LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

Mountain View
Fairfield
Oakland
San Ramon
Fullerton

August 29, 2003
1731-2G

Mr. Amir Gholami
ALAMEDA COUNTY HEALTH AGENCY
1131 Harbor Bay Parkway
Alameda, California 94502

RE: WORK PLAN
2901 GLASCOCK STREET
SOIL AND GROUND WATER SAMPLING
OAKLAND, CALIFORNIA

Dear Mr. Gholami:

We are pleased to present this work plan for soil and ground water sampling at 2901 Glascock Street in Oakland, California (Figure 1). The purpose of the sampling is to confirm current soil quality in the shallow ground water bearing zone and ground water quality, as discussed during our August 18, 2003 meeting.

SCOPE OF SERVICES

Soil and Ground Water Sampling

We will drill two exploratory borings to a depth of approximately 20 feet at the locations shown on Figure 2. The rational for the boring locations was presented in our August 29, 2003 letter.

Pre-Field Activities

Prior to beginning work, a drilling permit application will be submitted to Alameda County Public Works (ACPW) for their approval. We also will prepare a health and safety plan for our proposed work. To attempt to locate public underground utilities in the area of our exploratory borings, we will contact Underground Service Alert (USA).

Subsurface Exploration

Our field engineer or scientist will direct a subsurface exploratory program, supervise, log, and sample two exploratory borings to a depth of approximately 20 feet. The subsurface investigation will be performed using a limited access rig equipped with Direct Push Technology equipment. The borings will be advanced by hydraulically driving a 2-inch-diameter outer casing with an inner split spoon sampler, which contains a clear acetate sample liner. As the tools are advanced, the soil sample will be collected within the inner split spoon sampler. The split spoon sampler will be withdrawn to the surface while the outer casing remains in-place. The new sampler then will be lowered into place and the tools advanced further to collect the next soil sample.

Soil Sample Collection

Previous investigations encountered the top of the silty sand ground water bearing zone at depths of approximately 10 to 14 feet. One soil sample will be collected from within the

approximate upper foot of the ground water bearing zone. A second soil sample will be collected approximately 2 to 5 feet deeper, depending on field observations and organic vapor meter (OVM) measurements.

The soils will be logged using the Unified Soil Classification System (ASTM D-2487). Soil vapors from each sample will be monitored with an OVM. The soil will be placed in a Ziplock™ bag for several minutes; the bag then will be pierced with the OVM probe in order to record the organic vapor levels present. Soil samples for laboratory analysis will be collected in brass or acetate liners. The ends of the liners will be covered in aluminum foil or Teflon film, fitted with plastic end caps, taped, and labeled with a unique identification number. The samples then will be placed in an ice-chilled cooler and transported to a state-certified analytical laboratory with chain of custody documentation.

Ground Water Sampling
After the borings are advanced to the desired depths, ¾- inch I.D. flush-threaded, PVC casing will be lowered down the center of the drive rods. The lower portion of the casing will have factory machined slots to allow for the infiltration of ground water. The drive rods then will be extracted leaving the PVC casing in-place. Ground water, if encountered, will be collected using a small diameter bailer and placed in appropriate sample bottles labeled with a unique identification number. The samples then will be placed in an ice-chilled cooler and transported to a state-certified analytical laboratory with chain of custody documentation.

Laboratory Analyses

The four soil samples and two ground water samples will be analyzed at a state-certified laboratory total petroleum hydrocarbons in the gasoline range (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE) (EPA Test Method 8015/8020); total petroleum hydrocarbons in the diesel range (TPHd) (EPA Test Method 8015M); and total petroleum hydrocarbons in the bunker oil range (TPHbo) (EPA Test Method 8015M). The laboratory analyses will be performed on a two-day response time.

Sampling Equipment Decontamination

All sampling equipment will be thoroughly cleaned with an aqueous solution of tri-sodium phosphate and distilled water or steam cleaned. The cleaning procedure will be repeated between each sampling location.

Report

We will prepare a soil and ground water evaluation report presenting the results of our investigation and summarizing our conclusions and recommendations. The report will include a site plan showing sampling locations and copies of permits and laboratory data sheets.

Schedule

It is anticipated that the ground water sampling will take place during the week of September 8, 2003.

If you have any questions, please call and we will be glad to discuss them with you.

Very truly yours,

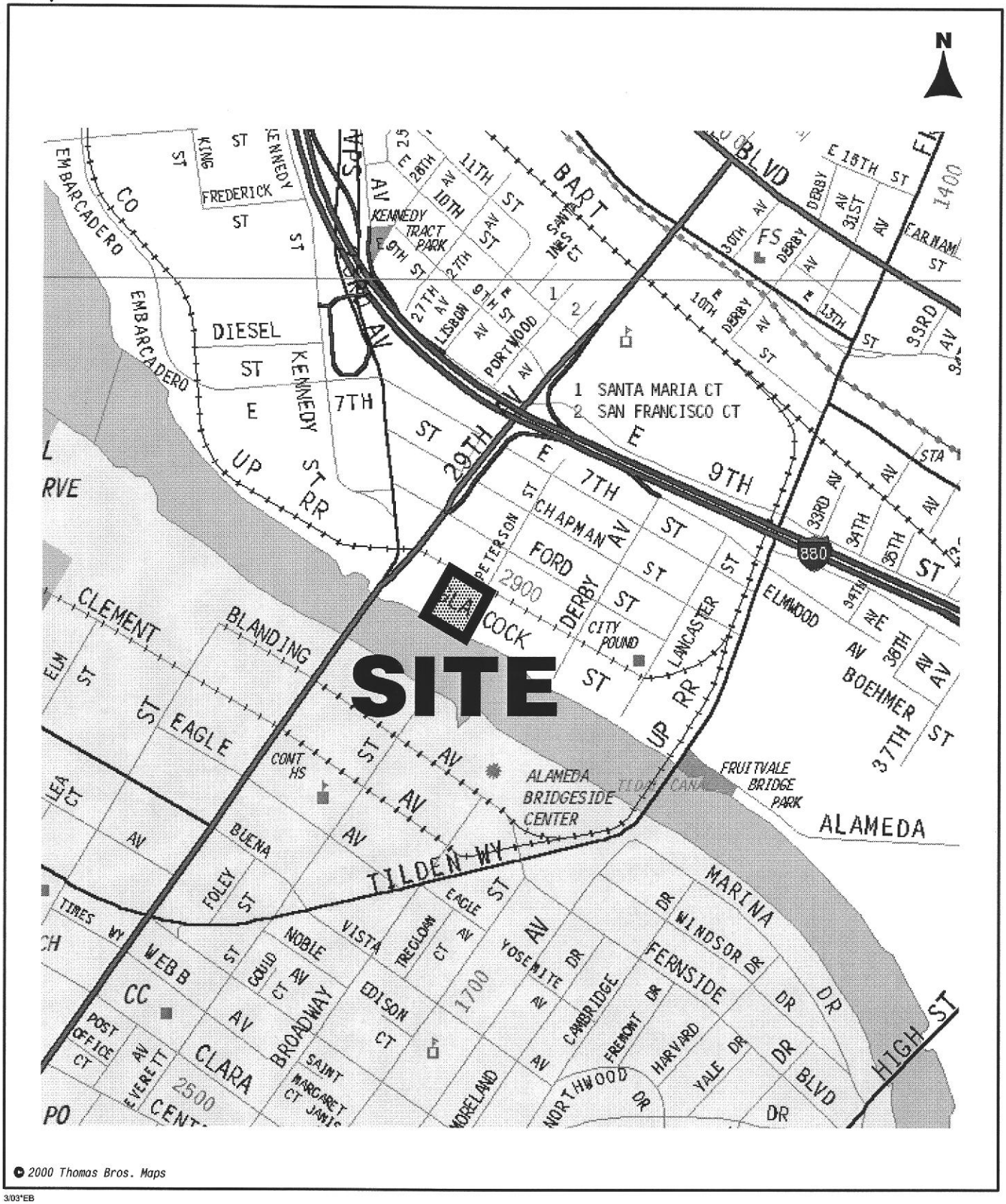
Lowney Associates

Peter M. Langtry, R.G., C.E.G.
Principal Environmental Geologist

Copies: Addressee (1)
Signature Properties (1)
Attn: Ms. Mary Grace Houlihan

Attachments: Figure 1, Vicinity Map
Figure 2, Site Plan

OK, P:\Projects\1700\1731-2 Derby-Glascock\1731-2G remediation\1731-2G Glascock GW sampling work plan 082903.doc



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VICINITY MAP

2901 GLASCOCK STREET
Oakland, California

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FIGURE 1
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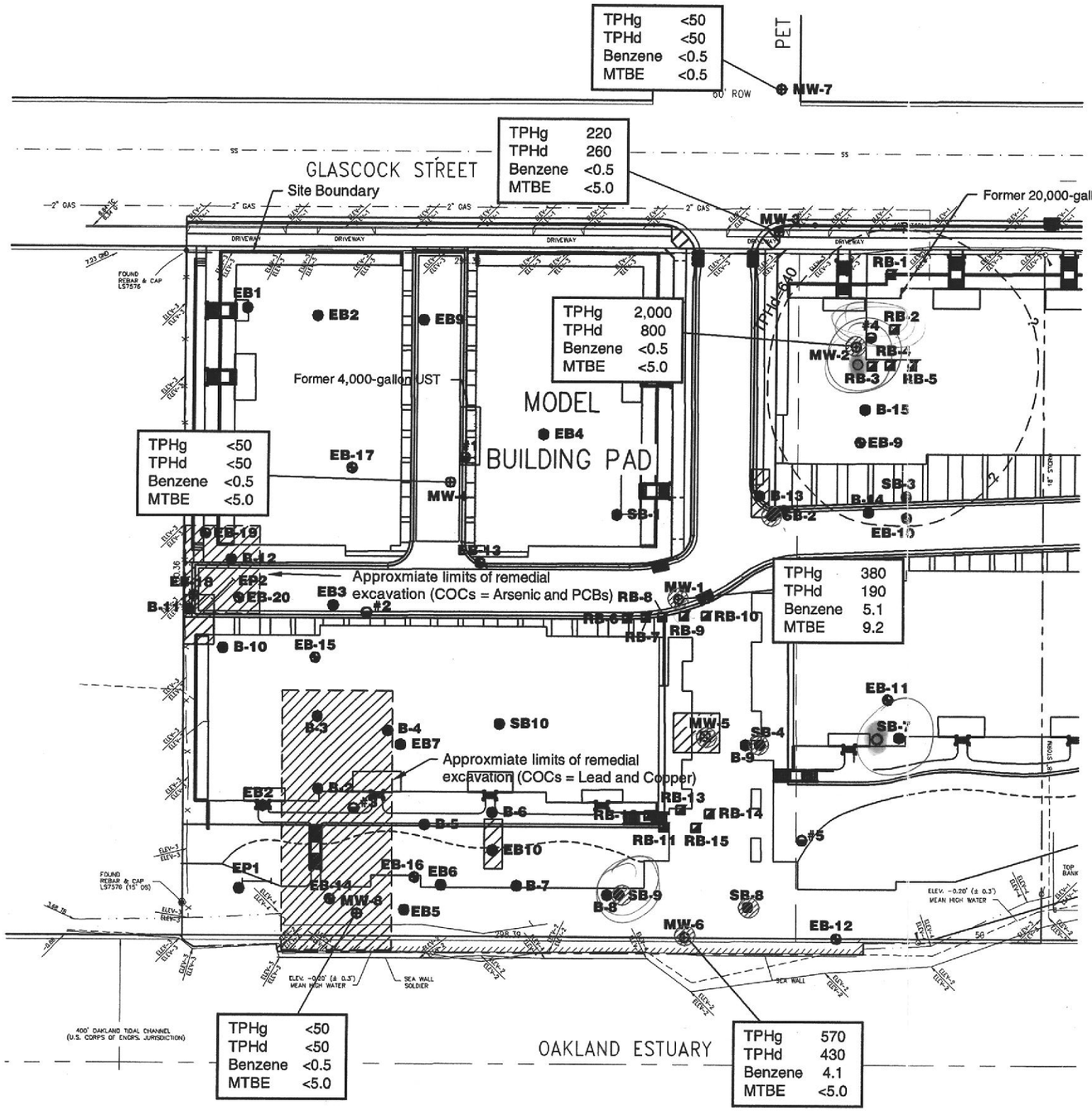

LEGEND

- ○ - Approximate location of proposed exploratory boring
- ◑ - Approximate location of exploratory boring (Lowney 2002)
- ● - Approximate location of exploratory boring (Lowney 2001)
- ⊕ - Approximate location of extraction/monitoring well
- △ - Approximate location of soil vapor boring
- ◪ - Approximate location of remediation boring (1999)
- ● - Approximate location of soil sample (1995)
- ⊢⊣ - Approximate location of test pit (1995)
- ◒ - Approximate location of soil sample (1993)
- ⊠ - Approximate location of destroyed ground water monitoring well
- ▨ - Soil excavation areas (1996)
- – – – Ground water concentrations exceeding ecological cleanup goals
- ▨ - Historical (1995) suspected free product in soil pores (approximately 11 to 15 feet)
- ▨ - Approximate extent of soil removal areas

Note:
Analytical results in parts per billion
Ground water results from February 2003 ground water monitoring event

Scale 0 50 feet

Base by KCA Engineers.

SITE PLAN
2901 GLASCOCK STREET
Oakland, California

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FIGURE 2
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