



& Associates

1181 Quarry Lane
Building 300
Pleasanton, CA 94566
(510) 462-4000
(510) 462-6283 FAX

August 18, 1992

PROPOSAL PR92216.3

Mr. Charlie Phinney
Castlewood Country Club
707 Country Club Circle
Pleasanton, CA 94566

Subject: Proposal For Preliminary Site Characterization
Unauthorized Underground Storage Tank Release
Castlewood Country Club
707 Country Club Circle
Pleasanton, California

Dear Mr. Phinney:

As requested, BSK & Associates has prepared this proposal for the preliminary characterization of contamination resulting from leakage from an underground storage tank located at the Castlewood Clubhouse at the referenced address in Pleasanton, California. The site location is shown on Figure 1, Vicinity Map.

BACKGROUND

As determined from a site visit, meetings with yourself and Mr. John Bethe, and the information you provided to us, we understand that a release of gasoline was experienced from a 1,000 gallon underground storage tank (UST) located on the east side of your Clubhouse. According to tank removal documents, the UST was removed April 23, 1992 by Timmerman Engineering Construction. At that time, significant contamination of soil near the north end of the tank was encountered at 8 to 9 feet in depth. It was chemically analyzed soil samples. Analyses indicated the contamination to be gasoline in origin. Some lead was also encountered. Subsequent excavation to a maximum depth of 16 feet below present grade and sampling on May 27, 1992 revealed reduced levels of contaminants, with the greatest quantity occurring near the south end of the former tank. The excavation was closed by backfilling with pea-gravel, and was paved over with concrete, as allowed by the Alameda County Environmental Health Department (ACEH) representative, Scott Seery.

The Clubhouse is located on the east flank of Pleasanton Ridge. The surrounding landuse has always been residential, and as a golf and country club. The project site is located in a driveway accessing the lower floor of a large Clubhouse building. The tank area is paved in concrete. The age of the tank is unknown, but is considered to have been installed over 15 years ago.

WORK PLAN

1.0 PURPOSE AND SCOPE

This work plan has been prepared to address the request by ACEH for assessment of the results of gasoline contamination to soil and potentially to groundwater from the unauthorized UST release at the Castlewood Clubhouse.

Preliminary assessment of the subsurface in the immediate vicinity of the former UST is proposed to consist of the following:

1.1 Subsurface Exploration And Sampling

Three 8 inch diameter borings would be advanced by hollow-stem auger around the former tank location. The first boring would be advanced through the center of the former tank location to a depth of approximately 50 feet below the present grade, or to groundwater if encountered. If groundwater is encountered less than 50 feet below surface, a groundwater monitoring well would be installed. If water is not encountered, observations made of soils to 50 feet in depth with respect to hydrocarbon contamination would be utilized to determine if the boring should be advanced to greater depths.

The remaining two borings would be placed on the west and east sides of the tank location, the distance from the tank determined by site conditions, and information obtained from the first boring. The second and third borings would be drilled to a minimum depth of 20 feet; further if contaminant conditions, if any, so dictate. Groundwater would not be entered.

1.2 Groundwater Well Installation

If necessitated by the conditions described in 1.1, a groundwater monitoring well would be constructed in the initial deep boring. The well would be constructed of two inch diameter PVC case and screen, sand annular fill, cement or grout seal and surface well box, as detailed in Figure 2, Typical Well Costruction Details. The screened portion of the well would be installed 10 to 15 feet into the water bearing horizon.

1.3 Soil And Water Sampling

Discrete samples of the encountered soils would be obtained at 5 foot intervals, and as necessitated by subsurface conditions in the deep boring. In the shallow soil borings, samples would be obtained where contamination is encountered, and at the discretion of the project geologist or engineer. Soil obtained from the borings would be screened for hydrocarbons using a Photo-Ionization Detector (PID).

If a groundwater well is installed, the well would be developed by surging and pumping, and later purged and sampled using appropriate methods, materials and protocol.

1.4 Chemical Testing

Soil and water samples would be tested for leaded gasoline constituents and indicators in accordance with Tri-Regional Water Quality Control Board recommendations (10 August 1991). Tests would be performed on the selected samples for Total Petroleum Hydrocarbons as Gasoline (TPH-G); Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), and Total Lead.

1.5 Reporting

Upon completion of the field work and receipt of the chemical analysis results, a report summarizing our work, observations and the chemical data would be prepared. Conclusions, and recommendations for additional work, if necessary, would be presented.

2.0 GENERAL DETAILS

2.1 Drilling And Logging

Drilling activities would be performed using a truck-mounted Mobile B-53 auger rig, turning 8 inch outside diameter, continuous flight, hollow stem auger. Logging of the boring samples and cuttings, and direction of site activities would be performed by a Staff level geologist/engineer, under the supervision of a Registered Geologist or Licensed Civil Engineer. Classification of subsurface materials would be performed in accordance with the U.S.C.S. Soil Classification System.

2.2 Sampling

Soil sampling would be performed using a 2.0 I.D. modified California split- spoon sampler. The sampler holds three 2x6 inch stainless steel or brass sample liners. The sampler holding the liners is driven by slide hammer ahead of the auger into undisturbed soil, and then withdrawn. The soil filled liners are removed, and the

chosen sample(s) sealed with Teflon® sheeting and a pressure-fitted plastic cap, labeled, and refrigerated for delivery to our State-certified analytical laboratory for analysis.

Water samples would be obtained by Teflon® bailer or bladder pump after purging. Samples would be obtained in order of decreasing constituent volatility, and placed in the appropriate container, with preservative if necessary. The sample is then labeled, sealed and refrigerated for delivery to our laboratory.

2.3 Waste Handling

Soil and water waste generated by drilling, cleaning and sampling activities will be stored in DOT-approved 55 gallon drums. Water and soil would be stored separately. Each drum would be labeled with the date of waste accumulation, source, owner, and other pertinent data. The drums would be stored on-site until chemical analyses determine the character of the drum contents. Disposal of drummed waste is the ultimate responsibility of the client.

2.4 Decontamination

Drilling and sampling equipment would be thoroughly cleaned by hi-pressure and temperature wash prior to site entry, exit, and between borings and samples in order to reduce the chance of cross-contamination between samples and sites.

2.5 Well Development And Purging

If a groundwater monitoring well is installed, the well would be developed after 72 hours to help set the well pack, and aid in conditioning the well and surrounding subsurface environment. The well would be developed by surging and pumping. Removed water would be monitored for physical parameters such as sediment load, temperature, conductivity and pH. The well would be developed until the parameters exhibited a degree of stability.

Twenty-four hours after development, the well could be purged and sampled. Purging involves the removal by pumping or bailing of four to ten well casing volumes of water, in order to obtain fresh formation water for sampling.

2.6 Boring Closure

Soil borings would be closed by backfilling with neat cement or 11 sack sand slurry. If the boring contains water, or is greater than 30 feet in depth, the seal would be placed by tremie.

SCHEDULE AND FEES

1.0 SCHEDULE

We would begin work on this project promptly following our receipt of your authorization and approval to proceed. Based on ready access to the site, and receipt of the necessary permits, our report would be completed within four to six weeks of your authorization.

2.0 FEES

Our fees for this work would be computed in accordance with our 1992 Fee Schedule. The total charges for the scope of work outlined herein are estimated for two scenarios:

- 1. **Preliminary Soil Characterization and Reporting
(No Monitoring Well Installation) \$8,000**

- 2. **Preliminary Soil Characterization, Monitoring
Well Installation and Reporting \$9,500**

Item No. 1 assumes that no groundwater is encountered within 50 feet below present grade, and soil contamination does not warrant a boring deeper than 50 feet.

Item No. 2 assumes installation of a 65 to 70 foot groundwater monitoring well, and development, sampling and testing of the well.

* * * * *

Attached is the BSK & Associates Terms for Agreement for Environmental Consulting Services, which is a part of this Proposal, PR92216.3.

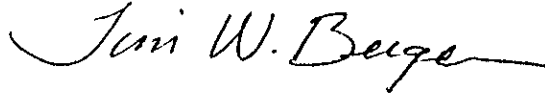
If this proposal is acceptable, please sign in the space provided on Page 6 to indicate your approval of the scope of services and acceptance of our Fee Schedule, Terms and Conditions, and have the property owner(s) sign the "Authorization to Enter and Investigate" form attached after the Terms of Agreement. **Please return both signed, completed copies of the proposal and attachments to us, as our authorization to proceed. We will return an executed copy of the proposal agreement for your files.**



We appreciate the opportunity to submit this proposal and look forward to working with you on this project. Should you have questions regarding this proposal, please contact us.

Respectfully submitted,

BSK & Associates



Tim W. Berger, R.G.
Registered Geologist
No. 5225



Alex Y. Eskandari, P.E.
Manager - Geo-Environmental Services

AYE/TWB:twb
(pro\env\Castle.PRO)

Enclosures:

- Figure 1, Vicinity Map
- Figure 2, Typical Monitoring Well Construction Details
- BSK & Associates' Terms for Environmental Consulting Services

For Client: Castlewood Country Club

For: BSK & Associates

Accepted by: Edward J. Ward

By: John R. Hedley

Title: _____

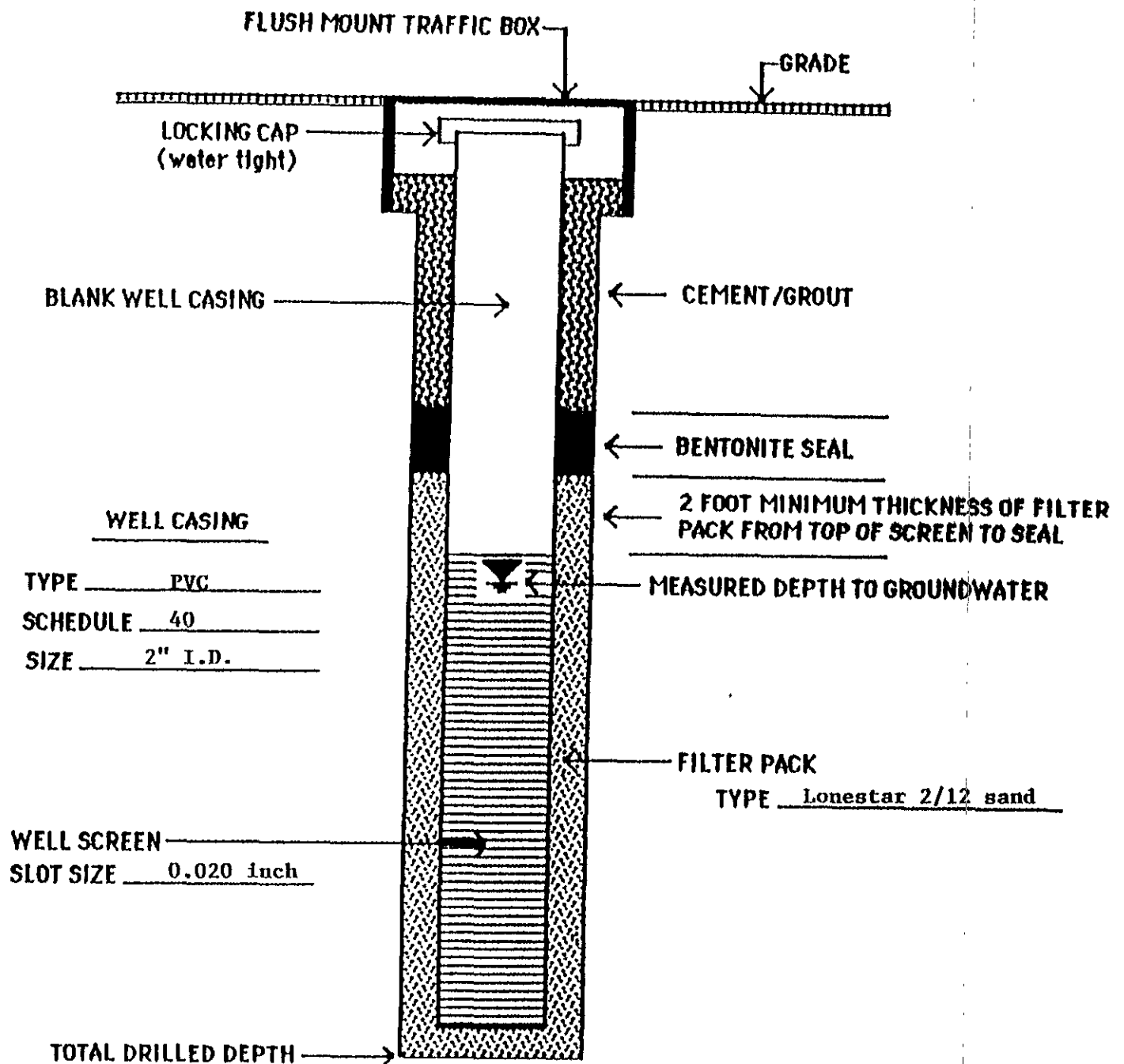
Title: Principal

Signature: _____

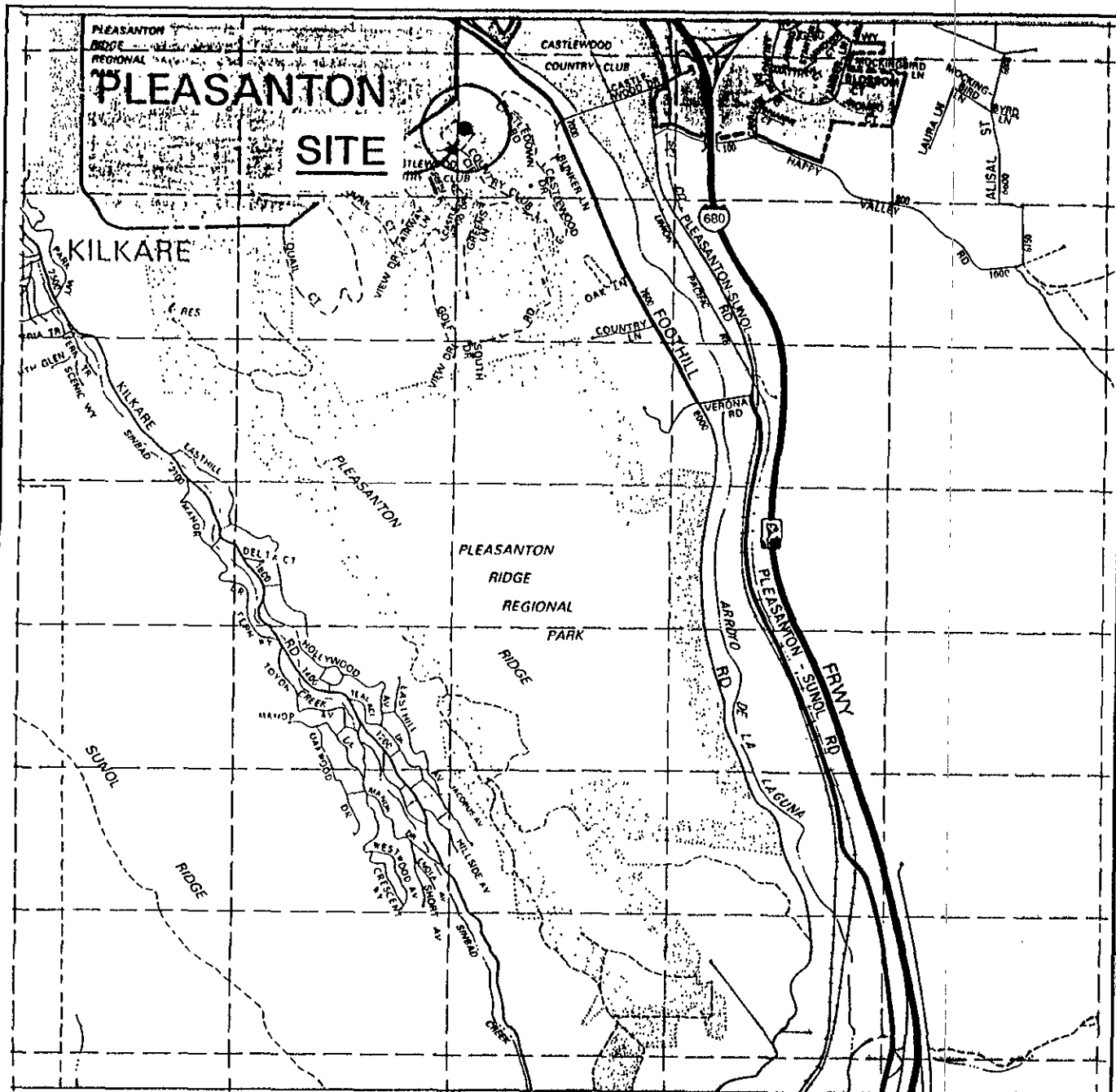
Signature: John R. Hedley

Date: 9/12/92

Date: 15 Sep 92



TYPICAL MONITORING WELL CONSTRUCTION DETAILS



Source: 1990 Thomas Guide, Alameda County, California Scale: 1" = 2200'

PRELIMINARY SITE ASSESSMENT
UNAUTHORIZED UNDERGROUND STORAGE TANK
RELEASE
CASTLEWOOD COUNTRY CLUB
707 COUNTRY CLUB CIRCLE
PLEASANTON, CALIFORNIA

VICINITY MAP

PROPOSAL NO.
PR92216.3
AUGUST 1992
FIGURE: 1

