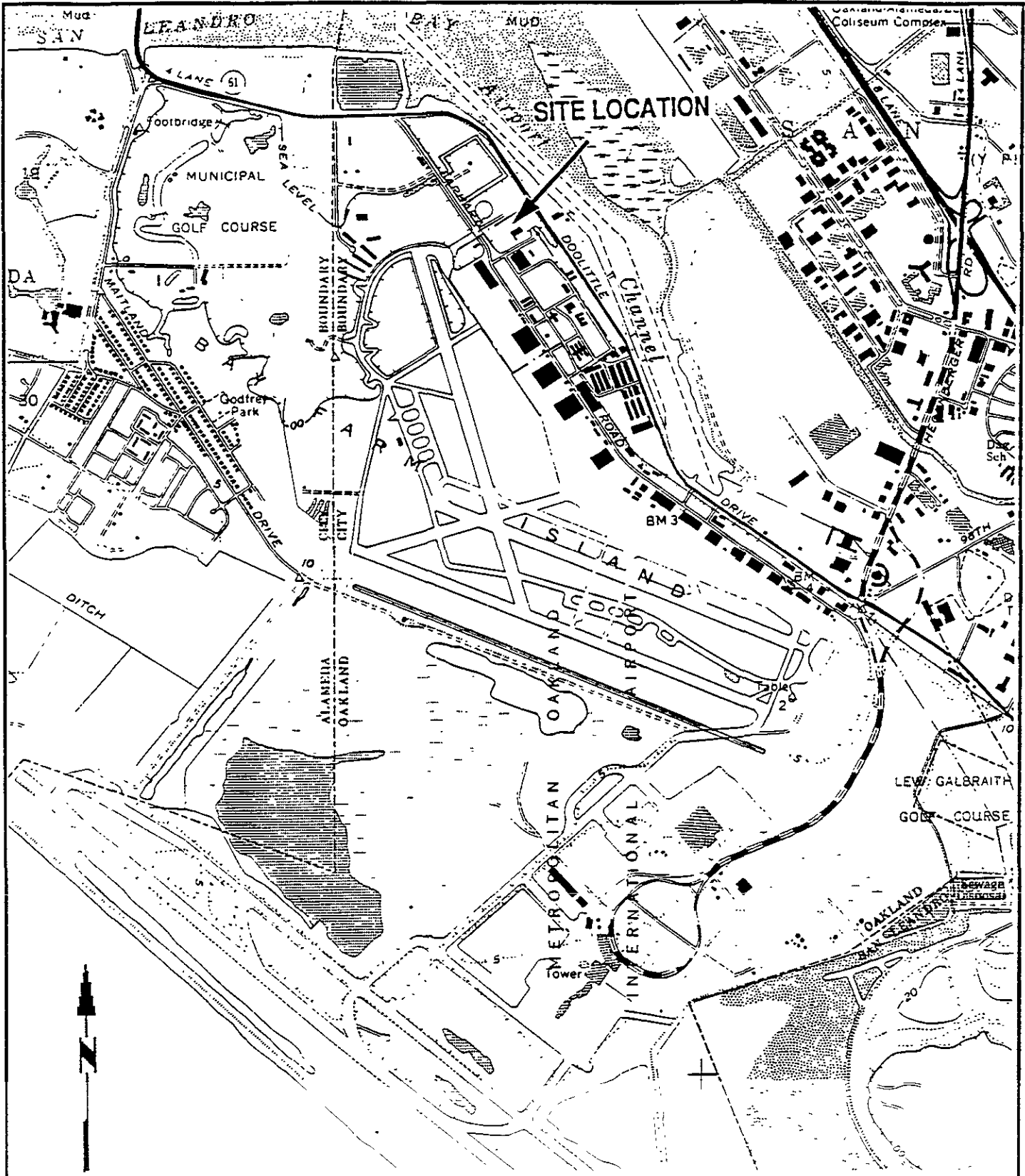
Sincerely,

  
Sarah Battelle, R.G. #4869  
Project Manager



Attachments: Figure 1 – Site Location  
Figure 2 – Site Plan

cc: Charley Chamness – FAA, Los Angeles



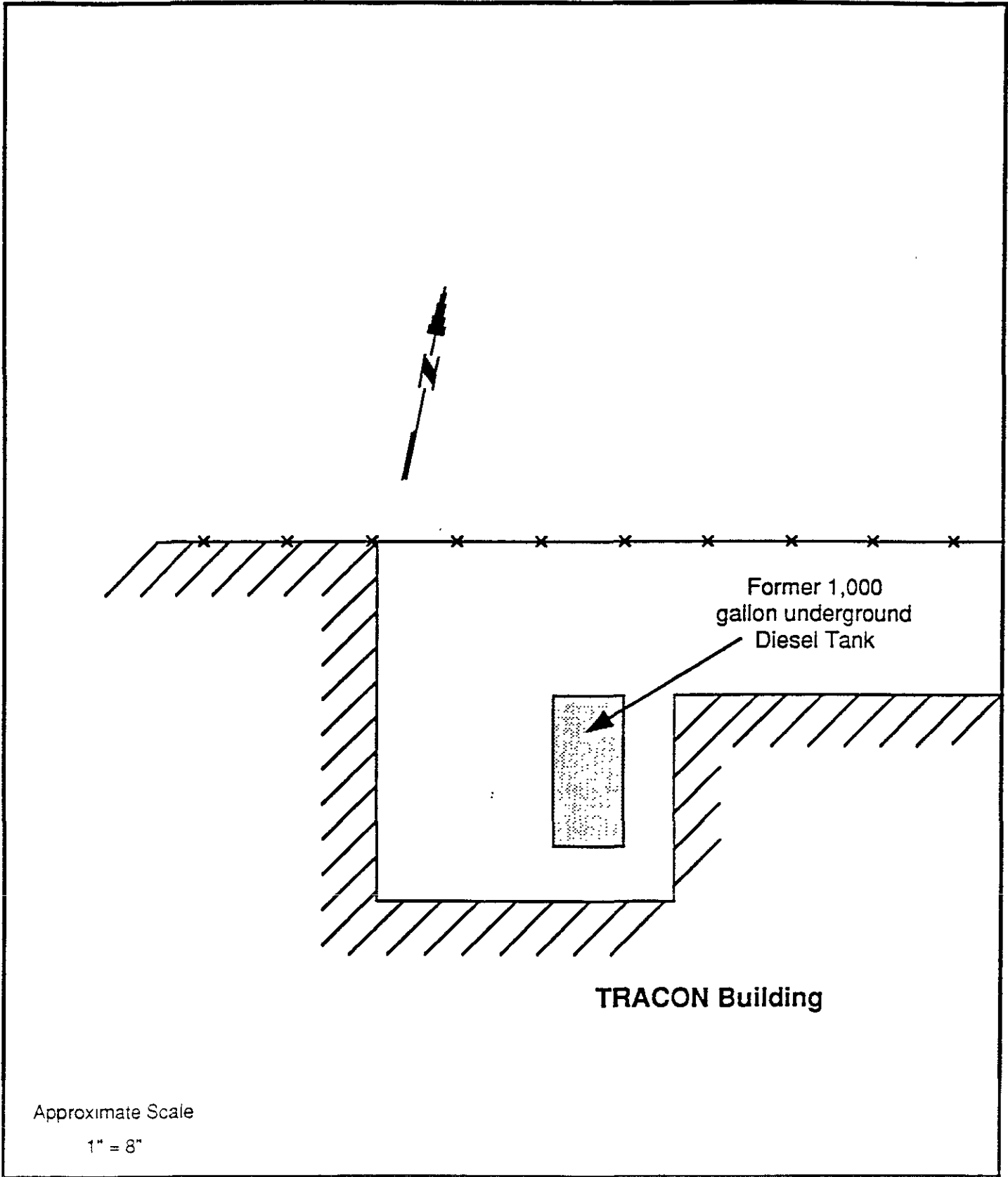
Scale: 1:24,000 Reference: U.S.G.S. San Leandro, Calif. 7 1/2 Minute Topographic Quadrangle Map

**Site Location**  
**Federal Aviation Administration**  
**Oakland International Airport TRACON Facility**

PROJECT NO. 9788-2212

FIGURE 1

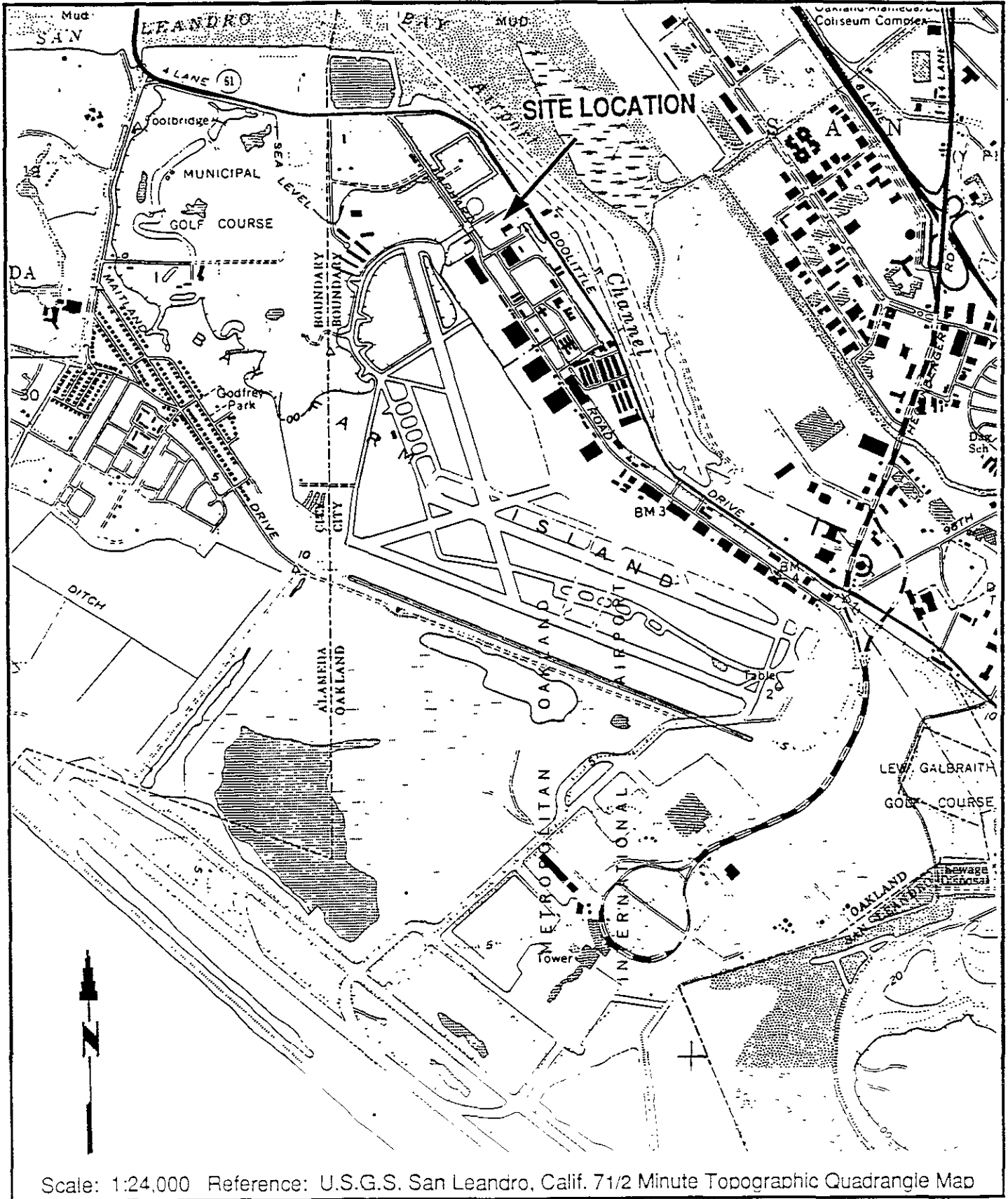




**SITE PLAN**  
**Federal Aviation Administration**  
**Oakland Airport TRACON Facility**

PROJECT NO. 9788-2212

FIGURE 2

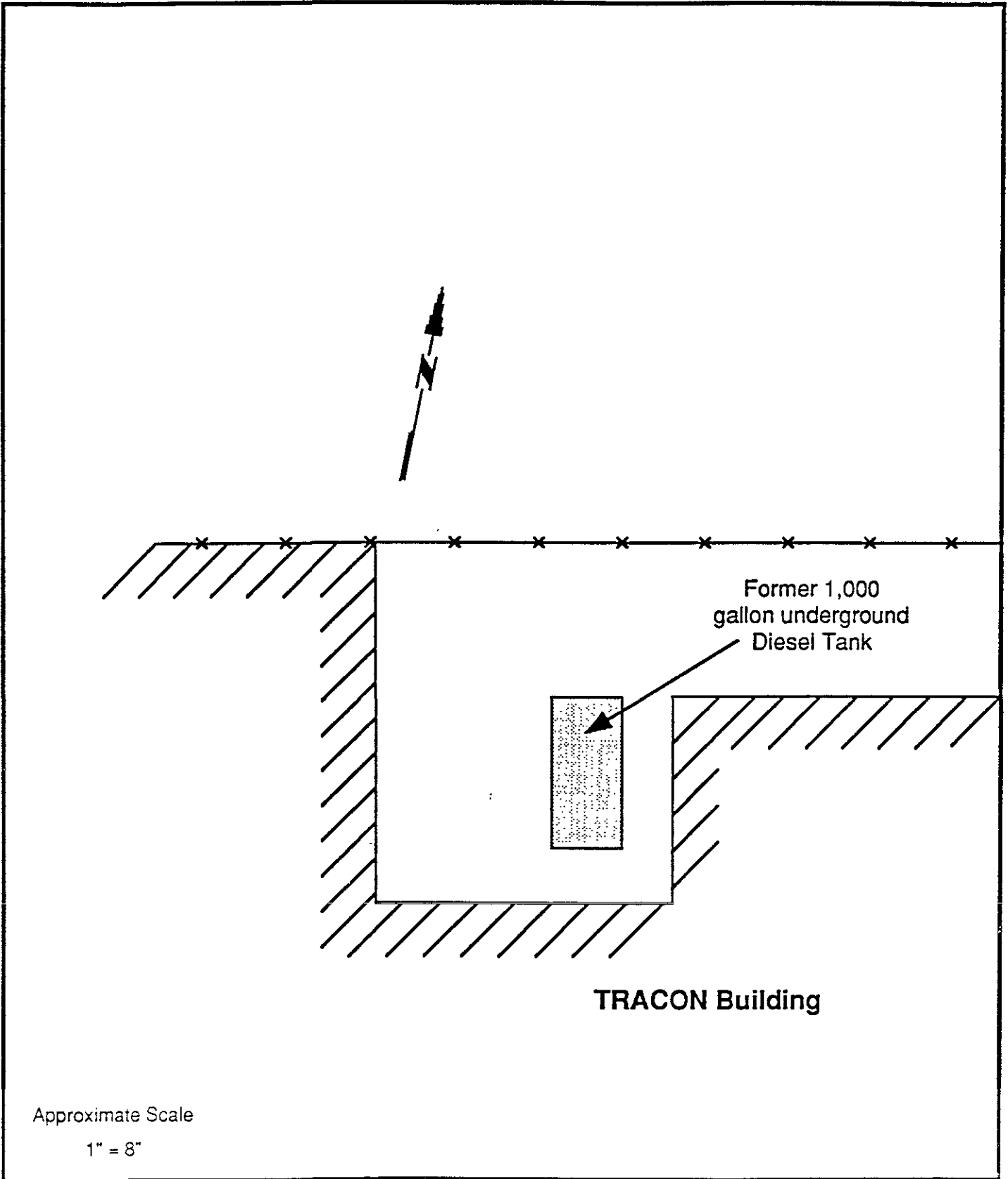


**Site Location**  
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FIGURE 1





**SITE PLAN**  
**Federal Aviation Administration**  
**Oakland Airport TRACON Facility**

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FIGURE 2