



California Department of Transportation, District 4

Office of Environmental Engineering

Telecopier (FAX) No: (510) 286-5728

Date: 01/13/2000

Time: 9:20

To: Name: DON HWANG
Agency: ALAMEDA COUNTY
Attention: _____
Telephone: 510 567-6746

From: Name: TERESA TRINH
Telephone: 510 286-5701

Number of pages being sent (including this page): 21

Message:
Please review & comment.

GEOCON

GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS



Project No. S8100-06-40
December 18, 1996

California Department of Transportation
District 4
P.O. Box 23660
Oakland, California 94623

Attention: Christopher Wilson, Contract Manager

Subject: THOMAS A. SHORT COMPANY SITE
OAKLAND, CALIFORNIA
CONTRACT NO. 53W202
TASK ORDER NO. 04-192203-01
SUBMITTAL OF BORING/WELL LOGS AND LABORATORY REPORTS

Dear Mr. Wilson:

In accordance with Caltrans Contract No. 53W202 and Task Order No. 04-192203-01, Geocon Environmental Consultants, Inc. (Geocon) is submitting herein boring/well logs and laboratory reports for the field activities completed at the subject site on November 18, 1996.

If there are any questions concerning the contents of this submittal, or if Geocon may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON ENVIRONMENTAL CONSULTANTS, INC.


John E. Juhrend, PE, CEG
Project Manager

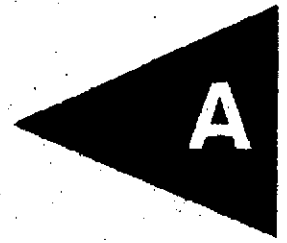
JEJ:ds

(1) Addressee

Attachments: Appendix A - Boring/Well Logs
Appendix B - Laboratory Reports



APPENDIX



PROJECT NO. S8100-06-40

| DEPTH IN FEET | PENETRAT. RESIST. BLAS/FT. | SAMPLE NO. | LITHOLOGY | BORING/WELL NO. MW 1 | | WELL CONSTRUCTION | PID HEADSPACE (PPM) |
|--------------------------------|----------------------------------|----------------|-----------|--|-------------------|----------------------|---------------------------|
| | | | | DATE DRILLED | WATER LEVEL (ATD) | | |
| | | | | 11/18/96 | 6.0' | | |
| | | | | EQUIPMENT | MOBIL B-61 | DRILLER | V & W |
| SOIL DESCRIPTION | | | | | | | |
| 1 | 40 | MW1-1 1050 | | -Coarse Gravel FILL Dense, moist, tan-brown, angular, Gravelly, fine to coarse SAND trace clay (SP) | | 1.4 | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | Firm, moist, brown, Sandy CLAY, trace gravel (CL) | | 1.0 | |
| 5 | 24 | MW1-5 1055 | | ▼-Gravel stringer-saturated | | | |
| 6 | | | | | | | |
| 7 | | | | BAY MUD Soft, saturated, black CLAY, sea shells, weak odor (CL) | | 1.1 | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | 4 | MW1-10 1105 | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| BORING TERMINATED AT 11.5 FEET | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| 16 | | | | | | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |
| 21 | | | | | | | |
| 22 | | | | | | | |
| 23 | | | | | | | |
| 24 | | | | | | | |

Figure A-1, log of Boring MW 1

01874

| | |
|--|--|
| CASING ELEVATION: | QUANTITY OF FILTER MATERIAL: 2.5 - 100lb Bag |
| DIAMETER & TYPE OF CASING: 2-inch Dia. PVC | WELL SEAL & INTERVAL: Bentonite Chips 0.5-1 |
| CASING INTERVAL: 0-2ft. | WELL SEAL QUANTITY: 1/2-50lb Bag |
| WELL SCREEN: 0.01-inch | ANNULUS SEAL/INTERVAL: 0 - 0.5ft. |
| SCREEN INTERVAL: 2-10ft. | ADDITIVES: None |
| WELL COVER: 8-inch Traffic Cover | WELL DEPTH: 10.0ft. |
| FILTERPACK/INTERVAL: #3 Sand 1.5-11.0ft. | ENGINEER/GEOLOGIST: MOORHEAD/JUHREND |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. S8100-06-40

| DEPTH IN FEET | PENETRAT. RESIST. BLWS/FT. | SAMPLE NO. | LITHOLOGY | BORING/WELL NO. MW 2 | | WELL CONSTRUCTION | PID HEADSPACE (PPM) |
|---------------------|----------------------------------|----------------|-----------|--|-------------------|----------------------|---------------------------|
| | | | | DATE DRILLED | WATER LEVEL (ATD) | | |
| | | | | 11/18/96 | 6.0' | | |
| | | | | EQUIPMENT | DRILLER | | |
| | | | | MOBIL B-61 | V & W | | |
| SOIL DESCRIPTION | | | | | | | |
| 1 | 50 | MW2-1 1303 | | -Coarse Gravel FILL SOIL Very dense, moist, brown, Clayey GRAVEL (GC) | | 3.2 | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | 4 | MW2-5 1310 | | BAY MUD Soft, saturated, gray, CLAY, trace sea shell fragments | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | 5 | MW2-10 1315 | | -Strong odor | | 1.5 | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| 16 | | | | | | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |
| 21 | | | | | | | |
| 22 | | | | | | | |
| 23 | | | | | | | |
| 24 | | | | | | | |
| | | | | BORING TERMINATED AT 11.5 FEET | | | |

Figure A-2, log of Boring MW 2

D16T4

| | |
|--|---|
| CASING ELEVATION: | QUANTITY OF FILTER MATERIAL: 3-100lb Bag |
| DIAMETER & TYPE OF CASING: 2-inch Dia. PVC | WELL SEAL & INTERVAL: Bentonite Chips 0.5-1.5 |
| CASING INTERVAL: 0-2ft. | WELL SEAL QUANTITY: 1/2-50lb Bag |
| WELL SCREEN: 0.01-inch | ANNULUS SEAL/INTERVAL: 0-0.5ft. |
| SCREEN INTERVAL: 2-10ft. | ADDITIVES: None |
| WELL COVER: 8-inch Traffic Cover | WELL DEPTH: 10.0ft. |
| FILTERPACK/INTERVAL: #3 Sand 1.5-10ft. | ENGINEER/GEOLOGIST: MOORHEAD/JUHREND |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. S8100-06-40

| DEPTH IN FEET | PENETRAT. RESIST. BLUS/FT. | SAMPLE NO. | LITHOLOGY | BORING/WELL NO. MW 3 | | WELL CONSTRUCTION | PID HEADSPACE (PPH) | |
|---------------------|----------------------------------|----------------|-----------|--|-------------------|----------------------|---------------------------|--|
| | | | | DATE DRILLED | WATER LEVEL (ATD) | | | |
| | | | | 11/18/96 | 8.0' | | | |
| | | | | EQUIPMENT | DRILLER | | | |
| | | | | MOBIL B-61 | V & W | | | |
| SOIL DESCRIPTION | | | | | | | | |
| 1 | 61 | MW3-1 1150 | | FILL Wet-saturated, brown, coarse Gravelly CLAY matrix (GC) | | 1.4 | | |
| 2 | | | | Dense, moist, tan-brown, Gravelly, fine to coarse SAND, trace clay (SP) | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | -Wood debris | | | | |
| 6 | 40 | MW3-5 1158 | | Dense, moist, coarse angular GRAVEL (GP) | | | | |
| 7 | | | | | | | | |
| 8 | | | | Soft, wet-saturated, gray, CLAY (CL) | | | | |
| 9 | | | | | | | | |
| 10 | 7 | MW3-10 1202 | | Firm, wet, brown, Gravelly CLAY, strong odor (CL) | | 209 | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | -Wood debris | | | | |
| 14 | | | | BORING TERMINATED AT 13 FEET | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| 21 | | | | | | | | |
| 22 | | | | | | | | |
| 23 | | | | | | | | |
| 24 | | | | | | | | |

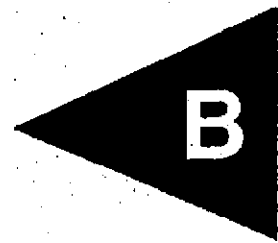
Figure A-3, log of Boring MW 3

DIST4

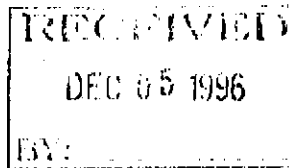
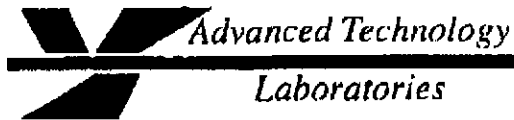
| | |
|--|--|
| CASING ELEVATION: | QUANTITY OF FILTER MATERIAL: 3.5 - 100lb Bag |
| DIAMETER & TYPE OF CASING: 2-inch Dia. PVC | WELL SEAL & INTERVAL: Bentonite Chlps 1-2 |
| CASING INTERVAL: 0-3ft. | WELL SEAL QUANTITY: 1/2-50lb Bag |
| WELL SCREEN: 0.01-inch | ANNULUS SEAL/INTERVAL: 0-1ft. |
| SCREEN INTERVAL: 3-13ft. | ADDITIVES: None |
| WELL COVER: 8-inch Traffic Cover | WELL DEPTH: 13.0ft. |
| FILTERPACK/INTERVAL: #3 Sand 2-13ft. | ENGINEER/GEOLOGIST: MOORHEAD/JUHREND |

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

APPENDIX



B



November 27, 1996

ELAP No.: 1838

Geocon Environmental
3235 Sunrise Blvd. #6
Rancho Cordova, CA 95742

ATTN: Mr. Ian Moorhead

Client's Project: Thomas A. Short, S8100-06-40
Lab No.: 14230-001/009

Gentlemen:

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (310) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Edgar P. Caballero'.

Edgar P. Caballero
Laboratory Director
EPC/ms

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.

*Mailing Address: P.O. Box 9108 Newport Beach, CA 92658
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 310 989-4045 Fax: 310 989-4040*

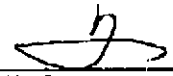
Client: Geacou Environmental
 Attn: Mr. Ian Moorhead

Client's Project: Thomas A. Short, 88100-04-40
 Date Received: 11/20/96
 Matrix: Soil
 Units: ug/kg

EPA Method 8140

| Lab No.: | Method Blank | 14230-001 | 14230-001D | 14230-002 | 14230-003 | 14230-004 | 14230-005 | 14230-006 | | | | | | | | | |
|---------------------------|--------------|-----------|------------|-----------|-----------|-----------|-----------|-----------|---------|-----|---------|-----|---------|-----|---------|-----|---------|
| Client Sample I.D.: | -- | MW1-1 | MW1-1 | MW1-5 | MW1-10 | MW3-1 | MW3-5 | MW3-10 | | | | | | | | | |
| Date Sampled: | -- | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | | | | | | | | | |
| QC Batch #: | 96VOC2193 | 96VOC2193 | 96VOC2293 | 96VOC2293 | 96VOC2193 | 96VOC2193 | 96VOC2293 | 96VOC2293 | | | | | | | | | |
| Date Analyzed: | 11/25/96 | 11/25/96 | 11/25/96 | 11/25/96 | 11/25/96 | 11/25/96 | 11/25/96 | 11/25/96 | | | | | | | | | |
| Analyst Initials: | TK | TK | TK | TK | TK | TK | TK | TK | | | | | | | | | |
| Dilution Factor: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | |
| ANALYTE | MDL | DLR | Results | DLR | Results | DLR | Results | DLR | Results | DLR | Results | DLR | Results | DLR | Results | DLR | Results |
| Chloromethane | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Vinyl Chloride | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Bromomethane | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Chloroethane | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Trichlorofluoromethane | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Acetone | 50 | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND |
| 1,1-Dichloroethane | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Carbon Disulfide | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Methylene Chloride | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| trans-1,2-Dichloroethene | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| 1,1-Dichloroethene | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Chloroform | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| 1,2-Dichloroethane | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Vinyl Acetate | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| 2-Butanone | 50 | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND |
| 1,1,1-Trichloroethane | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Carbon Tetrachloride | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Benzene | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| 1,2-Dichloropropane | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Trichloroethene | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Bromodichloromethane | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| 2-Chloroethyl Vinyl Ether | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| cis-1,3-Dichloropropene | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| trans-1,3-Dichloropropene | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| 1,1,2-Trichloroethane | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Dibromochloromethane | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Bromoform | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| 4-Methyl-2-Pentanone | 50 | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND |
| Toluene | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| 2-Hexanone | 50 | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND | 50 | ND |
| Tetrachloroethene | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Chlorobenzene | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Ethylbenzene | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Xylene (Total) | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| Styrene | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| 1,1,2,2-Tetrachloroethane | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| 1,3-Dichlorobenzene | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| 1,4-Dichlorobenzene | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |
| 1,2-Dichlorobenzene | 5 | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND | 5 | ND |

MDL - Method Detection Limit
 ND - Not Detected (Below DLR)
 DLR - MDL X Dilution Factor
 NA - Not Analyzed

Reviewed/Approved By: 
 Yun Pan
 Department Supervisor

Date: 11/29/96

The cover letter is an integral part of this analytical report.



Client: Cuccin Environmental
 Attn: Mr. Ian Moorhead

Client's Project: Thomas A. Short, 88100-06-40
 Date Received: 11/20/96
 Matrix: Soil
 Units: ug/kg

EPA Method 8140

| Lab No.: | 14230-007 | 14230-008 | 14230-009 | | | | |
|---------------------------|-----------|-----------|-----------|-----|---------|-----|---------|
| Client Sample I.D.: | MW2-1 | MW2-5 | MW2-10 | | | | |
| Date Sampled: | 11/18/96 | 11/18/96 | 11/18/96 | | | | |
| QC Batch #: | 96VOC2293 | 96VOC2293 | 96VOC2293 | | | | |
| Date Analyzed: | 11/25/96 | 11/25/96 | 11/25/96 | | | | |
| Analyst Initials: | TK | TK | TK | | | | |
| Dilution Factor: | 1 | 5 | 1 | | | | |
| ANALYTE | MDL | DLR | Results | DLR | Results | DLR | Results |
| Chloromethane | 5 | 5 | ND | 25 | ND | 5 | ND |
| Vinyl Chloride | 5 | 5 | ND | 25 | ND | 5 | ND |
| Bromomethane | 5 | 5 | ND | 25 | ND | 5 | ND |
| Chloroethane | 5 | 5 | ND | 25 | ND | 5 | ND |
| Trichlorofluoromethane | 5 | 5 | ND | 25 | ND | 5 | ND |
| Acetone | 50 | 50 | ND | 250 | ND | 50 | ND |
| 1,1-Dichloroethene | 5 | 5 | ND | 25 | ND | 5 | ND |
| Carbon Disulfide | 5 | 5 | ND | 25 | ND | 5 | ND |
| Methylene Chloride | 5 | 5 | 13 | 25 | ND | 5 | 15 |
| trans-1,2-Dichloroethene | 5 | 5 | ND | 25 | ND | 5 | ND |
| 1,1-Dichloroethane | 5 | 5 | ND | 25 | ND | 5 | ND |
| Chloroform | 5 | 5 | ND | 25 | ND | 5 | ND |
| 1,2-Dichloroethane | 5 | 5 | ND | 25 | ND | 5 | ND |
| Vinyl Acetate | 5 | 5 | ND | 25 | ND | 5 | ND |
| 2-Butanone | 50 | 50 | ND | 250 | ND | 50 | ND |
| 1,1,1-Trichloroethane | 5 | 5 | ND | 25 | ND | 5 | ND |
| Carbon Tetrachloride | 5 | 5 | ND | 25 | ND | 5 | ND |
| Benzene | 5 | 5 | ND | 25 | ND | 5 | ND |
| 1,2-Dichloropropane | 5 | 5 | ND | 25 | ND | 5 | ND |
| Trichloroethene | 5 | 5 | ND | 25 | ND | 5 | ND |
| Bromodichloromethane | 5 | 5 | ND | 25 | ND | 5 | ND |
| 2-Chloroethyl Vinyl Ether | 5 | 5 | ND | 25 | ND | 5 | ND |
| cis-1,3-Dichloropropene | 5 | 5 | ND | 25 | ND | 5 | ND |
| trans-1,3-Dichloropropene | 5 | 5 | ND | 25 | ND | 5 | ND |
| 1,1,2-Trichloroethane | 5 | 5 | ND | 25 | ND | 5 | ND |
| Dibromochloromethane | 5 | 5 | ND | 25 | ND | 5 | ND |
| Bromoform | 5 | 5 | ND | 25 | ND | 5 | ND |
| 4-Methyl-2-Pentanone | 50 | 50 | ND | 250 | ND | 50 | ND |
| Toluene | 5 | 5 | ND | 25 | ND | 5 | ND |
| 2-Hexanone | 50 | 50 | ND | 250 | ND | 50 | ND |
| Tetrachloroethene | 5 | 5 | ND | 25 | ND | 5 | ND |
| Chlorobenzene | 5 | 5 | ND | 25 | ND | 5 | ND |
| Ethylbenzene | 5 | 5 | ND | 25 | ND | 5 | ND |
| Xylene (Total) | 5 | 5 | ND | 25 | ND | 5 | ND |
| Styrene | 5 | 5 | ND | 25 | ND | 5 | ND |
| 1,1,2,2-Tetrachloroethane | 5 | 5 | ND | 25 | ND | 5 | ND |
| 1,3-Dichlorobenzene | 5 | 5 | ND | 25 | ND | 5 | ND |
| 1,4-Dichlorobenzene | 5 | 5 | ND | 25 | ND | 5 | ND |
| 1,2-Dichlorobenzene | 5 | 5 | ND | 25 | ND | 5 | ND |

MDL = Method Detection Limit
 ND = Not Detected (Below DLR)
 DLR = MDL X Dilution Factor
 NA = Not Analyzed

Reviewed/Approved By: _____


 Yun Fan
 Department Supervisor

Date: 11/29/96

The cover letter is an integral part of this analytical report.



Client: Gecon Environmental
 Attn: Mr. Ian Moorhead

Client's Project: Thomas A. Short, S8100-06-40

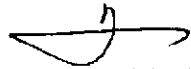
Date Received: 11/20/96
 Matrix: Soil

METHOD 8015M (Gasoline) EPA 8020 (BTEX)

| Lab No.: | Method Blank | 14230-001 | 14230-002 | 14230-003 | 14230-004 | 14230-005 | 14230-006 | 14230-007 | 14230-008 | 14230-009 | | | | | | | | | | | | |
|--------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|---|----|
| Client Sample ID.: | --- | MW1-1 | MW1-5 | MW1-10 | MW3-1 | MW3-5 | MW3-10 | MW2-1 | MW2-5 | MW2-10 | | | | | | | | | | | | |
| Date Sampled: | --- | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | | | | | | | | | | | | |
| QC Batch #: | 968G20S8160 | 968G20S6160 | 968G20S6160 | 968G20S6160 | 968G20S6160 | 968G20S6160 | 968G20S6160 | 968G20S6160 | 968G20S6160 | 968G20S6160 | | | | | | | | | | | | |
| Date Analyzed: | 11/21/96 | 11/21/96 | 11/21/96 | 11/21/96 | 11/21/96 | 11/21/96 | 11/21/96 | 11/21/96 | 11/21/96 | 11/21/96 | | | | | | | | | | | | |
| Analyst Initials: | DT | DT | DT | DT | DT | DT | DT | DT | DT | DT | | | | | | | | | | | | |
| Dilution Factor: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 5.0 | 1.0 | 1.0 | 1.0 | | | | | | | | | | | | |
| Analyte | MDL | Units | DLR | Results | DLR | Results | DLR | Results | DLR | Results | DLR | Results | DLR | Results | DLR | Results | DLR | Results | DLR | Results | | |
| TPH (Gas) | 1 | mg/kg | 1 | ND | 1 | ND | 1 | ND | 1 | ND | 1 | ND | 1 | ND | 5 | 43 | 1 | ND | 1 | 6.0 | 1 | ND |
| Benzene | 5 | ug/kg | 5 | NA | 5 | NA | 5 | NA | 5 | NA | 5 | NA | 5 | NA | 25 | NA | 5 | NA | 5 | NA | 5 | NA |
| Toluene | 5 | ug/kg | 5 | NA | 5 | NA | 5 | NA | 5 | NA | 5 | NA | 5 | NA | 25 | NA | 5 | NA | 5 | NA | 5 | NA |
| Ethylbenzene | 5 | ug/kg | 5 | NA | 5 | NA | 5 | NA | 5 | NA | 5 | NA | 5 | NA | 25 | NA | 5 | NA | 5 | NA | 5 | NA |
| Xylenes (total) | 5 | ug/kg | 5 | NA | 5 | NA | 5 | NA | 5 | NA | 5 | NA | 5 | NA | 25 | NA | 5 | NA | 5 | NA | 5 | NA |

| Lab No.: | 14230-009Dup | LCS | | | | | | | | | | | | | | | | | | | |
|--------------------|--------------|-------------|-----|---------|-------|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Client Sample ID.: | MW2-10 | --- | | | | | | | | | | | | | | | | | | | |
| Date Sampled: | 11/18/96 | --- | | | | | | | | | | | | | | | | | | | |
| QC Batch #: | 968G20S6160 | 968G20S6160 | | | | | | | | | | | | | | | | | | | |
| Date Analyzed: | 11/21/96 | 11/21/96 | | | | | | | | | | | | | | | | | | | |
| Analyst Initials: | DT | DT | | | | | | | | | | | | | | | | | | | |
| Dilution Factor: | 1.0 | 1.0 | | | | | | | | | | | | | | | | | | | |
| Analyte | MDL | Units | DLR | Results | %Rec. | Limits | | | | | | | | | | | | | | | |
| TPH (Gas) | 1 | mg/kg | 1 | ND | 86 | 50-150 | | | | | | | | | | | | | | | |
| Benzene | 5 | ug/kg | 5 | NA | NA | 50-150 | | | | | | | | | | | | | | | |
| Toluene | 5 | ug/kg | 5 | NA | NA | 50-150 | | | | | | | | | | | | | | | |
| Ethylbenzene | 5 | ug/kg | 5 | NA | NA | 50-150 | | | | | | | | | | | | | | | |
| Xylenes (total) | 5 | ug/kg | 5 | NA | NA | 50-150 | | | | | | | | | | | | | | | |

MDL = Method Detection Limit
 ND = Not Detected. (Below DLR)
 DLR = MDL X Dilution Factor
 NA = Not Analyzed

Reviewed/Approved By: 
 Yun Pan
 Department Supervisor

Date: 11/21/96

The cover letter is an integral part of this analytical report.



01-13-00 11:16AM

P11

Spike Recovery and RPD Summary Report - SOIL (ug/kg)

Method : C:\HPCHEM\1\METHODS\VOC35.M
 Title : Volatile Organic Compounds
 Last Update : Mon Nov 25 09:48:27 1996
 Response via : Continuing Calibration

Non-Spiked Sample: V10036.D

| Spike Sample | Spike Duplicate Sample |
|-------------------------------------|-----------------------------|
| File ID : VS10037.D | VS10038.D |
| Sample : 14230-001, 5 GMS, MS, SOIL | 14230-001, 5 GMS, MSD, SOIL |
| Acq Time: 25 Nov 96 2:41 pm | 25 Nov 96 3:10 pm |

| Compound | Sample Conc | Spike Added | Spike Res | Dup Res | Spike %Rec | Dup %Rec | RPD | QC Limits RPD | QC Limits % Rec |
|--------------------|-------------|-------------|-----------|---------|------------|----------|-----|---------------|-----------------|
| 1,1-dichloroethene | ND | 50 | 51 | 55 | 102 | 111 | 8 | 23 | 37-166 |
| benzene | ND | 50 | 55 | 60 | 108 | 118 | 9 | 21 | 68-133 |
| trichloroethene | ND | 50 | 49 | 56 | 96 | 110 | 14 | 23 | 65-129 |
| toluene | ND | 50 | 48 | 56 | 94 | 108 | 14 | 21 | 74-136 |
| chlorobenzene | ND | 50 | 51 | 61 | 102 | 121 | 17 | 19 | 83-122 |

QC Batch #: 96VOCs2293

Reviewed and Approved by: _____

Yun Pan
Organics Supervisor

Date: 11/29/96

Spike Recovery and RPD Summary Report - SOIL

Method : C:\HPCHEM\5\METHODS\8025EXT.M
 Title : 8015GAS/ 8020(BTXE)
 Last Update : Thu Nov 21 09:23:00 1996
 Response via : Initial Calibration


Non-Spiked Sample: V04099.D

| Spike Sample | Spike Duplicate Sample |
|---------------------------------------|-------------------------------|
| File ID : VS4101.D | VS4102.D |
| Sample : 14230-009 3ppm MS Gas(+BTEX) | 14230-009 3ppm MSD Gas(+BTEX) |
| Acq Time: 21 Nov 96 07:33 PM | 21 Nov 96 07:58 PM |

| Compound | Sample Conc | Spike Added | Spike Res | Dup Res | Spike %Rec | Dup %Rec | RPD | QC Limits | |
|------------------|-------------|-------------|-----------|---------|------------|----------|-----|-----------|--------|
| | | | | | | | | RPD | % Rec |
| Gasoline (mg/kg) | ND | 3 | 3 | 3 | 73 | 82 | 11 | 12 | 47-140 |
| Benzene (ug/kg) | ND | 48 | 37 | 39 | 77 | 82 | 6 | 12 | 66-121 |
| Toluene (ug/kg) | ND | 255 | 246 | 266 | 97 | 104 | 8 | 14 | 62-127 |

QC Batch #:968G20S6160

Reviewed and Approved by: _____


 Yun Pan
 Organics Supervisor

Date: 11/29/96

Spike Recovery and RPD Summary Report - soil(mg/kg)

Method : C:\HPCHEM\5\METHODS\DIESEL.M
 Title : Diesel
 Last Update : Fri Nov 22 14:00:14 1996
 Response via : Initial Calibration

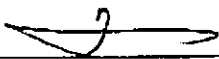
Non-Spiked Sample: D11296.D

| Spike Sample | Spike Duplicate Sample |
|---------------------------------------|-------------------------------|
| File ID : DS11297.D | DS11298.D |
| Sample : 14230-9MS 30G-1ML E-11/22/96 | 14230-9MSD 30G-1ML E-11/22/96 |
| Acq Time: 22 Nov 96 03:33 PM | 22 Nov 96 03:55 PM |

| Compound | Sample Conc | Spike Added | Spike Res | Dup Res | Spike %Rec | Dup %Rec | RPD | QC Limits | |
|----------|-------------|-------------|-----------|---------|------------|----------|-----|-----------|--------|
| | | | | | | | | RPD | % Rec |
| Diesel | ND | 100 | 101 | 112 | 101 | 112 | 8 | 50 | 50-150 |

QC Batch # : 968015DS381

Reviewed/Approved by: _____


 Yun Pan
 Organics Supervisor

Date: 11/29/96

Client: Gecon Environmental
 Attn: Mr. Ian Moorhead

Client's Project: Thomas A. Short, S8100-06-40

Date Received: 11/20/96
 Date Sampled: 11/18/96

| Lab No. | Sample I.D. | Analysis | Date Analyzed | Results | Matrix, Units | MDL | D.L.R. | Analyst |
|------------|-------------|------------------|---------------|---------|---------------|-----|--------|---------|
| 14230-001 | MW1-1 | EPA 418.1 (TRPH) | 11/26/96 | 45 | Soil, mg/kg | 4.0 | 4.0 | AK |
| 14230-002 | MW1-5 | EPA 418.1 (TRPH) | 11/26/96 | 43 | Soil, mg/kg | 4.0 | 4.0 | AK |
| 14230-003 | MW1-10 | EPA 418.1 (TRPH) | 11/26/96 | 12 | Soil, mg/kg | 4.0 | 4.0 | AK |
| 14230-003D | MW1-10 | EPA 418.1 (TRPH) | 11/26/96 | 11 | Soil, mg/kg | 4.0 | 4.0 | AK |
| 14230-004 | MW3-1 | EPA 418.1 (TRPH) | 11/26/96 | 1500 | Soil, mg/kg | 4.0 | 100 | AK |
| 14230-005 | MW3-5 | EPA 418.1 (TRPH) | 11/26/96 | 356 | Soil, mg/kg | 4.0 | 20 | AK |
| 14230-006 | MW3-10 | EPA 418.1 (TRPH) | 11/26/96 | 50 | Soil, mg/kg | 4.0 | 4.0 | AK |
| 14230-007 | MW2-1 | EPA 418.1 (TRPH) | 11/26/96 | 370 | Soil, mg/kg | 4.0 | 30 | AK |
| 14230-008 | MW2-5 | EPA 418.1 (TRPH) | 11/26/96 | 360 | Soil, mg/kg | 4.0 | 30 | AK |
| 14230-009 | MW2-10 | EPA 418.1 (TRPH) | 11/26/96 | 12 | Soil, mg/kg | 4.0 | 4.0 | AK |
| | | | | | | | | |
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MDL = Method Detection Limit
 ND = Not Detected (Below DLR)
 DF = Dilution Factor (DLR/MDL)

Reviewed/Approved By: _____

Cheryl De Los Reyes
 Cheryl De Los Reyes
 Department Supervisor

Date: _____

11/27/96

The cover letter is an integral part of this analytical report.

Client: Gecon Environmental
 Attn: Mr. Ian Moorhead

Client's Project: Thomas A. Short, 88100-06-40
 Date Received: 11/20/96
 Matrix: Soil
 Units: mg/kg
 Digestion Method: 3050

EPA Method 6010 (CCR Metals)

| Lab No.: | 14230-001 | 14230-002 | 14230-003 | 14230-004 | 14230-005 | 14230-006 | 14230-007 | 14230-008 | 14230-009 | | | | | | | | | | | |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------|--|--|--|--|--|--|--|--|--|--|
| Client Sample I.D.: | MW1-1 | MW1-5 | MW1-10 | MW3-1 | MW3-5 | MW3-10 | MW2-1 | MW2-5 | MW2-10 | | | | | | | | | | | |
| Date Sampled: | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | 11/18/96 | | | | | | | | | | | |
| Date Digested: | 11/25-26/96 | 11/25-26/96 | 11/25-26/96 | 11/25-26/96 | 11/25-26/96 | 11/25-26/96 | 11/25-26/96 | 11/25-26/96 | 11/25-26/96 | | | | | | | | | | | |
| Date Analyzed: | 11/25-26/96 | 11/25-26/96 | 11/25-26/96 | 11/25-26/96 | 11/25-26/96 | 11/25-26/96 | 11/25-26/96 | 11/25-26/96 | 11/25-26/96 | | | | | | | | | | | |
| Analyst Initials: | L.P/DJ | L.P/DJ | L.P/DJ | L.P/DJ | L.P/DJ | L.P/DJ | L.P/DJ | L.P/DJ | L.P/DJ | | | | | | | | | | | |
| Dilution Factor: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | |
| ANALYTE | | DLR | | RESULTS | | | | | | | | | | | | | | | | |
| Antimony | 0.25 | 0.46 | 0.61 | 0.30 | 0.33 | 0.50 | 0.30 | 0.50 | 0.35 | 0.27 | | | | | | | | | | |
| Arsenic | 0.25 | 3.4 | 7.2 | 4.1 | 3.0 | 4.8 | 5.5 | 5.0 | 2.4 | 3.7 | | | | | | | | | | |
| Barium | 0.05 | 146 | 62 | 31 | 110 | 93 | 89 | 65 | 126 | 122 | | | | | | | | | | |
| Beryllium | 0.05 | ND | ND | ND | ND | ND | 0.16 | ND | ND | ND | | | | | | | | | | |
| Cadmium | 0.15 | ND | ND | ND | ND | ND | ND | ND | ND | ND | | | | | | | | | | |
| Chromium *** | 0.15 | 11 | 15 | 30 | 19 | 16 | 30 | 48 | 29 | 33 | | | | | | | | | | |
| Cobalt | 0.15 | 10 | 7.9 | 7.3 | 9.4 | 7.9 | 13 | 6.2 | 6.4 | 20 | | | | | | | | | | |
| Copper | 0.15 | 20 | 31 | 17 | 21 | 25 | 19 | 40 | 542 | 4.6 | | | | | | | | | | |
| Lead | 0.25 | 35 | 44 | 4.4 | 6.7 | 18 | 4.8 | 40 | 0.15 | ND | | | | | | | | | | |
| Mercury ** | 0.10 | 0.29 | ND | ND | ND | 0.13 | ND | 0.39 | 0.15 | ND | | | | | | | | | | |
| Molybdenum | 0.25 | 0.55 | 0.53 | 0.62 | 0.49 | 1.0 | 1.2 | 1.2 | 0.40 | 1.1 | | | | | | | | | | |
| Nickel | 0.15 | 16 | 22 | 35 | 39 | 24 | 62 | 37 | 29 | 4.8 | | | | | | | | | | |
| Selenium | 0.25 | 0.51 | 0.59 | 0.56 | 0.52 | 1.0 | 0.63 | 0.61 | 0.34 | 0.36 | | | | | | | | | | |
| Silver | 0.05 | ND | ND | ND | ND | 0.68 | ND | ND | ND | ND | | | | | | | | | | |
| Thallium | 0.25 | 1.9 | 1.4 | 2.2 | 1.6 | 2.1 | 3.4 | 2.3 | 1.1 | 2.6 | | | | | | | | | | |
| Vanadium | 0.15 | 15 | 18 | 25 | 14 | 19 | 29 | 32 | 18 | 29 | | | | | | | | | | |
| Zinc | 0.50 | 66 | 105 | 37 | 30 | 54 | 34 | 99 | 82 | 33 | | | | | | | | | | |

MDL = Method Detection Limit
 ND = Not Detected (Below DLR)
 DLR = MDL X Dilution Factor

- * - Only listed constituents designated with TCLC and BTLC under CCR Title 22
- ** - Analyzed by EPA Method 7471
- *** - From Title 22 - If the soluble chromium, as determined by the TCLP set forth in Appendix 1 of Chapter 18 of this Division (4), less than 5 mg/l, and the soluble chromium, as determined by the procedure set forth in Appendix II of chapter 18, equals or exceeds 560 mg/l and the waste is not otherwise identified as a RCRA hazardous waste pursuant to section 6036.100, then the waste is a non-RCRA hazardous waste.

Reviewed/Approved By: Cheryl De Los Reyes
 Cheryl De Los Reyes
 Department Supervisor

Date: 11/27/96

The cover sheet is an integral part of this analytical report.



Spike Recovery and RPD Summary Report

Method: 6010
 Analyst: LP/OL
 QA File: 6331-IS
 Data File: ICAP61126-1

Date Analyzed: 11/26/96
 Date Digested: 11/26/96
 Sample ID: 14299-003
 Matrix: Soil

| ANALYTE | UNITS | METH BLANK | SPL CONC | SPK ADDED | MS RESULT | MSD RESULT | %MS REC | %MSD REC | % REC Limit | RPD | RPD Limit | MDL |
|------------|-------|------------|----------|-----------|-----------|------------|---------|----------|-------------|-----|-----------|------|
| Antimony | mg/kg | ND | 0.29 | 125 | 81 | 90 | 65 | 72 | 41 - 129 | 11 | 31 | 0.25 |
| Arsenic | mg/kg | ND | 1.4 | 125 | 104 | 108 | 82 | 85 | 62 - 119 | 4 | 13 | 0.25 |
| Barium | mg/kg | ND | 63 | 125 | 255 | 189 | 154 | 101 | 59 - 135 | 42 | 44 | 0.05 |
| Beryllium | mg/kg | ND | ND | 125 | 104 | 108 | 85 | 86 | 49 - 122 | 4 | 12 | 0.05 |
| Cadmium | mg/kg | ND | ND | 125 | 102 | 106 | 82 | 85 | 66 - 110 | 4 | 12 | 0.15 |
| Chromium | mg/kg | ND | 9.1 | 125 | 121 | 124 | 90 | 92 | 52 - 136 | 3 | 39 | 0.15 |
| Cobalt | mg/kg | ND | 5.8 | 125 | 113 | 116 | 86 | 88 | 67 - 113 | 3 | 13 | 0.15 |
| Copper | mg/kg | ND | 18 | 125 | 126 | 130 | 91 | 96 | 70 - 124 | 3 | 18 | 0.15 |
| Lead | mg/kg | ND | 1.6 | 125 | 105 | 108 | 83 | 85 | 54 - 124 | 3 | 24 | 0.25 |
| Molybdenum | mg/kg | ND | 0.64 | 125 | 107 | 112 | 85 | 89 | 71 - 109 | 5 | 19 | 0.25 |
| Nickel | mg/kg | ND | 6.2 | 125 | 111 | 114 | 84 | 86 | 47 - 136 | 3 | 37 | 0.15 |
| Selenium | mg/kg | ND | 0.40 | 125 | 94 | 100 | 75 | 80 | 50 - 120 | 6 | 22 | 0.25 |
| Silver | mg/kg | ND | ND | 125 | 83 | 86 | 66 | 69 | 31 - 138 | 4 | 38 | 0.05 |
| Thallium | mg/kg | ND | 1.4 | 125 | 106 | 110 | 84 | 87 | 59 - 114 | 4 | 21 | 0.25 |
| Vanadium | mg/kg | ND | 24 | 125 | 134 | 138 | 88 | 91 | 68 - 121 | 4 | 15 | 0.15 |
| Zinc | mg/kg | ND | 30 | 125 | 128 | 130 | 78 | 80 | 35 - 138 | 2 | 30 | 0.50 |
| | | | | | | | | | | | | |
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Approved by: *Cheryl De Llos Reyes*
 Cheryl De Llos Reyes
 Inorganics Supervisor

Date: 11/27/96

