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GEOMATRIX

September 1, 2000
Project 6262.000.0

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Mr. Hugh Murphy
Hazardous Materials Program Coordinator
City of Hayward Fire Department
777 B Street
Hayward, California 94541-5007

Subject: Work Plan for Surface Soil Sampling of Occupied Residential Lots
Canterbury Residential Development
Hayward, California

Dear Mr. Murphy:

Geomatrix Consultants, Inc. (Geomatrix) is pleased to submit a copy of this work plan for the collection of surface soil samples at residential lots not previously sampled in the Canterbury Residential Development located in Hayward, California (Figure 1). Soil samples collected from previous investigations conducted at adjacent unoccupied lots in the Canterbury development have indicated the presence of petroleum hydrocarbon-related compounds in the soil. Although the Department of Toxic Substances Control, Regional Water Quality Control Board, and Alameda County Health Care Agency concurred that the concentrations detected did not require further action, and lots could be occupied for residential use, sampling at the occupied lots has been offered by SummerHill Houmes.

Geomatrix has been requested by the City of Hayward to collect and analyze surface soil samples at select residential lots. To date, 16 owners of properties (out of 28 that had not previously been sampled) located along Spalding Street and Olympic Avenue have requested their lots be tested. Figure 2 depicts the residential lots and the proposed sampling locations. Additional lots may be sampled if requested by the homeowners.

The following sections present a description of the soil sampling program, the analytical methods that will be used, the criteria that will be used to assess the analytical results, a description of the report that would present the results of the investigation, and a proposed schedule for the implementation of this work.

SOIL SAMPLING PROGRAM

One shallow soil sample will be collected from each of the 16 lots presented in Figure 2. Soil sampling will be performed in accordance with Geomatrix protocols for soil sampling for chemical analysis detailed in the March 17, 2000 work plan.[1] A hand auger will be used to advance a borehole through the upper six inches of soil in the backyard of the sixteen homeowners. A hand-operated drive sampler lined with brass or stainless-steel tubes will be used to collect a soil sample from approximately 6 to 12 inches below ground surface. Field

1 Geomatrix Consultants, Inc., 2000, Soil Sampling Plan, Canterbury Residential Development, Hayward, California, March 17.

measurement equipment (a photoionization detector (PID)) will be used to screen the samples and the boreholes. Soil will be logged by a Geomatrix field geologist or engineer in accordance with the Unified Soil Classification System visual-manual procedure (ASTM D2488-90).

Soil samples to be submitted for analysis will be retained in 6-inch brass or stainless steel sample tubes. The ends of the sample tube will be covered with Teflon sheets and plastic caps. The caps will be secured with silicon tape. The soil samples will be labeled and placed in a cooler with ice pending delivery to an analytical laboratory under Geomatrix chain-of-custody. Following the completion of sample collection, the boreholes will be backfilled with surrounding soil, potting soil, or both, and the yard will be restored to its original condition. It is anticipated that approximately 30 to 60 minutes will be required to complete the work in each backyard. Rinsate water from decontamination activities will be temporarily stored near the Canterbury Construction trailer in 5-gallon pails, 55-gallon drums, or both, pending characterization for disposal. Summerhill Homes will be responsible for final disposal.

LABORATORY ANALYSIS

Soil samples will be submitted to Friedman & Bruya in Seattle, Washington for petroleum-hydrocarbon related analyses. These analyses will include total petroleum hydrocarbons as motor oil (TPHmo; U.S. EPA 8015M) and polycyclic aromatic hydrocarbons (PAHs; U.S. EPA Method 8270 SIMS). Volatile organic compounds are not in this sampling effort because they have not been detected previously at elevated concentrations in any of the lots in the vicinity of the occupied lots. If elevated PID readings are observed, the sample will be analyzed for VOCs (U.S. EPA Method 8260). The soil samples will be analyzed on a standard 10-day turn-around time.

For quality assurance and quality control purposes, the laboratory will analyze a method blank and laboratory control samples, in accordance with its quality assurance plan. Geomatrix will specify one site soil sample to be used by the laboratory for matrix spike/matrix spike duplicates.

DATA EVALUATION

Upon receipt, laboratory data will be tabulated for evaluation. Data quality will be evaluated based on field and laboratory documentation and laboratory quality control samples. Sample results will be compared with residential Preliminary Remediation Goals (PRGs) established by the U.S. EPA Region 9 for the purpose of assessing potential human health risks.

Following review of the analytical laboratory data, if samples contain concentrations of chemicals above residential PRGs, additional soil samples may be collected. Arrangements with the homeowners to provide access will be required for this additional sampling. If this work is required, it will be performed in a separate mobilization and will consist of collecting and analyzing three shallow soil samples within 20 feet of the affected sample and a sample

approximately 2 feet below the affected sample, and re-analyzing the original sample using the opposite end of the sample tube.

REPORTING

Once all the fieldwork and analytical testing associated with the investigation is completed, a report presenting the data will be prepared and will include:

- a summary of the soil sampling methods;
- a table presenting soil descriptions;
- laboratory analytical reports, data, and summary tables; and
- an evaluation of potential human health risks.

SCHEDULE

The soil investigation is tentatively scheduled to begin the week of September 11, 2000. Depending on coordinating access with each homeowner, all samples are anticipated to be collected by September 30, 2000. A report summarizing all sampling results will be issued within four weeks of collection of the last sample.

Please contact either of the undersigned if you have any questions or require additional information.

Sincerely yours,
GEOMATRIX CONSULTANTS, INC.

Ann M. Holbrow
Senior Scientist

Thomas H. Gavigan, R.G., C. HG.
Project Hydrogeologist

AMH/THG/abr
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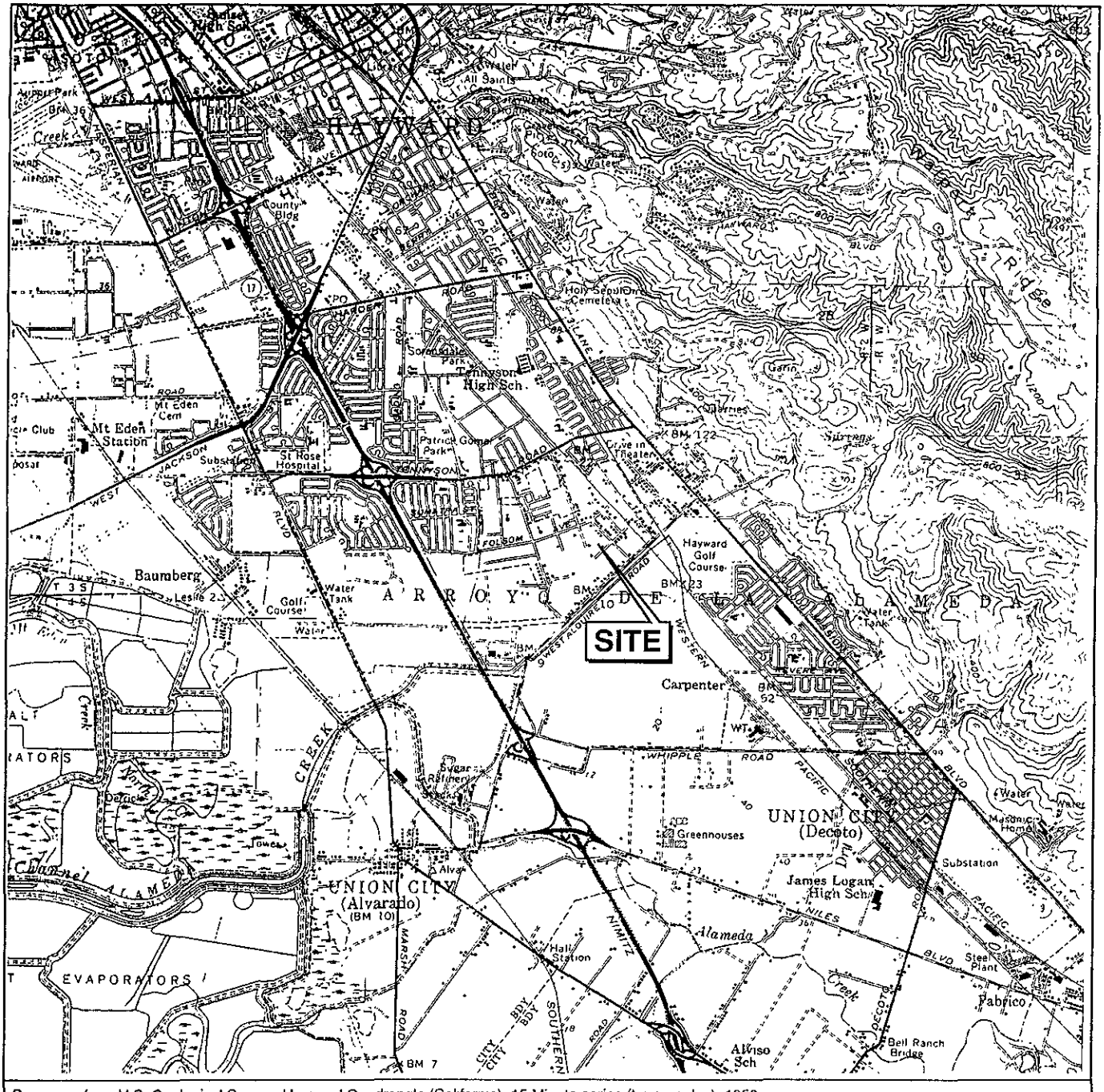
Attachments

Figure 1: Site Location Map
Figure 2: Residential Lots and Proposed Sample Locations

cc: Mark Beskind, SummerHill Homes
Susan Hugo, Alameda County Health Care Services
Roger Brewer, California Regional Water Quality Control Board, SF Bay Region
Barbara Cook, Department of Toxic Substances Control
Kathleen Isaacson, LFR Levine • Fricke



Base map from U.S Geological Survey; Hayward Quadrangle (California), 15 Minute series (topographic), 1959.

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SITE VICINITY MAP
Canterbury Residential Development
Olympic Avenue
Hayward, California

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Figure
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PROPOSED SAMPLING LOCATIONS
Canterbury Development
Hayward, California

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