# FAX

from **Geomatrix Consultants, Inc.**
2101 Webster Street, 12th Floor, Oakland, CA 94612
www.geomatrix.com

GEOMATRIX

*The information in this telecopy is intended for the named recipient(s) only. It may contain privileged and confidential matter. If you have received this telecopy in error, please notify the sender immediately. Thank you.*

**Date:** December 18, 2000 **Number of pages including cover sheet:** 7

3rd C 6669

**To:**

| | |
|---|---|
| Susan Hugo<br>Alameda County Health Care Services | (510) 337-9335 |
| Roger Brewer<br>RWQCB | (510) 622-2460 |
| Nina Antonio<br>DTSC | (510) 540-3819 |
| Fax Phone: | |
| Phone: | |
| cc: Hugh Murphy<br>Hayward Fire Dept<br>w/o attachments | (510) 583-3641 |

**From:**

Susan Gallardo
Geomatrix Consultants

Fax Phone: 510-663-4141
Phone: 510-663-4100
Direct dial: 510-663-4137
Email: sgallardo@geomatrix.com

Project No.: 6262.000
Project Name: Canterbury Development

**REMARKS:**

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

Attached is a site map and data generated from our sampling of the occupied lots. We look forward to meeting with you tomorrow at 10:00 a.m. in the DTSC offices.



\\sf3\deptdata\Doc_Safe\6000s\6262\Fax121800..doc

S. Hugo

GEOMATRIX

# MEMORANDUM

| | | | |
|---|---|---|---|
| **TO:** | Nina Antonio – DTSC<br>Susan Hugo – ACHCSA | **DATE:** | January 3, 2001 |
| **FROM:** | Ann Holbrow and Susan Gallardo | **CC:** | Kathleen Isaacson<br>Hugh Murphy |
| **SUBJECT:** | Data Summary Tables for Additional Sampling at Occupied Lots<br>Canterbury Residential Development | | |

We have enclosed the revised data summary table and figure showing sample locations for soil samples collected at occupied lots at the Canterbury Residential Development.

\\sf3\deptdata\Project\6000s\6262\Occupied Lots\Data Memo.doc

00 JAN -4 AM 8:49
ENVIRONMENTAL PROTECTION

## 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 ID | Depth (feet) | Date Sampled | 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-16A-1.0 | 1.0 | 9/22/00 | **1,800** | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| GMX-TRN-16B-1.0 | 1.0 | 10/24/00 | **370** | <5 | <5 | <5 | **12** | **16** | **15** | **14** | **12** | **22** | **6** | **17** | <5 | **9** | <5 | **8** | **21** |
| GMX-TRN-16B-3.5 | 3.5 | 10/24/00 | <50 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| GMX-TRN-16C-1.0 | 1.0 | 10/24/00 | **600** | <5 | <5 | <5 | **20** | **22** | **19** | **24** | **10** | **56** | **7** | **20** | <5 | **13** | <5 | **12** | **34** |
| GMX-TRN-16D-1.0 | 1.0 | 10/24/00 | **150** | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | **5** |
| GMX-TRN-17A-1.0 | 1.0 | 9/22/00 | **1,500** | <50 | <50 | <50 | <50 | <50 | <50 | **63** | <50 | **63** | <50 | **58** | <50 | <50 | <50 | <50 | **63** |
| GMX-TRN-17B-1.0 | 1.0 | 10/24/00 | **1,100** | <5 | <5 | <5 | **7** | **11** | **11** | **14** | **7** | **16** | **6** | **9** | <5 | **8** | <5 | <5 | **13** |
| GMX-TRN-17B-3.5 | 3.5 | 10/24/00 | <50 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| GMX-TRN-17C-1.0 | 1.0 | 10/24/00 | **580** | <5 | <5 | <5 | **6** | **10** | **8** | **7** | <5 | **14** | <5 | **9** | <5 | <5 | <5 | **9** | **16** |
| GMX-TRN-17D-1.0 | 1.0 | 10/24/00 | **1,100** | <5 | <5 | <5 | **19** | **25** | **22** | **16** | **17** | **32** | <5 | **55** | <5 | **12** | <5 | **22** | **59** |
| GMX-TRN-18A-1.0 | 1.0 | 9/21/00 | **590** | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | **74** |
| GMX-TRN-20A-1.0 | 1.0 | 9/22/00 | **860** | <5 | <5 | <5 | **7** | **11** | <5 | **19** | <5 | **18** | <5 | <5 | <5 | <5 | <5 | **7** | **8** |
| GMX-TRN-21A-1.0 | 1.0 | 9/28/00 | **1,200** | <50 | <50 | <50 | <50 | <50 | <50 | **64** | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| GMX-TRN-21B-1.0 | 1.0 | 10/26/00 | 2300 | <50d | <50d | <50d | <50d | <50d | 56d | 59d | <50d | 88d | <50d | 82d | <50d | <50d | <50d | <50d | 100d |
| GMX-TRN-21B-3.5 | 3.5 | 10/26/00 | **700** | <5 | <5 | <5 | <5 | <5 | **6** | <5 | <5 | **8** | <5 | **8** | <5 | <5 | <5 | **6** | **9** |
| GMX-TRN-21C-1.0 | 1.0 | 10/26/00 | **700** | <5 | <5 | **5** | **22** | **29** | **29** | **22** | **22** | **35** | **5** | **48** | <5 | **16** | <5 | **26** | **50** |
| GMX-TRN-21D-1.0 | 1.0 | 10/26/00 | 2000 | <50d | <50d | <50d | 71d | 100d | 92d | 68d | 75d | 110d | <50d | 170d | <50d | <50d | <50d | 85d | 180d |
| GMX-TRN-23A-1.0 | 1.0 | 9/21/00 | **770** | <50 | <50 | <50 | <50 | <50 | **50** | **64** | <50 | **63** | <50 | **110** | <50 | <50 | <50 | **110** | **96** |
| GMX-TRN-25A-1.0 | 1.0 | 9/21/00 | **210** | <5 | <5 | <5 | **20** | **20** | **18** | **10** | **13** | **25** | <5 | **33** | <5 | **11** | <5 | **14** | **33** |
| GMX-TRN-26A-1.0 | 1.0 | 9/22/00 | <50 | <5 | <5 | <5 | **12** | **15** | **15** | **11** | **12** | **16** | <5 | **29** | <5 | **12** | <5 | **13** | **27** |
| GMX-TRN-27A-1.0 | 1.0 | 9/21/00 | **190** | <5 | <5 | **7** | **54** | **72** | **79** | **33** | **48** | **74** | **19** | **120** | <5 | **43** | <5 | **47** | **110** |
| GMX-TRN-27B-1.0 | 1.0 | 10/26/00 | **310** | <5 | <5 | **10** | **50** | **62** | **60** | **27** | **45** | **75** | **11** | **91** | <5 | **25** | <5 | **39** | **100** |
| GMX-TRN-27B-3.5 | 3.5 | 10/26/00 | **520** | <5 | <5 | <5 | **10** | **17** | **14** | **10** | **15** | **14** | <5 | **20** | <5 | **10** | <5 | **14** | **21** |
| GMX-TRN-27C-1.0 | 1.0 | 10/26/00 | **230** | **29** | **6** | **36** | **71** | **69** | **62** | **24** | **37** | **130** | **8** | **78** | **56** | **22** | <5 | **350** | **180** |
| GMX-TRN-27D-1.0 | 1.0 | 10/26/00 | **710** | **10** | <5 | **25** | **94** | **130** | **140** | **46** | **130** | **130** | **23** | **240** | **9** | **51** | **6** | **120** | **230** |
| GMX-TRN-30A-1.0 | 1.0 | 9/22/00 | **1,500** | **370** | <50 | **500** | **660** | **420** | **220** | **270** | <50 | **1,200** | <50 | **180** | **490** | **130** | **84** | **2,300** | **1,300** |
| GMX-TRN-30B-1.0 | 1.0 | 10/24/00 | 230 | <50d | <50d | <50d | 75d | 72d | 65d | 53d | 59d | 100d | <50d | 210d | <50d | <50d | <50d | 68d | 230d |
| GMX-TRN-30B-3.0 | 3.0 | 10/24/00 | <50 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| GMX-TRN-30C-1.0 | 1.0 | 10/24/00 | 2900 | <50d | <50d | <50d | 89d | <50d | <50d | 66d | <50d | 190d | <50d | <50d | 59d | <50d | <50d | 210d | 140d |
| GMX-TRN-30D-1.0 | 1.0 | 10/24/00 | 740 | <50d | <50d | <50d | 67d | 69d | 55d | 59d | <50d | 140d | <50d | 71d | <50d | <50d | <50d | 110d | 120d |
| GMX-TRN-31A-1.0 | 1.0 | 9/21/00 | **410** | <5 | <5 | <5 | **16** | **20** | **22** | **18** | **15** | **23** | **8** | **39** | <5 | **19** | <5 | **18** | **34** |
| GMX-TRN-32A-1.0 | 1.0 | 9/21/00 | **120** | <5 | <5 | <5 | **20** | **26** | **29** | **25** | **17** | **31** | **11** | **39** | <5 | **22** | <5 | **16** | **39** |
| GMX-TRN-41A-1.0 | 1.0 | 9/21/00 | **1,100** | <5 | <5 | <5 | <5 | <5 | <5 | **8** | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | **6** |
| GMX-TRN-41B-1.0 | 1.0 | 10/26/00 | **220** | <5 | <5 | <5 | **15** | **25** | **17** | **20** | **19** | **26** | **9** | **18** | <5 | **15** | **12** | **12** | **20** |
| GMX-TRN-41B-3.5 | 3.5 | 10/26/00 | **88** | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| GMX-TRN-41C-1.0 | 1.0 | 10/26/00 | **570** | <5 | <5 | <5 | **21** | **30** | **27** | **22** | **19** | **44** | **9** | **46** | <5 | **14** | **6** | **20** | **49** |

## 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 ID | Depth (feet) | Date Sampled | 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-41D-1.0 | 1.0 | 10/26/00 | **130** | <5 | <5 | <5 | <5 | **7** | **8** | **8** | <5 | **17** | <5 | **6** | <5 | <5 | **9** | **17** | **9** |
| GMX-TRN-42A-1.0 | 1.0 | 9/28/00 | **1,000** | <5 | <5 | **6** | **43** | **42** | **46** | **19** | **35** | **69** | **11** | **19** | <5 | **14** | <5 | **13** | **26** |
| GMX-TRN-43A-1.0 | 1.0 | 9/21/00 | **620** | <5 | <5 | <5 | **7** | **10** | **12** | **14** | **7** | **15** | <5 | **8** | <5 | **8** | <5 | <5 | **11** |
| GMX-TRN-44B-1.5 | 1.5 | 10/26/00 | **1,400** | <5 | <5 | <5 | **9** | **22** | **15** | **14** | **8** | **26** | **6** | **14** | <5 | **7** | <5 | **8** | **21** |
| GMX-TRN-44B-1.5[6,7] | 1.5 | 10/26/00 | **320** | <5 | <5 | <5 | **9** | <5 | **13** | **8** | **11** | **15** | <5 | **19** | <5 | **5** | <5 | **11** | **25** |
| GMX-TRN-44B-3.5[7] | 3.5 | 10/26/00 | **130** | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d |
| GMX-TRN-44C-1.0[7] | 1.0 | 10/26/00 | **150** | <50d | <50d | <50d | **55** | <50d | <50d | <50d | <50d | <50d | <50d | **71** | <50d | <50d | <50d | <50d | **81** |
| GMX-TRN-44D-1.0[7] | 1.0 | 10/26/00 | **1,200** | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d |
| GMX-TRN-45A-1.0 | 1.0 | 9/28/00 | **1,900** | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| GMX-TRN-45B-1.0 | 1.0 | 10/24/00 | **1,200** | <5 | <5 | <5 | **9** | **13** | **18** | **22** | **6** | **26** | **7** | **10** | <5 | **8** | <5 | **7** | **16** |
| GMX-TRN-45B-3.5 | 3.5 | 10/24/00 | <50 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| GMX-TRN-45C-1.0 | 1.0 | 10/24/00 | 380 | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d |
| GMX-TRN-45D-1.0 | 1.0 | 10/24/00 | 1400 | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d | <50d |
| GMX-TRN-46A-1.0 | 1.0 | 9/22/00 | **380** | <5 | <5 | <5 | <5 | **6** | **8** | <5 | <5 | **8** | <5 | <5 | <5 | <5 | <5 | <5 | **5** |
| GMX-TRN-47A-1.0 | 1.0 | 9/21/00 | **3,500** | <5 | <5 | <5 | **10** | <5 | <5 | **21** | <5 | **43** | <5 | **6** | <5 | <5 | <5 | <5 | **16** |
| GMX-TRN-47B-1.0 | 1.0 | 10/24/00 | **150** | <5 | <5 | <5 | <5 | <5 | <5 | **5** | <5 | **10** | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| GMX-TRN-47B-3.5 | 3.5 | 10/24/00 | <50 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| GMX-TRN-47C-1.0 | 1.0 | 10/24/00 | **270** | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| GMX-TRN-47D-1.0 | 1.0 | 10/24/00 | **540** | <5 | <5 | <5 | <5 | <5 | <5 | **8** | <5 | **13** | <5 | <5 | <5 | <5 | <5 | <5 | **5** |
| GMX-TRN-48A-1.0 | 1.0 | 9/21/00 | **140** | <5 | <5 | <5 | **6** | **7** | **8** | **7** | **5** | **11** | <5 | **16** | <5 | **6** | <5 | **14** | **16** |
| PRGs[5] | | | NA8 | 3,700,000 | --[9] | 22,000,000 | 620 | 62 | 620 | 3700000 [10] | 6200 | 6100 | -- | 2,300,000 | 2,600,000 | 620 | 56000 | 22000000 [10] | 2,300,000 |

Notes:

d: The sample was diluted due to high levels of interfering compounds. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

* 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 Petroluem 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. Analysis of sample GMX-TRN-44B-1.5 were taken from the opposite end of the sampling tube than that used for the previous analysis of the sample.
7. Samples were analyzed outside of normal holding time. All other quality control requirements were within acceptable limits.
8. Not available; PRGs have not been delveloped for mixtures. TPHmo evaluated based on the individual constituents detected.
9. -- - PRGs only provided if analyte was detected.
10. 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.


GMX-TRN-16A
GMX-TRN-16B
GMX-TRN-16C
GMX-TRN-16D
Lot 15
Lot 16
GMX-TRN-17C
GMX-TRN-17B
GMX-TRN-17A-1.0
GMX-TRN-17D
Lot 14
Lot 17
Lot 13
Lot 18
GMX-TRN-18A
Lot 12
Lot 19
Lot 11
GMX-TRN-20A
Lot 20
GMX-TRN-21C
Lot 21
10
GMX-TRN-21A
GMX-TRN-21D
GMX-TRN-21B
Lot 22
GMX-TRN-23A
Lot 23
Lot 24
SPALDING STREET
GMX-TRN-25A
Lot 25
Lot 26
GMX-TRN-26A
GMX-TRN-27D
GMX-TRN-27A
GMX-TRN-27B
Lot 27
GMX-TRN-27C
Lot 28
Lot 29
GMX-TRN-30C
GMX-TRN-30B
Lot 30
GMX-TRN-30A
GMX-TRN-30D
Lot 31
Lot 34
GMX-TRN-31A
Lot 32
Lot 33
GMX-TRN-32A
Lot 35
Lot 36
Lot 37
TELFORD COURT
Lot 38
Lot 39
Lot 40
GMX-TRN-45D
GMX-TRN-45B
Lot 45
GMX-TRN-45A
GMX-TRN-45C
GMX-TRN-44C
GMX-TRN-44B
Lot 44
GMX-TRN-44D
Lot 43
GMX-TRN-43A
Lot 42
GMX-TRN-42A
GMX-TRN-41D
GMX-TRN-41A
Lot 41
GMX-TRN-41B
GMX-TRN-41C
OLYMPIC AVENUE
GMX-TRN-46A
Lot 46
Lot 56
Lot 57
Lot 58
Lot 47
GMX-TRN-47D
GMX-TRN-47A
GMX-TRN-47B
GMX-TRN-47C
Lot 48
GMX-TRN-48A
Lot 49
Lot 55
Lot 59
Lot 50
Lot 54
Lot 60
Lot 61
Lot 51
Lot 52
Lot 53
Lot 62
BRANAUGH COURT
HOLYOKE AVENUE
Lot 5
Lot 68
Lot 69
0
60
SCALE IN FEET
EXPLANATION
HAND AUGER SOIL SAMPLING LOCATION
SAMPLING LOCATIONS
Canterbury Development
Hayward, California
GEOMATRIX
Project No.
6262.000 8
Figure
2
03-JAN-2001 14:14 kuber
s:\6200s\6262\6262.000\6262.000 B\oil_001f_fig_02.dgn
CHECKED:---------- \\SFPRNT2\plotIL5000GDS geomtrx.ctb
MAP_4mv.pen