FAX

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Project No.: 6262.000.0
Project Name: Canterbury Residential Development

REMARKS:

☐ Hard copy to follow ☐ Urgent ☒ For your review ☐ Reply ASAP ☐ Please comment

We have attached a copy of our report on the unoccupied lots, including tables and figures. The final laboratory reports should arrive at Geomatrix on Thursday so we can send out the final report by the end of the day tomorrow.

Our next task is to develop the formal work plan for the Park based on previous discussions. We anticipate being in the field the week of May 8. Please let us know if that needs to be expedited and/or if accelerated turnaround times at the laboratory are required. Assuming standard turnaround times, we anticipate providing a report by the end of May.

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April 26, 2000
Project 6262.000.0

Mr. Hugh J. Murphy
City of Hayward Fire Department
777 B Street
Hayward, CA 94541-5007

Subject: Soil Sampling Results – Unoccupied Residential Lots
Canterbury Residential Development
Hayward, California

Dear Mr. Murphy:

On behalf of the City of Hayward, Geomatrix Consultants, Inc. (Geomatrix) has prepared this summary of the results of a soil sampling program performed on unoccupied lots in the Canterbury Residential Development in Hayward, California (Figure 1). The scope of work described herein was based on Geomatrix's April 6, 2000 work plan ("the work plan")[1].

Geomatrix's sampling effort was focussed on two objectives: 1) to evaluate the quality of soil likely to be contacted by residents during typical landscaping activities and 2) to further evaluate soil quality at lots located in the vicinity of previous soil removal. SummerHill Homes reportedly removed approximately 11,000 cubic yards of soil potentially impacted with chemicals ("soil removal area"). This soil was removed from lots in the vicinity of Chesterfield Court; lots south of Silverstar Lane were considered adjacent to the soil removal area.

This report is divided into four sections. The first section describes the methods used to collect the soil samples. The second section describes the analytical methods used by the laboratories. The third section presents the results of the field and analytical programs. The fourth section compares the detected concentrations to U.S. Environmental Protection Agency (U.S. EPA) Preliminary Remediation Goals (PRGs) for residential land use.

FIELD PROGRAM

Prior to performing the field investigation, Geomatrix completed the following tasks: reviewed the existing Health and Safety Plan (no update required); obtained a boring permit from the Alameda County Public Works Department (Attachment A); and cleared boring locations for underground utilities by notifying appropriate utilities through Underground Service Alert (USA). Prior to drilling, Geomatrix consulted in the field with a representative

[1] Geomatrix Consultants, Inc., 2000, Work Plan for Subsurface Investigation: Unoccupied Lots, Canterbury Residential Development, Hayward, California, April 6.

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of the City of Hayward Department of PublicWorks regarding the location of underground utilities.

LOTS OUTSIDE FORMER SOIL REMOVAL AREA

On April 7, 2000, Geomatrix supervised the advancement of 35 shallow soil borings on 34 unoccupied lots identified as outside the soil removal area (Figure 2). Two borings were advanced in Lot 5 of Tract 7069 as asphalt fragments were observed in the first boring.

Based on analytical results (discussed further in the Results Section), and in accordance with the work plan[1], seven additional shallow soil borings were advanced on April 21, 2000 at Lots 11 and 12 of Tract 7069.

Forty of the borings were advanced to 0.5 feet below ground surface (bgs) and two of the borings were advanced to 2.5 feet bgs using a hand auger. A hand-operated drive sampler lined with brass or stainless steel sleeves was used to collect soil samples at the bottom of each hand-augered boring. After retrieval of the soil core, the borehole was screened for volatile organic compounds (VOCs) using an organic vapor monitor equipped with a photoionization detector (PID). Soil descriptions, OVM readings and sample identifications were recorded on a shallow soil sampling log (Attachment B).

The soil samples were packaged for laboratory analysis by covering the ends of the sample sleeves with Teflon™ sheets and plastic caps. The caps were secured with silicon tape. The soil samples were labeled, placed in resealable plastic bags, and stored in coolers with ice, pending delivery to an analytical laboratory under Geomatrix chain-of-custody.

All downhole equipment including hand auger bucket and rods, drive sampler, and sleeves, were washed with an Alconox solution, rinsed with potable water, and rinsed with deionized water. Cleaning water was placed in a 55-gallon drum for characterization and disposal by SummerHill Homes.

LOTS WITHIN FORMER SOIL REMOVAL AREA

On April 10 and 11, 2000, Geomatrix supervised the advancement of 20 soil borings. Eighteen of the borings were advanced on lots in the vicinity of Chesterfield Court, and the remaining two borings were advanced near the former underground storage tank (UST) location. Fast-Tek Engineering Support Services, Inc., a California-licensed drilling firm from Richmond, California, advanced the borings using a Geoprobe® 5400 rig.

The borings were continuously cored to a depth of about 10 feet below ground surface (bgs) using Geoprobe®'s DT21dual tube sampling system. The inner sample barrel consists of

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1.25-inch-outside-diameter by 4-foot-long polybutyrate tubing. The recovered soil was logged in accordance with the Unified Soil Classification System visual-manual procedure (ASTM D2488-90) under the direction of a Geomatrix geologist registered in the State of California

Soil samples selected for laboratory analyses were cut from the polybutyrate sample barrel. The soil samples were collected from each boring at approximately 1, 5, and 9 feet bgs. Samples were packaged for laboratory analyses by covering the ends of each sampling tube with Teflon™ sheets and plastic caps. The caps were secured with silicon tape. The soil samples were labeled, placed in resealable plastic bags, and stored in coolers with ice, pending delivery to an analytical laboratory under Geomatrix chain-of-custody.

A gravel-sized particle was identified at approximately 2.5 feet bgs at GMX-TRS-12A. The dark gray particle appeared to be friable and was considered to potentially contain asbestos. The particle was double-bagged in resealable plastic bags, labeled, and submitted to an analytical laboratory under Geomatrix chain-of-custody.

Downhole equipment, including outer drive casing, and drive rods, was steam cleaned prior to borehole advancement at each location. Soil cuttings were placed in labeled 5-gallon pails pending characterization for disposal by SummerHill Homes. Cleaning water was combined in the 55-gallon drum with the cleaning water from the shallow soil sampling program.

ANALYTICAL PROGRAM

As outlined in the work plan, initial soil samples were submitted to Friedman & Bruya, a California- certified analytical laboratory in Seattle, Washington for analysis of:

- total petroleum hydrocarbons quantified as motor oil (TPHmo), in accordance with U.S. EPA Method 8015 modified, after a silica gel cleanup;
- polycyclic aromatic hydrocarbons (PAHs), in accordance with U.S. EPA Method 8270C SIM (selected ion mode); and
- VOCs, in accordance with U.S. EPA Method 8260.

The additional samples collected at lots 11 and 12 on April 21, 2000 were analyzed for PAHs and TPHmo only.

The potential asbestos-containing material was analyzed for asbestos using polarized light microscopy by Forensic Analytical Specialties, Inc. (FAS), a California-certified laboratory located in Hayward, California. Based on the initial results (discussed further in the Results

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Section) splits of ten soil samples were sent by Friedman and Bruya under chain-of-custody to FAS for additional asbestos analysis.

For quality assurance/quality control (QA/QC) purposes, the Friedman and Bruya analyzed duplicate samples, method blanks, matrix spike/matrix spike duplicate samples, and laboratory control samples.

RESULTS OF FIELD PROGRAM

This section presents the results of the field program. A summary of the soil types observed during sampling and a discussion of the analytical results follow.

SOIL CLASSIFICATION

Soil observed during sampling is generally consistent with soil observed during sampling activities in other portions of the development[2]. Site stratigraphy consists of a fill unit underlain by lean clay. Soil boring logs for the 20 borings advanced in the soil removal area are included as Attachment B.

The fill unit typically consists of firm gray to brown lean clay with minor amounts of fine to coarse sand and fine gravel. Shallow soil sampled from Lots 1 through 4 in Tract 7124 (designated by "TRS" in sample identification) consisted of clayey sand with gravel and appeared to be imported aggregate base material. The fill material is underlain by lean clay and lean clay with sand that typically grades in color from dark gray to light gray to brown.

Fill material in the six borings sampled west of Chesterfield Court (lots 76 to 83) ranged in thickness from approximately 2 to 4 feet. Fill material in the 12 borings sampled east of Chesterfield Court (lots 8 to 17 and lots 71 and 72) ranged in thickness from approximately 2 to 6 feet. Fill material thickness at the two locations advanced near the former UST ranged from approximately 4 to 8 feet. The variable thickness of this fill material is likely due to soil removal activities performed by SummerHill Homes, differences in final grade elevation, and grading operations (overexcavation, replacement, and compaction).

Saturated soil was encountered during soil sampling activities at location GMX-TRS-18a at 8.0 feet bgs; a lens of clayey sand was observed at this depth. Saturated soil was not observed in any of the other borings.

A slight odor, but no elevated PID readings, was detected by Geomatrix field personnel at location GMX-UST-01 at 6.5 feet bgs. This was one of two samples collected near the former

[2] Geomatrix Consultants, 2000, Soil Sampling Results, Canterbury Residential Development, Hayward, California, March 30.

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UST. At this location, no sample recovery was achieved between 6.5 and 10 feet bgs, due to soft conditions and concrete debris. A companion boring, advanced adjacent to GMX-UST-01, was sampled from 8 to 10 feet bgs; no odor was detected in this soil. Neither odor nor elevated PID readings were noted in any of the other soil borings.

At approximately 2.5 feet bgs in boring GMX-TRS-12A, a gray particle approximately 1-inch in diameter with a white fibrous component was observed and collected for analysis; the particle was interpreted in the field to potentially contain asbestos.

ANALYTICAL LABORATORY RESULTS

Soil Sample Results

Analytical results for TPHmo and PAHs are summarized in Table 1; analytical results for VOCs are summarized in Table 2. Laboratory analytical reports from Friedman and Bruya and FAS are presented in Attachments D and E, respectively. A review of the Quality Assurance/Quality Control data is presented in Attachment F.

TPHmo was detected in 45 of the 101 soil samples at concentrations ranging from 52 to 1,600 milligrams per kilogram (mg/kg) and in one sample collected 6.5 feet bgs near the former UST (GMX-UST-01-6.5) at 5400 mg/kg. Of the 45 samples containing TPHmo, 40 were collected at approximately 1-foot bgs (out of 53 lots sampled); one was collected at approximately 3 feet bgs; three were collected at depths of approximately 5 to 6 feet bgs; and one was collected at approximately 9 feet bgs.

Twenty-one of the 101 collected samples contained at least one PAH (Table 1); concentrations ranged from 5 to 630 micrograms per kilogram (ug/kg). Seventeen of these samples were collected at approximately 1.0 feet bgs and four were collected at approximately 5 to 6 feet bgs (GMX-TRS-13A-5.0, GMX-TRS-15A-5.5, GMX-TRN-82A-5.0, and GMX-UST-01-6.5). None of the samples collected at approximately 9 feet bgs contained detectable concentrations of PAHs.

Benzo(a)pyrene was detected in two samples (GMX-TRN-11A-1.0 at 85 ug/kg and GMX-TRN-12A-1.0 at 180 ug/kg) above the PRG (62 ug/kg; discussed further in the next section). In accordance with the work plan, these detections required four additional samples to be collected at each lot: three samples at approximately 20-feet from and surrounding the original location at 1.0 feet bgs and one at the original location at 2.5 to 3 feet bgs (Figure 3). Because lots 11 and 12 were adjacent in tract 7069, sample GMX-TRN-12D-1.0 served as one of the surrounding samples for both lots. In addition, each original sample was reanalyzed using remaining soil from the other end of the sample container. Up to three PAHs (chrysene, fluoranthene, and pyrene) were detected in three of the surrounding samples (GMX-TRN-

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11B-1.0, GMX-TRN-12C-1.0, and GMX-TRN-12D-1.0). Benzo(a)pyrene was not detected in any of these samples. No PAHs were detected in the reanalysis of GMX-TRN-12A-1.0. Ten PAHs, including benzo(a)pyrene at a concentration of 70 ug/kg, were detected in the reanalysis of GMX-TRN-11A-1.0.

Methylene chloride was detected in 21 samples but was attributed to sample contamination by the laboratory. Four of the 94 samples (GMX-TRN-72A-5.0, GMX-TRS-14A-5.0, GMX-UST-01-1.5, and GMX-UST-01-6.5) contained detections of other VOCs. Acetone was detected in all of these samples from 73 to 1000 ug/kg. It should be noted that acetone is a common laboratory contaminant and its detection may not be representative of soil quality at those locations. In two of the four samples, acetone was the only VOC detected. In one of the four samples (GMX-UST-01-1.5), MEK was also detected at 150 ug/kg. In another sample (GMX-UST-01-6.5), 12 VOCs in addition to acetone were detected at concentrations ranging from 9 to 510 ug/kg[3]. An odor associated with this sample was noted in the boring log.

The particle submitted for asbestos analysis from sample location GMX-TRS-12A at 2.5 feet bgs contained 20 percent asbestos. The ten soil samples submitted for asbestos analysis did not contain detectable concentrations of asbestos.

Discussion of Results

In accordance with the work plan, concentrations of PAHs and VOCs detected at the site were compared with residential Preliminary Remediation Goals (PRGs) established by U.S. EPA Region 9[4]. Total petroleum hydrocarbon measurements, such as TPHmo, represent mixtures of chemicals that, because of their potentially highly variable composition, have no associated health criteria. Therefore, the toxicity of these mixtures is best described by the aggregate toxicity of key individual chemicals in the mixture. As is the practice in California[5], only petroleum hydrocarbon constituents detected in soil, i.e., VOCs and PAHs, were considered for comparison to PRGs.

PRGs combine current EPA toxicity values with standard exposure factors to estimate concentrations in environmental media (e.g., soil) that are protective of human health, including sensitive subgroups, over a lifetime. For some chemicals, variations in exposure or toxicity assessment required in California have been applied and a "Cal-modified" PRG has been published. The Cal-modified PRGs have been used in this assessment, where available.

[3] As discussed in Appendix F, several internal laboratory standards were beyond control limits, and, therefore, reported concentrations of seven of the 12 VOCs are estimated concentrations in this sample.
[4] U.S. EPA, 1999, Region 9 Preliminary Remediation Goals (PRGs), October 1.
[5] Cal-EPA, 1994, Preliminary Endangerment Assessment Guidance Manual: Department of Toxic Substances control, Sacramento, California.

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If chemicals are present at concentrations below the PRGs, then exposure to these chemicals should not result in adverse health effects. If multiple chemicals are present, then the potential for adverse health effects associated with cumulative exposure may need to be evaluated. The presence of chemicals at concentrations exceeding PRGs does not indicate that adverse health effects will occur, but "suggests that further evaluation of the potential risks that may be posed by site contaminants is appropriate."[5] The PRGs are listed at the bottom of the Tables 1 and 2 for detected chemicals.

The comparison to PRGs yielded the following results:

- With the exception of samples with benzo(a)pyrene above the PRGs, concentrations of PAHs in other samples were at least 9 times lower than their respective PRGs. Eight of the fourteen PAHs were more than 100 times lower than their respective PRGs. Benzo(a)pyrene was detected in two samples (GMX-TRN-11A-1.0 at 85 ug/kg and GMX-TRN-12A-1.0 at 180 ug/kg) and in a replicate sample (GMX-TRN-12A-1.0 at 70 ug/kg) above the PRG (62 ug/kg). Benzo(a)pyrene was not detected in samples surrounding these locations, and concentrations of PAHs in these surrounding samples were at least 90 times lower than their respective PRG. PAHs also were not detected in samples collected below the two samples. These results indicate that the benzo(a)pyrene detected represents a shallow, isolated area of potentially affected soil that would not present a significant source of exposure.

- Concentrations of VOCs were at least ten times lower than their respective PRGs in all samples where concentrations were detected. However, the detection of several VOCs and TPHmo near the former UST indicate residual petroleum hydrocarbons remain in the soil in this area.

A PRG has not been developed for asbestos in soil. However, since asbestos was not detected in any of the 10 soil samples analyzed, asbestos in soil does not appear to be an issue at the site. Particulates, similar to the one identified in the core from location GMX-TRS-12A, were not identified in any of the other 28 cores (8 at lots on Telford Court[6] and 20 from the soil removal area).

[6] Geomatrix, 1999, Soil Sampling Results – Telford Court, March 30.

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CONCLUSIONS

Based on data presented in this report and comparisons of maximum detected soil concentrations to levels considered acceptable by U.S. EPA for residential site use, no further action is recommended, and the lots can be occupied for residential use.

Geomatrix appreciates this opportunity to provide consulting services to the City of Hayward. If you have any further questions, please contact any of the undersigned.

Sincerely yours,
GEOMATRIX CONSULTANTS, INC.

Ann M. Holbrow
Senior Scientist

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

Attachments:

Tables 1 through 3
Figures 1 and 2
Attachment A – Permit
Attachment B – Shallow Soil Sampling Log
Attachment C – Boring Logs
Attachment D – Laboratory Analytical Results – Friedman & Bruya
Attachment E – Laboratory Analytical Results – Forensic Analytical Services
Attachment F – Results of Quality Assurance/Quality Control

cc: Susan Hugo – Alameda County Health Care Services
Denise Tsuji – Department of Toxic Substances Control
Roger Brewer – California Regional Water Quality Control Board, San Francisco Bay Region
Mark Beskind – SummerHill Homes
Kim Brandt – LFR Levine*Fricke

TABLES

TABLE 1

SOIL ANALYTICAL RESULTS FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL AND POLYCYCLIC AROMATIC HYDROCARBONS[1]

Canterbury Residential Development
Hayward, California

Polycyclic aromatic hydrocarbon concentrations are reported in micrograms per kilogram (µg/kg); total petroleum hydrocarbon concentrations are reported in milligrams per kilogram (mg/kg)

Sample I.D.	Depth (feet)	Sample Date	TPHmo[2]	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(g,h,i)-perylene	Benzo(k)-fluoranthene	Chrysene	Dibenzo(a,h)-anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)-pyrene	Naphthalene	Phenanthrene	Pyrene
GMX-TRN-03A-1.0	1.0	4/7/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	5
GMX-TRN-04A-1.0	1.0	4/7/00	<50	<5	<5	<5	<5	<5	6	<5	<5	7	<5	10	<5	<5	<5	<5	9
GMX-TRN-05A-1.0	1.0	4/7/00	<50	<5	<5	<5	<5	<5	<5	6	<5	6	<5	6	<5	<5	<5	<5	7
GMX-TRN-06A-1.0	1.0	4/7/00	<50	<50	<50	<50	<50	<50	<50	<50	<50	61	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-07A-1.0	1.0	4/7/00	120[3]	<50	<50	<50	<50	<50	<50	<50	<50	56	<50	100	<50	<50	<50	<50	87
GMX-TRN-08A-1.0	1.0	4/7/00	300	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-09A-1.0	1.0	4/7/00	190	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-10A-1.0	1.0	4/7/00	160	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-11A-1.0	1.0	4/7/00	1000	<50	<50	<50	80	85	53	63	74	100	<50	170	<50	<50	<50	180	210
GMX-TRN-11A-1.0[5]	1.0	4/7/00	NA[4]	<50	<50	<50	70	70	77	91	54	100	<50	140	<50	69	<50	55	130
GMX-TRN-11B-1.0	1.0	4/21/00	160	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	75
GMX-TRN-11C-3.0	3.0	4/21/00	610	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-11D-1.0	1.0	4/21/00	130	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-12A-1.0	1.0	4/7/00	90	<50	<50	71	260	180	190	83	160	290	<50	630	<50	73	<50	310	560
GMX-TRN-12A-1.0[5]	1.0	4/7/00	NA	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-12B-3.0	3.0	4/21/00	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	-
GMX-TRN-12C-1.0	1.0	4/21/00	520	<50	<50	<50	<50	<50	<50	<50	<50	65	<50	110	<50	<50	<50	90	120
GMX-TRN-12D-1.0	1.0	4/21/00	530	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	60	<50	<50	<50	<50	71
GMX-TRN-12E-1.0	1.0	4/21/00	370	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-13A-1.0	1.0	4/7/00	360	<50	<50	<50	<50	<50	<50	60	<50	63	<50	110	<50	<50	<50	65	110
GMX-TRN-14A-1.0	1.0	4/7/00	100	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-15A-1.0	1.0	4/7/00	65	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-52A-1.0	1.0	4/7/00	350	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-53A-1.0	1.0	4/7/00	100	<5	<5	<5	8	9	9	7	8	13	<5	13	<5	5	<5	6	17
GMX-TRN-54A-1.0	1.0	4/7/00	110	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-55A-1.0	1.0	4/7/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-56A-1.0	1.0	4/7/00	300	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-57A-1.0	1.0	4/7/00	420	<50	<50	<50	<50	<50	<50	<50	<50	63	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-58A-1.0	1.0	4/7/00	280	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-59A-1.0	1.0	4/7/00	150	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-60A-1.0	1.0	4/7/00	160	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-61A-1.0	1.0	4/7/00	370	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-62A-1.0	1.0	4/7/00	120	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-68A-1.0	1.0	4/7/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-69A-1.0	1.0	4/7/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-70A-1.0	1.0	4/7/00	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-71A-1.0	1.0	4/11/00	120	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-71A-5.0	5.0	4/11/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-71A-9.0	9.0	4/11/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-72A-1.5	1.5	4/11/00	<50	<50	<50	<50	66	59	<50	<50	60	39	<50	54	<50	<50	<50	<50	65
GMX-TRN-72A-5.0	5.0	4/11/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-72A-9.0	9.0	4/11/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-78A-1.5	1.5	4/10/00	230	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-78A-5.5	5.5	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-78A-9.0	9.0	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

TABLE 1

SOIL ANALYTICAL RESULTS FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL AND POLYCYCLIC AROMATIC HYDROCARBONS[1]

Canterbury Residential Development
Hayward, California

Polycyclic aromatic hydrocarbon concentrations are reported in micrograms per kilogram (µg/kg); total petroleum hydrocarbon concentrations are reported in milligrams per kilogram (mg/kg).

Sample I.D.	Depth (feet)	Sample Date	TPHmo[2]	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(g,h,i)-perylene	Benzo(k)-fluoranthene	Chrysene	Dibenzo(a,h)-anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)-pyrene	Naphthalene	Phenanthrene	Pyrene
GMX-TRN-79A-1.5	1.5	4/10/00	71	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-79A-5.5	5.5	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-79A-9.0	9.0	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-80A-1.0	1.0	4/10/00	53	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-80A-5.0	5.0	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-80A-9.0	9.0	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-81A-1.5	1.5	4/10/00	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-81A-5.5	5.5	4/10/00	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-81A-9.0	9.0	4/10/00	64	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-82A-1.0	1.0	4/10/00	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-82A-3.0	3.0	4/10/00	<50	<5	<5	<5	8	6	<5	<5	5	8	<5	15	<5	<5	<5	9	65
GMX-TRN-82A-9.0	9.0	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-83A-2.0	2.0	4/10/00	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-83A-5.5	5.5	4/10/00	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRN-83A-9.5	9.5	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-01A-1.0	1.0	4/7/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-02A-1.0	1.0	4/7/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-03A-1.0	1.0	4/7/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-04A-1.0	1.0	4/7/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-05A-1.0	1.0	4/7/00	270	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRS-06A-1.0	1.0	4/7/00	80	<50	<50	<50	<50	<50	<50	<50	<50	58	<50	<50	<50	<50	<50	<50	<50
GMX-TRS-07A-1.0	1.0	4/7/00	59	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRS-08A-1.5	1.5	4/11/00	71	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRS-08A-5.5	5.5	4/11/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-08A-9.5	9.5	4/11/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-09A-1.0	1.0	4/11/00	92	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRS-09A-5.0	5.0	4/11/00	1,600	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
GMX-TRS-09A-9.0	9.0	4/11/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-10A-1.5	1.5	4/11/00	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRS-10A-5.5	5.5	4/11/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-10A-9.0	9.0	4/11/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-11A-1.0	1.0	4/10/00	92	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRS-11A-5.5	5.5	4/10/00	83	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRS-11A-9.0	9.0	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-12A-1.5	1.5	4/10/00	77	<50	<50	<50	<50	<50	<50	<50	<50	57	<50	<50	<50	<50	<50	<50	51
GMX-TRS-12A-5.5	5.5	4/10/00	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRS-12A-9.0	9.0	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-13A-1.5	1.5	4/10/00	87	<50	<50	<50	<50	<50	<50	<50	<50	64	<50	62	<50	<50	<50	<50	61
GMX-TRS-13A-5.0	5.5	4/10/00	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	74	<50	<50	<50	<50	62
GMX-TRS-13A-9.0	9.0	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-14A-1.5	1.5	4/10/00	1,200	<50	<50	<50	50	<50	<50	<50	<50	116	<50	<50	<50	<50	<50	88	82
GMX-TRS-14A-5.0	5.5	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-14A-9.0	9.0	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-15A-1.5	1.5	4/11/00	150	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRS-15A-5.5	5.5	4/11/00	<50	<5	<5	<5	8	7	12	<5	<5	10	<5	12	<5	<5	<5	<5	12

TABLE 1

SOIL ANALYTICAL RESULTS FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL AND POLYCYCLIC AROMATIC HYDROCARBONS[1]

Canterbury Residential Development
Hayward, California

Polycyclic aromatic hydrocarbon concentrations are reported in micrograms per kilogram (µg/kg); total petroleum hydrocarbon concentrations are reported in milligrams per kilogram (mg/kg).

Sample I.D.	Depth (feet)	Sample Date	TPHmo[2]	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo(g,h,i)-perylene	Benzo(k)-fluoranthene	Chrysene	Dibenzo(a,h)-anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)-pyrene	Naphthalene	Phenanthrene	Pyrene
GMX-TRS-15A-9.0	9.0	4/11/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-16A-1.5	1.5	4/11/00	**100**	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRS-16A-5.0	5.0	4/11/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-16A-9.0	9.0	4/11/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-17A-1.0	1.0	4/11/00	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-TRS-17A-5.0	5.0	4/11/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-17A-9.0	9.0	4/11/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-UST-01-1.5	1.5	4/10/00	**52**	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
GMX-UST-01-6.5	6.5	4/10/00	**5,400**	**53**	<50	<50	**120**	<50	<50	<50	<50	**340**	<50	<50	**170**	<50	**159**	**440**	**150**
GMX-UST-01-9.0	9.0	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-UST-02-1.5	1.5	4/10/00	<50	<5	<5	<5	<5	<5	**6**	<5	<5	**17**	<5	<5	<5	<5	<5	**37**	**6**
GMX-UST-02-5.5	5.5	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
GMX-UST-02-9.0	9.0	4/10/00	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
PRGs[5]			NA[6]	3,700,000	--[7]	22,000,000	620	62	620	3700000[8]	6200	6100	--	2,300,000	2,600,000	620	56000	22000000[8]	2,300,000

Notes:

* Replicate analysis of sample using soil from the other end of the sample container.
1. Analyzed in accordance with U.S. EPA Methods 8015 modified (TPHmo) and 8270 SIMS (polycyclic aromatic hydrocarbon), respectively.
2. TPHmo - Total Petroleum Hydrocarbons as Motor Oil
3. Detected values highlighted in bold.
4. NA - Not analyzed.
5. PRGs - Residential Preliminary Remediation Goals (U.S. EPA, 1999).
6. Not available; PRGs have not been developed for mixtures. TPHmo evaluated based on the individual constituents detected.
7. -- - PRGs only provided if analyte was detected.
8. A surrogate PRG was used because a PRG was not available for this compound. The surrogate selected based on physico-chemical properties was:
   Acenaphthene for benzo(g,h,i)perylene;
   Anthracene for phenanthrene.

TABLE 2

SOIL ANALYTICAL RESULTS FOR SELECTED VOLATILE ORGANIC COMPOUNDS[1]

Canterbury Residential Development
Hayward, California

Concentrations reported in micrograms per kilogram (µg/kg)

Sample I.D.	Depth (feet)	Sample Date	Acetone	2-Butanone (MEK)	1,2-Dichlorobenzene	Ethylbenzene	Isopropylbenzene	p-Isopropyltoluene	Methylene chloride	Naphthalene	n-Propylbenzene	sec-Butylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylene	o-Xylene
GMX-TRN-03A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-04A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-05A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-06A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-07A-1.0	1.0	4/7/00	<50	<50	<5 J[2]	<5	<5	<5 J	<50	<5 J	<5 J	<5 J	<5 J	<5 J	<5	<5
GMX-TRN-08A-1.0	1.0	4/7/00	<50	<50	<5 J	<5	<5	<5 J	<50	<5 J	<5 J	<5 J	<5 J	<5 J	<5	<5
GMX-TRN-09A-1.0	1.0	4/7/00	<50	<50	<5 J	<5	<5	<5 J	<50	<5 J	<5 J	<5 J	<5 J	<5 J	<5	<5
GMX-TRN-10A-1.0	1.0	4/7/00	<50	<50	<5 J	<5	<5	<5 J	<50	<5 J	<5 J	<5 J	<5 J	<5 J	<5	<5
GMX-TRN-11A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-12A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-13A-1.0	1.0	4/7/00	<50	<50	<5 J	<5	<5	<5 J	<50	<5 J	<5 J	<5 J	<5 J	<5 J	<5	<5
GMX-TRN-14A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-15A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-52A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-53A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-54A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-55A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-56A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-57A-1.0	1.0	4/7/00	<50	<50	<5 J	<5	<5	<5 J	<50	<5 J	<5 J	<5 J	<5 J	<5 J	<5	<5
GMX-TRN-58A-1.0	1.0	4/7/00	<50	<50	<5 J	<5	<5	<5 J	<50	<5 J	<5 J	<5 J	<5 J	<5 J	<5	<5
GMX-TRN-59A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-60A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-61A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-62A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-68A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	51	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-69A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-70A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-71A-1.0	1.0	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-71A-5.0	5.0	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-71A-9.0	9.0	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-72A-1.5	1.5	4/11/00	<50	<50	<5	<5	<5	<5	52	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-72A-5.0	5.0	4/11/00	73	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-72A-9.0	9.0	4/11/00	<50	<50	<5	<5	<5	<5	61	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-78A-1.5	1.5	4/10/00	<50	<50	<5 J	<5	<5	<5 J	<50	<5 J	<5 J	<5 J	<5 J	<5 J	<5	<5
GMX-TRN-78A-5.5	5.5	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-78A-9.0	9.0	4/10/00	<50	<50	<5	<5	<5	<5	67	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-79A-1.5	1.5	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-79A-5.5	5.5	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-79A-9.0	9.0	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-80A-1.0	1.0	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5

TABLE 2

SOIL ANALYTICAL RESULTS FOR SELECTED VOLATILE ORGANIC COMPOUNDS[1]

Canterbury Residential Development
Hayward, California

Concentrations reported in micrograms per kilogram (µg/kg)

Sample I.D.	Depth (feet)	Sample Date	Acetone	2-Butanone (MEK)	1,2-Dichloro-benzene	Ethylbenzene	Isopropyl-enzene	p-Isopropyl-toluene	Methylene chloride	Naphthalene	n-Propylbenzene	sec-Butylbenzene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	m,p-Xylene	o-Xylene
GMX-TRN-80A-5.0	5.0	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-80A-9.0	9.0	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-81A-1.5	1.5	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-81A-5.5	5.5	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-81A-9.0	9.0	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-82A-1.0	1.0	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-82A-5.0	5.0	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-82A-9.0	9.0	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-83A-2.0	2.0	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-83A-5.5	5.5	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRN-83A-9.5	9.5	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-01A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-02A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-03A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	59	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-04A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-05A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-06A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-07A-1.0	1.0	4/7/00	<50	<50	<5	<5	<5	<5	53	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-08A-1.5	1.5	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-08A-5.5	5.5	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-08A-9.5	9.5	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-09A-1.0	1.0	4/11/00	<50	<50	<5 1	<5	<5	<5 1	56	<5 1	<5 1	<5 1	<5 1	<5 1	<5	<5
GMX-TRS-09A-5.0	5.0	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-09A-9.0	9.0	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-10A-1.5	1.5	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-10A-5.5	5.5	4/11/00	<50	<50	<5	<5	<5	<5	57	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-10A-9.0	9.0	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-11A-1.0	1.0	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-11A-5.5	5.5	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-11A-9.0	9.0	4/10/00	<50	<50	<5	<5	<5	<5	65	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-12A-1.5	1.5	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-12A-5.5	5.5	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-12A-9.0	9.0	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-13A-1.5	1.5	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-13A-5.0	5.0	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-13A-9.0	9.0	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-14A-1.5	1.5	4/10/00	<50	<50	<5 1	<5	<5	<5 1	63	<5 1	<5 1	<5 1	<5 1	<5 1	<5	<5
GMX-TRS-14A-5.0	5.0	4/10/00	130	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-14A-9.0	9.0	4/10/00	<50	<50	<5	<5	<5	<5	70	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-15A-1.5	1.5	4/11/00	<50	<50	<5	<5	<5	<5	68	<5	<5	<5	<5	<5	<5	<5

TABLE 2

SOIL ANALYTICAL RESULTS FOR SELECTED VOLATILE ORGANIC COMPOUNDS[1]

Canterbury Residential Development
Hayward, California

Concentrations reported in micrograms per kilogram (ug/kg)

Sample I.D.	Depth (feet)	Sample Date	Acetone	2-Butanone (MEK)	1,2-Dichloro-benzene	Ethylbenzene	Isopropyl-enzene	p-Isopropyl-toluene	Methylene chloride	Naphthalene	n-Propylbenzene	sec-Butylbenzene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	m,p-Xylene	o-Xylene
GMX-TRS-15A-5.5	5.5	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-15A-9.0	9.0	4/11/00	<50	<50	<5	<5	<5	<5	67	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-16A-1.5	1.5	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-16A-5.0	5.0	4/11/00	<50	<50	<5 I	<5	<5	<5 I	85	<5 I	<5 I	<5 I	<5 I	<5 I	<5	<5
GMX-TRS-16A-9.0	9.0	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-17A-1.0	1.0	4/11/00	<50	<50	<5 I	<5	<5	<5 I	57	<5 I	<5 I	<5 I	<5 I	<5 I	<5	<5
GMX-TRS-17A-5.0	5.0	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-TRS-17A-9.0	9.0	4/11/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
GMX-UST-01-1.5	1.5	4/10/00	1,000	150	<5 I	<5	<5	<5 I	79	<5 I	<5 I	<5 I	<5 I	<5 I	<5	<5
GMX-UST-01-6.5	6.5	4/10/00	78	<50	9 I	21	9	16 I	78	33	51	14	510	74	14	24
GMX-UST-01-9.0	9.0	4/10/00	<50	<50	<5	<5	<5	<5	51	<5	<5	<5	<5	<5	<5	<5
GMX-UST-02-1.5	1.5	4/10/00	<50	<50	<5	<5	<5	<5	64	<5	<5	<5	<5	<5	<5	<5
GMX-UST-02-5.5	5.5	4/10/00	<50	<50	<5	<5	<5	<5	57	<5	<5	<5	<5	<5	<5	<5
GMX-UST-02-9.0	9.0	4/10/00	<50	<50	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5
PRG[6]			1,600,000	7,300,000	370,000	230,000	160,000	--[7]	8,900	56,000	140,000	110,000	5,700	21,000	210,000[8]	--[8]

Notes:
1. Analyzed in accordance with U.S. EPA Method 8260. Only detected analytes included.
2. I- The internal standard associated with the analyte is out of control limits. The reporting limit or reported concentration is an estimate.
3. Detected values highlighted in bold.
4. lc - The presence of the compound indicated is likely due to laboratory contamination.
5. ve- The value reported exceeded the calibration range established for the analyte. The reported concentration is an estimate.
6. PRGs - Residential Preliminary Remediation Goals (U.S. EPA 1999).
7. -- A PRG is not available for this compound.
8. Concentrations of m,p-xylene and o-xylene should be summed for comparison to the PRG for total xylenes.

TABLE 3

SOIL ANALYTICAL RESULTS FOR ASBESTOS[1]

Canterbury Residential Development

Hayward, California

Sample I.D.	Depth (feet)	Sample Date	Asbestos Content (percent)
GMX-TRS-12A-2.5[2]	2.5	4/10/00	20 [3]
GMX-TRN-08A-1.0	1.0	4/7/00	ND[4]
GMX-TRN-13A-1.0	1.0	4/7/00	ND
GMX-TRN-53A-1.0	1.0	4/7/00	ND
GMX-TRN-58A-1.0	1.0	4/7/00	ND
GMX-TRN-69A-1.0	1.0	4/7/00	ND
GMX-TRN-80A-1.0	1.0	4/10/00	ND
GMX-TRS-11A-1.0	1.0	4/10/00	ND
GMX-TRS-12A-1.5	1.5	4/10/00	ND
GMX-TRS-13A-1.5	1.5	4/10/00	ND
GMX-TRS-14A-1.5	1.5	4/10/00	ND

Notes:

1. Analyzed in accordance with U.S. EPA Method 600/R-93-116.
2. Analysis of gravel-sized particle in soil core. All other results represent soil samples.
3. Detected values highlighted in bold.
4. ND - Not detected.

FIGURES

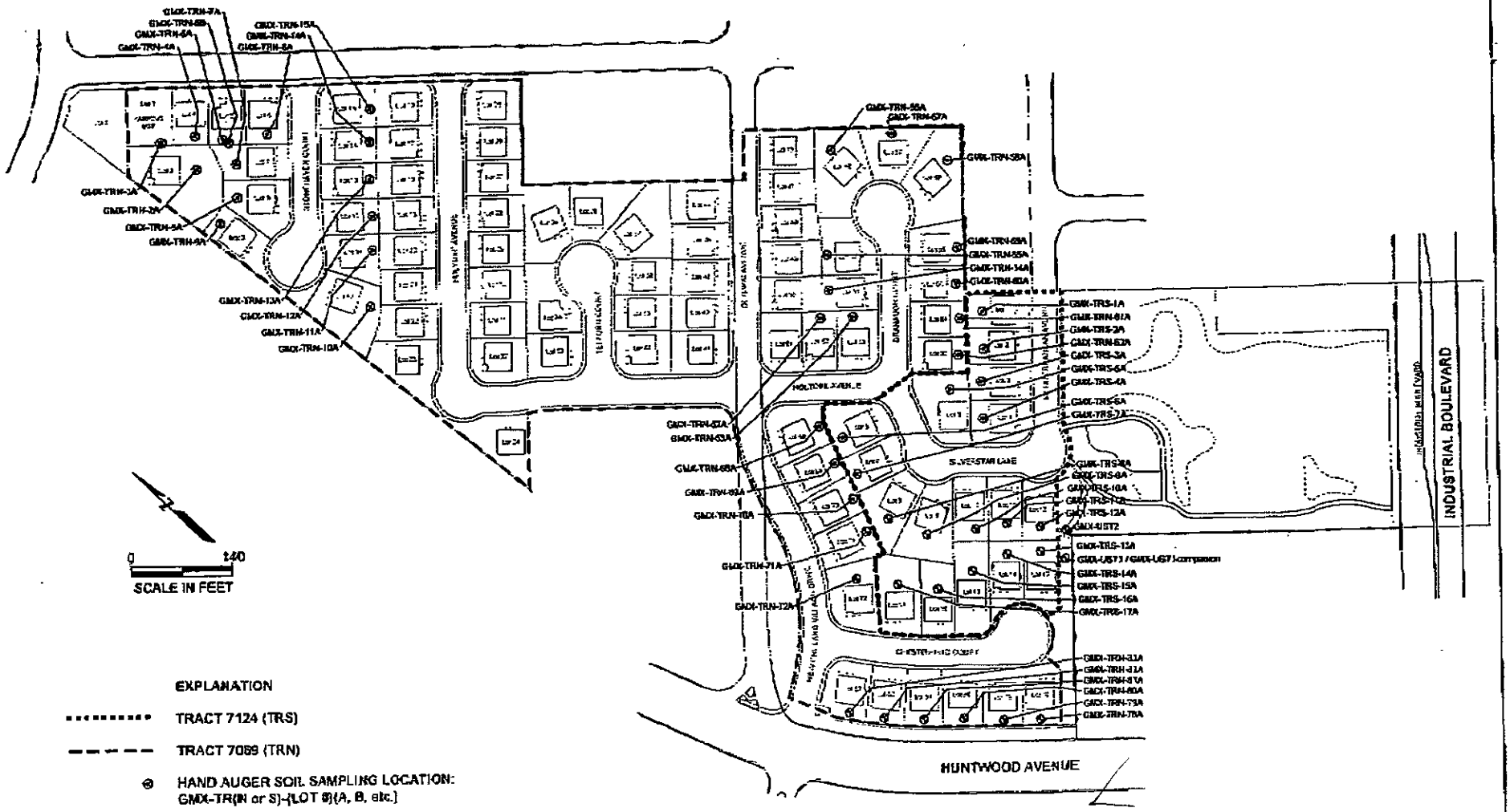
Base map from U.S. Geological Survey; Hayward Quadrangle (California), 15 Minute series (topographic), 1959.

0 1 Mile

GEOMATRIX

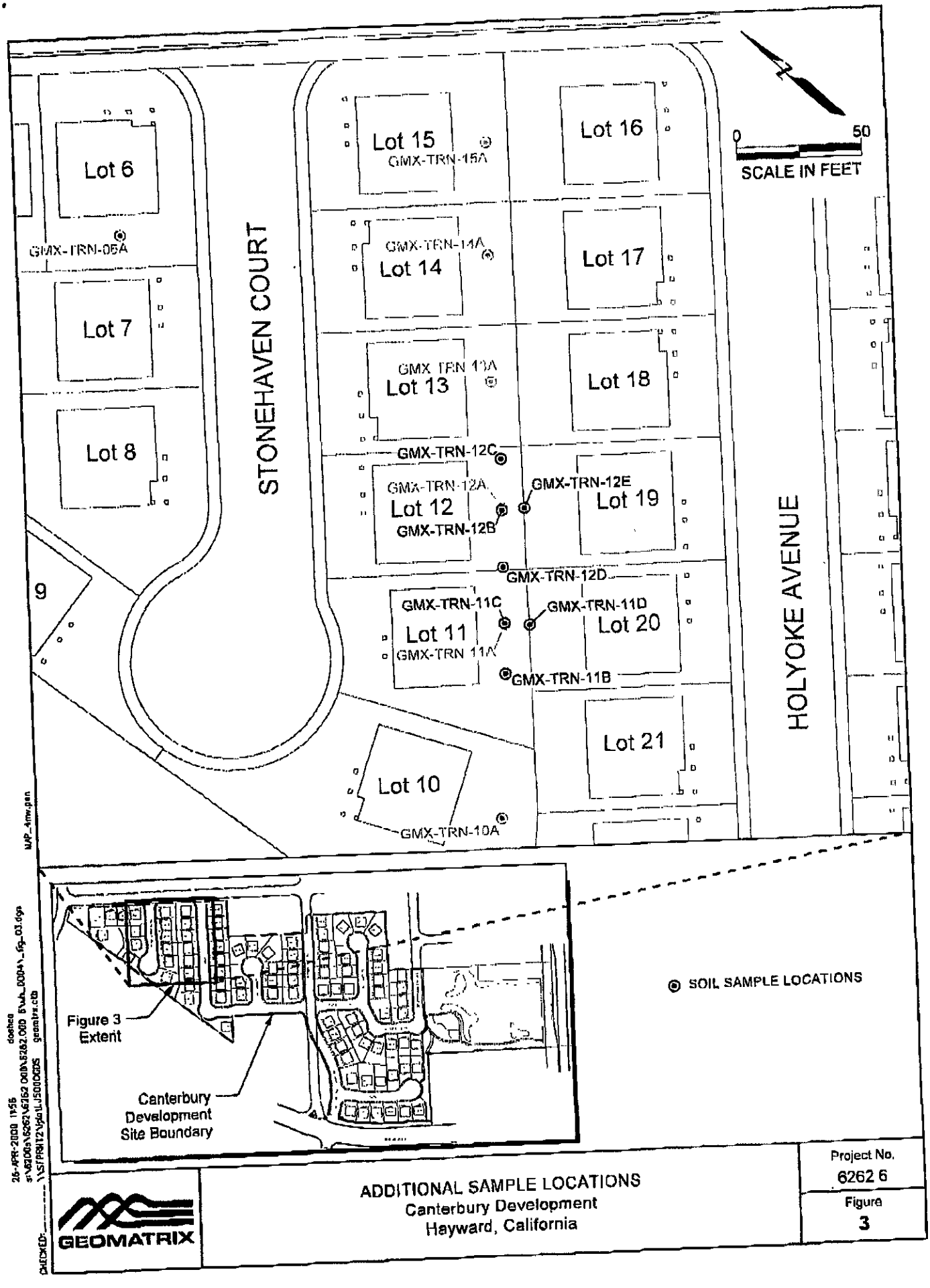
SITE VICINITY MAP
Canterbury Residential Development
Olympic Avenue
Hayward, California

Project No.
6262
Figure
1



SITE PLAN SHOWING RESIDENTIAL DEVELOPMENT AND INITIAL SAMPLE LOCATIONS
Canterbury Development
Hayward, California

GEOMATRIX	Project No 6262 6	Figure 2



ADDITIONAL SAMPLE LOCATIONS
Canterbury Development
Hayward, California

GEOMATRIX

Project No.
6262 6

Figure
3