

October 1, 1998

Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Attention: Eva Chu

Subject: Workplan to Conduct Soil and Groundwater Investigation
Dublin Toyota UST Site
6450 Dublin Court, Dublin, California
Alameda County LOP Site ID No. 699
GA Project No. 147-01-01

- look for analytes detected at time of UST removal. Any need for HVOC/SVOC analysis?
- Analyze GWS for PMA's

Ladies and Gentlemen:

Gribi Associates is pleased to submit this workplan on behalf of Dublin Toyota to conduct a soil and groundwater investigation at the underground storage tank (UST) site located at 6450 Dublin Court in Dublin, California (see Figure 1). This proposed soil and groundwater investigation will include: (1) Drilling and sampling approximately four investigative soil borings in an east, south, and southwest direction from the former UST excavation cavity; and (2) Drilling, installing, and sampling two groundwater monitoring wells, one southwest and the other southeast from the former UST excavation cavity. The purpose of the proposed investigation will be to provide an initial assessment of soil and groundwater quality adjacent to former underground storage tanks (USTs) at the project site.

SITE BACKGROUND

Two 2,000-gallon gasoline USTs and one 1,000-gallon waste oil UST were removed from a common excavation by Scott Company on June 10, 1998. A soil sample collected at the east end of the UST excavation cavity and a grab groundwater sample collected from the UST excavation cavity contained elevated levels of gasoline- and diesel-range hydrocarbons. On June 18, 1998, the UST excavation cavity was excavated vertically to the groundwater table, at about 12 feet in depth. Three grab groundwater samples collected from the excavation cavity following overexcavation contained elevated levels of gasoline-range hydrocarbons, and one soil sample collected from the south excavation sidewall contained elevated levels of gasoline- and diesel-range hydrocarbons. Following overexcavation and sampling, the UST excavation cavity was backfilled with clean fill material, and approximately 92 tons of hydrocarbon-impacted soil was transported to BAS for thermal de-sorption.

and low levels of
hydrocarbons in soil & GWS

PROJECT APPROACH

In order to assess the nature and extent of hydrocarbon impacts, and based on input from Ms. Eva Chu of Alameda County Department of Environmental Health, we recommend: (1) Drilling and sampling approximately four investigative soil borings in an east, south, and southwest direction from the former UST excavation cavity; and (2) Drilling, installing, and sampling two groundwater monitoring wells, one southwest and the other southeast from the former UST excavation cavity (see Figure 2). The investigative soil borings, which will be drilled using Geoprobe coring equipment, will provide an assessment of the lateral extent of hydrocarbon-impacted soils. The two groundwater monitoring wells, which will be installed using hollow stem auger equipment, will provide a reliable assessment of downgradient groundwater quality.

WORKPLAN ELEMENTS

The proposed soil and groundwater investigation will include the following workplan elements. All activities will be conducted in accordance with applicable State and Federal guidelines and statutes.

Prefield Activities

Prior to implementing this workplan, written approval will be obtained from the Alameda County Department of Environmental Health, and a boring and well installation permit will be obtained from Alameda County Zone 7 Water Agency. In addition, proposed boring and well locations will be marked with white paint, and Underground Services Alert (USA) will be notified at least 48 hours prior to drilling. Also, a private underground utility locator will clear proposed boring and well locations. Prior to initiating drilling activities, a Site Safety Plan will be prepared, and a tailgate safety meeting will be conducted with all site workers.

Location of Borings and Monitoring Wells

Proposed soil boring and well locations are shown on Figure 2. Based on the expected south-southeasterly groundwater flow direction in the project site area, the four Geoprobe borings will be sited on the east to southwest sides of the former UST excavation cavity. The two groundwater monitoring wells will be sited in a downgradient direction from the former UST excavation cavity, based on field screening results from the Geoprobe borings.

Drilling and Sampling of Investigative Soil Borings

The four investigative soil borings will be drilled and sampled using Geoprobe hydraulically-driven soil coring equipment. This coring system allows for the retrieval of almost continuous soil cores, which are contained in a clear plastic acetate tube, nested inside a stainless steel core barrel. After the core barrel is brought to the surface and exposed, the core will be examined, logged, and field screened for hydrocarbons by a qualified Gribi Associates geologist using sight and smell. If

drilling conditions warrant, it may be necessary to sample by pushing a closed one inch diameter core barrel to sampling depth, and then collecting a two-foot long core at the desired depth. Following completion, the four investigative soil borings will be grouted to match existing grade using a cement/sand slurry. Soil cuttings generated during this investigation will be stored onsite in sealed DOT-approved 55-gallon drums.

Subsurface soils will be sampled at approximately five-foot intervals starting at five feet in depth. After the sample and core barrel is raised to the surface, each sample was collected as follows: (1) The filled acetate tube will be exposed for visual examination; (2) The selected sampling interval will be collected by cutting the sample and acetate plastic tubing to the desired length (typically about five inches); (3) The ends of the selected sample will be quickly wrapped with teflon sheets or aluminum foil, capped with plastic end caps, labeled and wrapped tightly with tape; and (4) The sealed soil sample will be labeled and immediately placed in cold storage for transport to the analytical laboratory under formal chain-of-custody. All coring and sampling equipment will be thoroughly cleaned and decontaminated between each sample collection by triple rinsing first with water, then with dilute tri-sodium phosphate solution, and finally with distilled water. Cleaning rinseate will be contained onsite in a sealed drum pending laboratory results.

Drilling and Sampling of Monitoring Wells

Each of the two well borings will be drilled to a total depth approximately 25 feet below grade (groundwater is expected to be encountered below 12 feet in depth) using hollow stem auger equipment. Soils from each soil boring will be logged by a qualified geologist using sight and smell. Soil cuttings will be placed in sealed DOT-approved 55-gallon drums pending laboratory results.

Soil samples will be collected from the two well borings at approximately five-foot intervals starting at five feet in depth. Undisturbed soils will be sampled in advance of the auger as follows: (1) A two-inch inside diameter California-style split spoon sampler will be driven into undisturbed soil ahead of the drill bit; (2) The sampler will be raised quickly to the surface and the brass liners exposed; (3) The brass liner containing the most undisturbed soil will be quickly sealed with aluminum foil and plastic end caps, labeled, and wrapped tightly with tape; and (4) The sealed soil sample will be placed immediately in a cooler with crushed ice for transport to the analytical laboratory under formal chain-of-custody. All sampling equipment will be thoroughly cleaned and decontaminated between each sample collection by triple rinsing first with water, then with dilute tri-sodium phosphate solution, and finally with distilled water. All downhole drilling equipment, including auger and drill bit, will be steam cleaned before and after drilling the well boring. Steam cleaning rinseate will be contained in sealed drums pending laboratory results.

Installation of Monitoring Wells

The two groundwater monitoring wells will be constructed using two-inch diameter Schedule 40 threaded PVC casing according to the following specifications: (1) 0.020-inch slotted well casing

will be placed from approximately 25 feet to 10 feet in depth (exact screen depths will be determined in the field based on occurrence of first groundwater); (2) Filter sand will be placed around the casing to a depth of approximately eight feet below grade; (3) A two-foot bentonite seal will be placed above the filter sand to approximately six feet below grade; and (4) The remaining annulus will be grouted using a cement/sand slurry (bentonite less than 5 percent) to approximate grade. The top of the well will be enclosed in a traffic-rated locking box set in concrete slightly above grade. A well construction diagram is shown on Figure 3.

Well Development and Sampling

After allowing the cement seal to cure for at least 48 hours, each monitoring well will be developed and sampled using a clean disposable PVC bailer. Well development will consist of purging the well of at least three well volumes before sampling. During well development, groundwater will be monitored periodically for presence of free-floating product and odor, pH, specific conductance, temperature and visible clarity. After these parameters have stabilized, groundwater will be sampled directly from the bailer in the following manner: (1) Three 40-ml glass VOA vials and two one-half liter amber jars will be completely filled directly from the bailer with a minimum of agitation; (2) After making sure that no air bubbles are present, each container will be tightly sealed with a teflon-lined septum; and (3) Each container will be labeled and placed in cold storage for transport to the analytical laboratory under formal chain-of-custody. All purged groundwater will be stored on site in sealed DOT-approved 55-gallon drums pending groundwater analytical results. All sampling equipment will be thoroughly cleaned and decontaminated between each sample collection by triple rinsing as described above.

Laboratory Analysis of Soil and Water Samples

One to two soil samples will be selected from each soil and well boring for laboratory analysis, based on (1) Obvious field evidence of hydrocarbons; and (2) The desire to characterize the vertical extent of hydrocarbon-impacted soils. In addition, one groundwater sample from each of the two monitoring wells will be analyzed. All soil and groundwater samples will be analyzed for the following parameters with standard method turn around time on results.

USEPA 8015M Total Petroleum Hydrocarbons as Gasoline (TPH-G)
USEPA 8020/602 Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)
USEPA 8020/602 Methyl-t-butyl Ether (MTBE)
USEPA 8015M Total Petroleum Hydrocarbons as Diesel/Motor Oil (TPH-D/MO)

All analyses will be conducted by a California-certified analytical laboratory with standard turnaround on results.

Preparation of Summary Report

A report summarizing soil and groundwater sampling activities will be prepared for submittal to the Alameda County Department of Environmental Health. This report will describe all investigative methods and will include tabulated laboratory results, as well as maps depicting soil and groundwater hydrocarbon plumes.

Conduct Quarterly Groundwater Monitoring

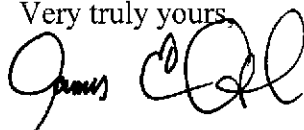
The two newly-installed groundwater monitoring wells will be monitored quarterly for three additional quarters, to make one year of quarterly monitoring. Each groundwater monitoring event will include: (1) Purging and sampling each of the wells; (2) Analyzing two groundwater samples for TPH-G/BTEX/ MTBE and TPH-D/MO; and (3) Preparing a letter report for submittal to Alameda County Department of Environmental Health. *no time for PNDs*

PROJECT SCHEDULE

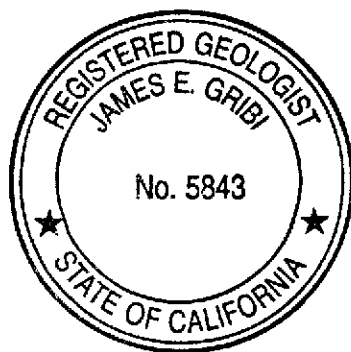
Subject to your approval, Gribi Associates is prepared to begin the proposed workplan activities immediately. Based on our understanding of the project and subject to rig availability, we expect to complete drilling and well installation activities and issue a summary report for these activities within six to eight weeks following workplan approval.

We appreciate the opportunity to present this workplan for your review. Please contact us if you have questions or require additional information.

Very truly yours,



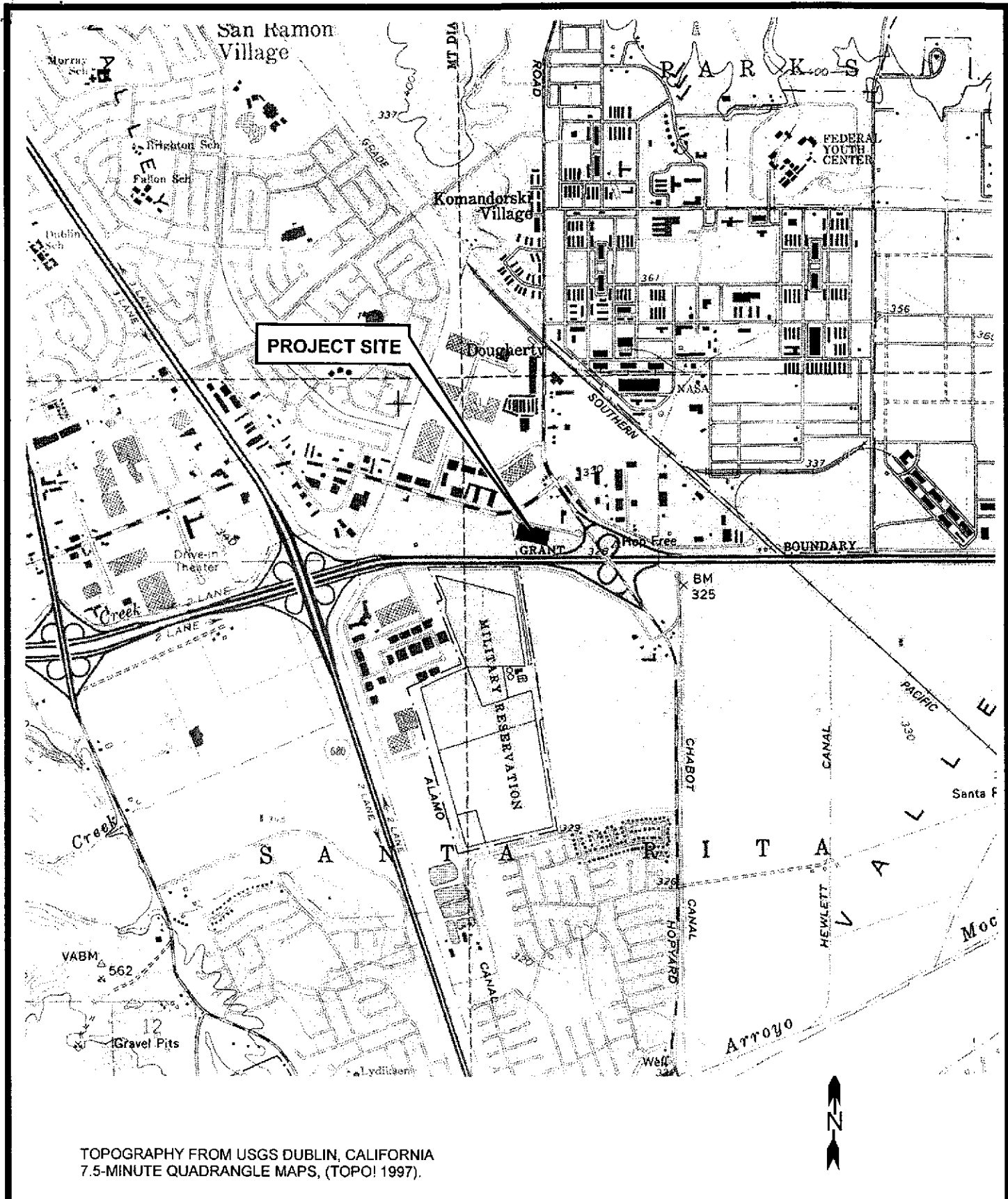
James E. Gribi
Registered Geologist
California No. 5843



JEG:cc
Enclosure

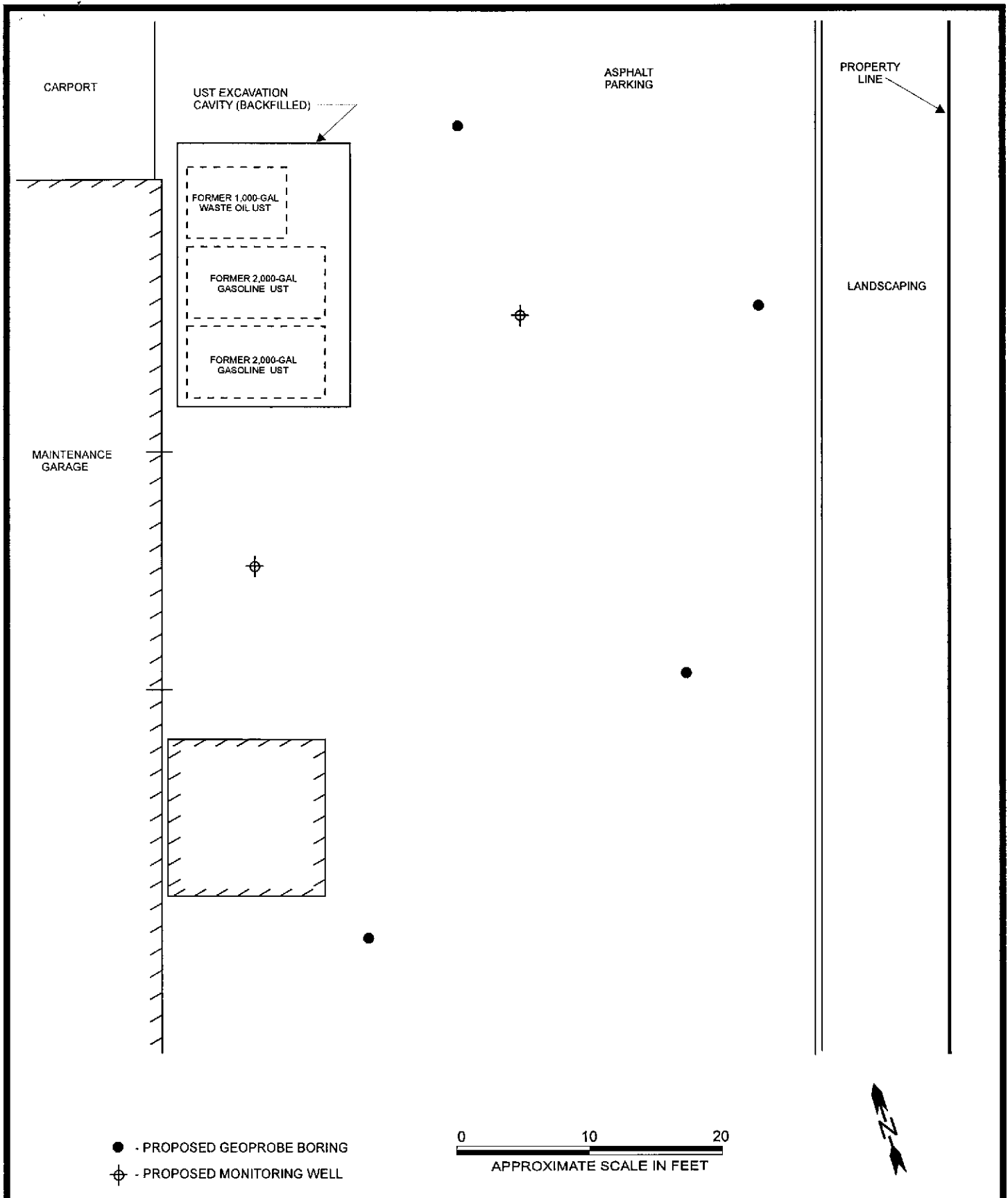
c Dave Rocha, Dublin Toyota

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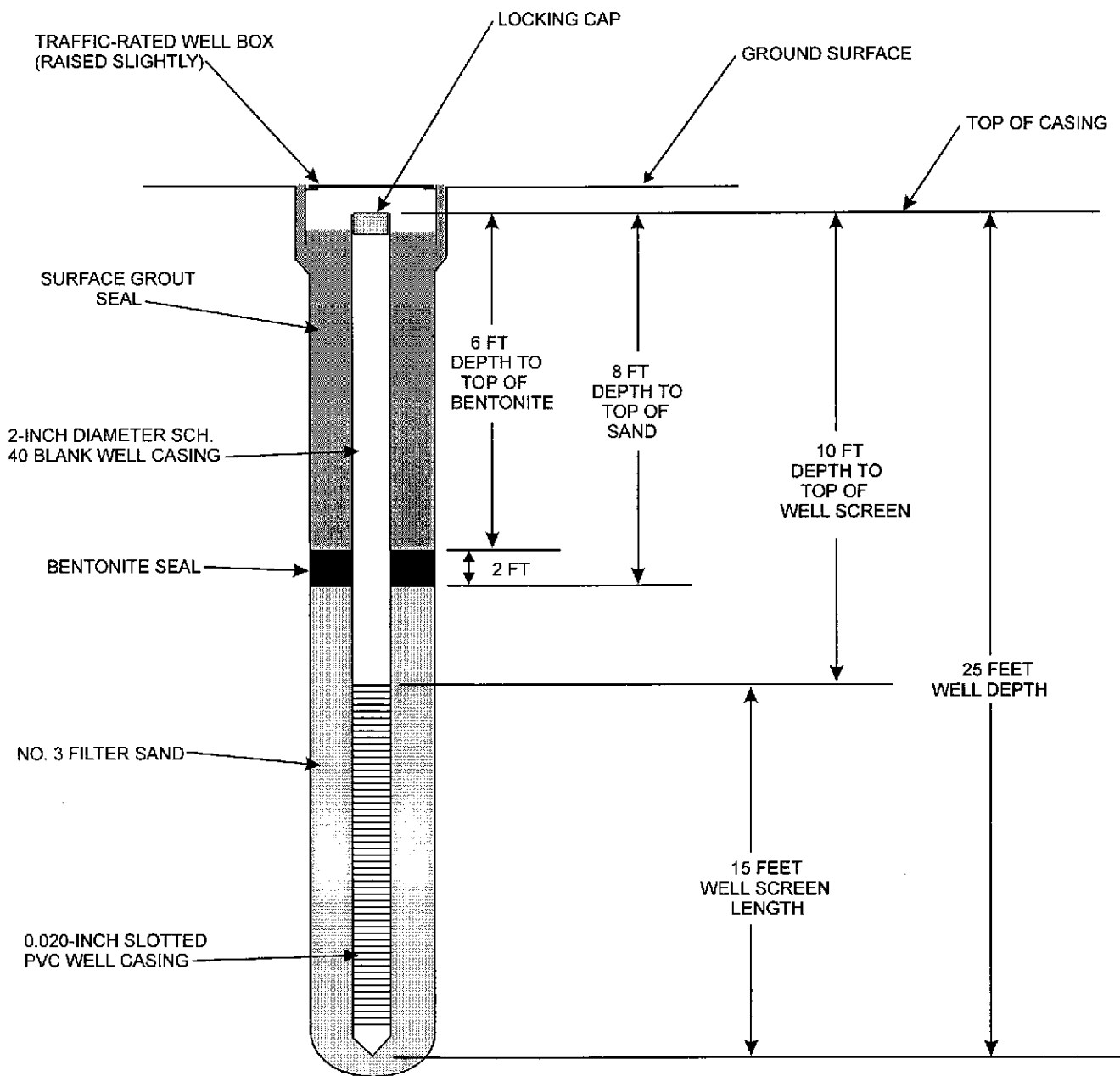


TOPOGRAPHY FROM USGS DUBLIN, CALIFORNIA
7.5-MINUTE QUADRANGLE MAPS, (TOPO! 1997).

DESIGNED BY:	CHECKED BY:	SITE VICINITY MAP	DATE: 10/01/98	FIGURE: 1
DRAWN BY: JG	SCALE: 1:24,000		GRIBI Associates	
PROJECT NO: 137-01-01		DUBLIN TOYOTA UST SITE 6450 DUBLIN COURT DUBLIN, CALIFORNIA		



DESIGNED BY:	CHECKED BY:	PROPOSED BORINGS AND WELLS	DATE: 10/01/98	FIGURE: 2
DRAWN BY: JG	SCALE:		GRIBI Associates	
PROJECT NO: 147-01-01				



DESIGNED BY:	CHECKED BY:	WELL CONSTRUCTION DIAGRAM	DATE: 10/01/98	FIGURE: 3
DRAWN BY: JG	SCALE: NTS		GRIBI Associates	
PROJECT NO: 147-01-01		DUBLIN TOYOTA UST SITE 6450 DUBLIN COURT DUBLIN, CALIFORNIA		