

US EPA ARCHIVE DOCUMENT

**REMEDIAL INVESTIGATION  
EG&G MISSOURI METAL SHAPING COMPANY**

**OVERLAND, MISSOURI**

**Volume III of III  
Appendices**

**NOVEMBER 1992**

**Project No. 91-319-4-005**

**Burns & McDonnell Waste Consultants, Inc.  
Engineers-Geologists-Scientists  
Overland Park, Kansas - St. Louis, Missouri**

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**APPENDIX I**  
**REMEDIAL INVESTIGATION**  
**LABORATORY ANALYTICAL RESULTS**

APPENDIX I  
INTRODUCTION

The following sections contain the raw analytical data reports for field work completed by Burns & McDonnell Waste Consultants, Inc. The data is organized in ascending order by the laboratory report number which is indicated on the blue pages preceding each section. An index is provided following this page which lists the sample numbers, the laboratory report number, and the analyses performed. All the samples were analyzed by NDRC Laboratories, Inc. except for seven samples which were analyzed by American Technical and Analytical Services, Inc. (ATAS). The ATAS data is presented in the last three sections of this appendix.

\* \* \* \* \*

**TABLE I-1  
Sample Number Index**

| Sample Number | Laboratory Report Number | Analyses |       |                     |        |     |         |                      |
|---------------|--------------------------|----------|-------|---------------------|--------|-----|---------|----------------------|
|               |                          | VOCs     | SVOCs | Pesticides/<br>PCBs | Metals | TOC | Cyanide | Fingerprint Analysis |
| SB-1 CME-1    | D92-2932                 |          |       |                     |        | X   |         |                      |
| SB-1 CME-2    | D92-2932                 | X        |       |                     |        |     |         |                      |
| SB-1 CME-3    | D92-2932                 | X        |       |                     |        |     |         |                      |
| SB-1 CME-4    | D92-2932                 | X        |       |                     |        |     |         |                      |
| SB-2 CME-1    | D92-3009                 | X        |       |                     |        |     |         |                      |
| SB-2 CME-2    | D92-3009                 | X        |       |                     |        |     |         |                      |
| SB-3 CME-1    | D92-3164                 | X        |       |                     |        |     |         |                      |
| SB-3 CME-2    | D92-3164                 | X        |       |                     |        | X   |         |                      |
| SB-4 CME-1    | D92-3281                 | X        |       |                     |        |     |         |                      |
| SB-4 CME-2    | D92-3281                 | X        |       |                     |        | X   |         |                      |
| SB-4 CME-3    | D92-3281                 | X        |       |                     |        |     |         |                      |
| SB-4 CME-4    | D92-3281                 | X        |       |                     |        |     |         |                      |
| SB-4 CME-5    | D92-3281                 | X        |       |                     |        |     |         |                      |
| SB-4 CME-40   | D92-3281                 | X        |       |                     |        |     |         |                      |
| SB-6 CME-1    | D92-3164                 | X        |       |                     |        |     |         |                      |
| SB-6 CME-2    | D92-3164                 | X        |       |                     |        | X   |         |                      |
| SB-6 CME-3    | D92-3164                 | X        |       |                     |        |     |         |                      |
| GMW-1 GW-1    | D92-3281                 | X        |       |                     |        |     |         |                      |
| GMW-3 GW-1    | D92-3281                 | X        |       |                     |        |     |         |                      |
| GMW-4 GW-1    | D92-3281                 | X        |       |                     |        |     |         |                      |
| GMW-5 GW-1    | D92-3281                 | X        |       |                     |        |     |         |                      |
| GMW-6 GW-1    | D92-3281                 | X        |       |                     |        |     |         |                      |
| GMW-7 GW-1    | D92-3281                 | X        |       |                     |        |     |         |                      |
| GMW-8 GW-1    | D92-3281                 | X        |       |                     |        |     |         |                      |
| GMW-9 GW-1    | D92-3281                 | X        |       |                     |        |     |         |                      |
| GMW-10 GW-1   | D92-3281                 | X        |       |                     |        |     |         |                      |
| GMW-11 GW-1   | D92-3281                 | X        |       |                     |        |     |         |                      |
| GMW-12 GW-1   | D92-3227                 |          |       |                     |        |     |         | X                    |
| GMW-14 CME-1  | D92-3067                 | X        | X     |                     |        |     |         |                      |
| GMW-14 CME-2  | D92-3067                 |          |       | X                   |        |     | X       |                      |
| GMW-14 CME-3  | D92-3067                 |          |       |                     | X      |     |         |                      |
| GMW-14 CME-4  | D92-3067                 | X        |       |                     |        |     |         |                      |
| GMW-14 CME-5  | D92-3067                 | X        |       |                     |        |     |         |                      |
| GMW-14 GW-1   | D92-3227                 | X        | X     |                     |        |     |         |                      |
| GMW-14 GW-2   | D92-3281                 | X        | X     | X                   | X      |     | X       |                      |
| GMW-14 RB-1   | D92-3164                 | X        |       |                     |        |     |         |                      |
| GMW-15 CME-1  | D92-3227                 | X        |       |                     |        |     |         |                      |
| GMW-15 CME-2  | D92-3227                 | X        |       |                     |        |     |         |                      |
| GMW-15 CME-4  | D92-3227                 | X        |       |                     |        | X   |         |                      |
| GMW-15 CME-7  | D92-3227                 | X        |       |                     |        |     |         |                      |
| GMW-15 CME-8  | D92-3227                 | X        |       |                     |        |     |         |                      |
| GMW-15 CME-20 | D92-3227                 | X        |       |                     |        |     |         |                      |
| GMW-15 GW-1   | D92-3281                 | X        |       |                     |        |     |         |                      |
| GMW-16 CME-1  | D92-3424                 | X        |       |                     |        |     |         |                      |
| GMW-16 CME-2  | D92-3424                 | X        |       |                     |        |     |         |                      |
| GMW-16 CME-3  | D92-3424                 | X        |       |                     |        |     |         |                      |
| GMW-16 GW-1   | D92-3538                 | X        |       |                     |        |     |         |                      |
| GMW-16 GW-2   | D92-3538                 | X        |       |                     |        |     |         |                      |

**TABLE I-1  
Sample Number Index**

| Sample Number | Laboratory Report Number | Analyses |       |                     |        |     |         |                      |
|---------------|--------------------------|----------|-------|---------------------|--------|-----|---------|----------------------|
|               |                          | VOCs     | SVOCs | Pesticides/<br>PCBs | Metals | TOC | Cyanide | Fingerprint Analysis |
| GMW-17 CME-1  | D92-3424                 | X        |       |                     |        |     |         |                      |
| GMW-17 CME-5  | D92-3424                 | X        |       |                     |        |     |         |                      |
| GMW-17 CME-7  | D92-3424                 | X        |       |                     |        |     |         |                      |
| GMW-17 CME-8  | D92-3424                 | X        |       |                     |        |     |         |                      |
| GMW-17 CME-9  | D92-3424                 | X        |       |                     |        |     |         |                      |
| GMW-17 GW-1   | D92-3703                 | X        |       |                     |        |     |         |                      |
| GMW-17 GW-2   | D92-3703                 | X        |       |                     |        |     |         |                      |
| GMW-17 GW-3   | D92-3703                 | X        |       |                     |        |     |         |                      |
| GMW-18 GW-1   | D92-3703                 | X        |       |                     |        |     |         |                      |
| GMW-18 GW-2   | D92-3818                 | X        |       |                     |        |     |         |                      |
| X GW-1        | D92-3281                 | X        |       |                     |        |     |         |                      |
| TB-326        | D92-3009                 | X        |       |                     |        |     |         |                      |
| TB-327        | D92-3067                 | X        |       |                     |        |     |         |                      |
| TB-331        | D92-3164                 | X        |       |                     |        |     |         |                      |
| TB-40192A     | D92-3227                 | X        |       |                     |        |     |         |                      |
| TB-402        | D92-3281                 | X        |       |                     |        |     |         |                      |
| TB-407        | D92-3424                 | X        |       |                     |        |     |         |                      |
| TB-409        | D92-3538                 | X        |       |                     |        |     |         |                      |
| *GMW-15 CME-2 | 3995                     | X        |       |                     |        |     |         |                      |
| *GMW-7        | 4003                     | X        |       |                     |        |     |         |                      |
| *SB-4         | 4003                     | X        |       |                     |        |     |         |                      |
| *AS-3 S-2     | 4745                     | X        |       |                     |        |     |         |                      |
| *AS-9 S-2     | 4745                     | X        |       |                     |        |     |         |                      |
| *AS-8 S-2     | 4745                     | X        |       |                     |        |     |         |                      |
| *AS-7 S-1     | 4745                     | X        |       |                     |        |     |         |                      |

Note: All samples were analyzed by NDRC Laboratories, Inc. except for those marked with a \*. The \* indicates samples analyzed by American Technical & Analytical Services, Inc.

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**LABORATORY  
REPORT  
NUMBER**

**D92-2932**



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 26-MAR-1992

REPORT NUMBER : D92-2932-1

REPORT DATE : 14-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-1 CME-1  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 25-MAR-1992

| MISCELLANEOUS ANALYSES   |                 |            |
|--|-----------------|------------|
| TEST REQUESTED   | DETECTION LIMIT | RESULTS    |
| Total Solids   | 0.01 %          | 80.9 %     |
| Analyzed using EPA 160.3 on 1-APR-1992 by KOB                      |                 |            |
| Total Organic Carbon   | 80 mg/Kg        | 1480 mg/Kg |
| Dilution Factor : 4<br>Analyzed using EPA 9060 on 6-APR-1992 by LU |                 |            |

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2

David R. Godwin, Ph.D.  
Chief Executive Officer

US EPA ARCHIVE DOCUMENT

CUSTOMER : Burns & McDonnell  
 PROJECT : 91-319-1

=====

SAMPLE ID : D92-2932-8            DATE SAMPLED : 25-MAR-1992  
 ID MARKS : Method Blank (Soil)

ANALYSIS            PRP BY PREP DATE            ANL BY ANALYSIS DATE  
 -----

=====

SAMPLE ID : D92-2932-9            DATE SAMPLED : 25-MAR-1992  
 ID MARKS : MS (Liquid)

ANALYSIS            PRP BY PREP DATE            ANL BY ANALYSIS DATE  
 -----

=====

SAMPLE ID : D92-2932-10          DATE SAMPLED : 25-MAR-1992  
 ID MARKS : MSD (Liquid)

ANALYSIS            PRP BY PREP DATE            ANL BY ANALYSIS DATE  
 -----

=====

SAMPLE ID : D92-2932-11          DATE SAMPLED : 25-MAR-1992  
 ID MARKS : Method Blank (Liquid)

ANALYSIS            PRP BY PREP DATE            ANL BY ANALYSIS DATE  
 -----

=====

| ANALYSIS ID | DESCRIPTION                                 |
|-------------|---|
| SOLID_TPER  | Total Solids by OVEN                        |
| TOC_S       | Total Organic Carbon                        |
| 8240_FL_S   | Volatile Organics, Full List, Solid Matrix  |
| VOA_TIC     | Tentatively Identified Compounds - VOA      |
| 8240_FL_L   | Volatile Organics, Full List, Liquid Matrix |

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CUSTOMER : Burns & McDonnell  
PROJECT : 91-319-1

=====

SAMPLE ID : D92-2932-1            DATE SAMPLED : 25-MAR-1992  
ID MARKS : SB-1 CME-1

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| SOLID_TPER |                  | KOB      1-APR-1992  |
| TOC_S      |                  | LU        6-APR-1992 |

=====

SAMPLE ID : D92-2932-2            DATE SAMPLED : 25-MAR-1992  
ID MARKS : SB-1 CME-2

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240_FL_S  |                  | ZJS      7-APR-1992  |
| SOLID_TPER |                  | KOB      1-APR-1992  |
| VOA_TIC    |                  | ZJS      7-APR-1992  |

=====

SAMPLE ID : D92-2932-3            DATE SAMPLED : 25-MAR-1992  
ID MARKS : SB-1 CME-3

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240_FL_S  |                  | ZJS      7-APR-1992  |
| SOLID_TPER |                  | KOB      1-APR-1992  |
| VOA_TIC    |                  | ZJS      7-APR-1992  |

=====

SAMPLE ID : D92-2932-4            DATE SAMPLED : 25-MAR-1992  
ID MARKS : SB-1 CME-4

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240_FL_S  |                  | ZJS      7-APR-1992  |
| SOLID_TPER |                  | KOB      1-APR-1992  |
| VOA_TIC    |                  | ZJS      7-APR-1992  |

=====

SAMPLE ID : D92-2932-5            DATE SAMPLED : 25-MAR-1992  
ID MARKS : TB-325

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS      2-APR-1992  |
| VOA_TIC   |                  | ZJS      2-APR-1992  |

=====

SAMPLE ID : D92-2932-6            DATE SAMPLED : 25-MAR-1992  
ID MARKS : MS (Soil)

| ANALYSIS | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|----------|------------------|----------------------|
|          |                  |                      |

=====

SAMPLE ID : D92-2932-7            DATE SAMPLED : 25-MAR-1992  
ID MARKS : MSD (Soil)

| ANALYSIS | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|----------|------------------|----------------------|
|          |                  |                      |



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 26-MAR-1992

REPORT NUMBER : D92-2932-2

REPORT DATE : 14-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-1 CME-2  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 25-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 7-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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HOUSTON

REPORT NUMBER : D92-2932-2  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,1,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 103 %           |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 96.7 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 98.0 %          |

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*David R. Godwin*  
David R. Godwin, Ph.D.  
Chief Executive Officer

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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 26-MAR-1992

REPORT NUMBER : D92-2932-2

REPORT DATE : 14-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

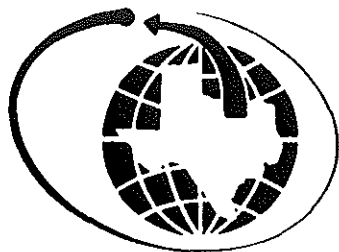
SAMPLE MATRIX : Soil  
ID MARKS : SB-1 CME-2  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 25-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 7-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |               |
|----------------------------------|----------------|----------|---------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT        |
| No compounds detected            |                | VOA      | 10 $\mu$ g/Kg |

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DALLAS

HOUSTON

DATE RECEIVED : 26-MAR-1992

REPORT NUMBER : D92-2932-2

REPORT DATE : 14-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-1 CME-2  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 25-MAR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 81.8 %  |
| Analyzed using EPA 160.3 on 1-APR-1992 by KOB |                 |         |

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DALLAS

HOUSTON

DATE RECEIVED : 26-MAR-1992

REPORT NUMBER : D92-2932-3

REPORT DATE : 14-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-1 CME-3  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 25-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 7-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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DALLAS

HOUSTON

REPORT NUMBER : D92-2932-3  
ANALYSIS METHOD : EPA 8240

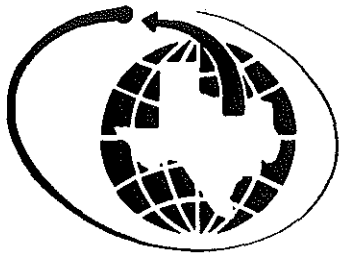
PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 105 %           |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 98.3 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 103 %           |

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HOUSTON

DATE RECEIVED : 26-MAR-1992

REPORT NUMBER : D92-2932-3

REPORT DATE : 14-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
          : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-1 CME-3  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 25-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 7-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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HOUSTON

DATE RECEIVED : 26-MAR-1992

REPORT NUMBER : D92-2932-3

REPORT DATE : 14-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-1 CME-3  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 25-MAR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 86.3 %  |
| Analyzed using EPA 160.3 on 1-APR-1992 by KOB |                 |         |

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HOUSTON

DATE RECEIVED : 26-MAR-1992

REPORT NUMBER : D92-2932-4

REPORT DATE : 14-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-1 CME-4  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 25-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 7-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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REPORT NUMBER : D92-2932-4  
ANALYSIS METHOD : EPA 8240

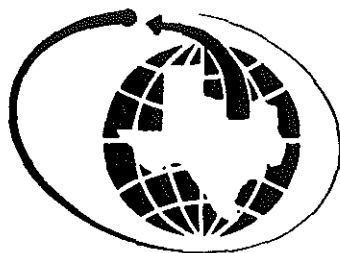
PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 107 %           |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 97.5 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 98.0 %          |

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David R. Godwin, Ph.D.  
Chief Executive Officer



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DALLAS

HOUSTON

DATE RECEIVED : 26-MAR-1992

REPORT NUMBER : D92-2932-4

REPORT DATE : 14-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
          : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-1 CME-4  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 25-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 7-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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REPORT NUMBER : D92-2932-4

REPORT DATE : 14-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
          : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-1 CME-4  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 25-MAR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 87.5 %  |
| Analyzed using EPA 160.3 on 1-APR-1992 by KOB |                 |         |

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DALLAS

HOUSTON

DATE RECEIVED : 26-MAR-1992

REPORT NUMBER : D92-2932-5

REPORT DATE : 14-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-325  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 25-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 2-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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REPORT NUMBER : D92-2932-5  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | < 5.0 µg/L  |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 95.8 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 100 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 98.5 %          |

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Chief Executive Officer

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DALLAS

HOUSTON

DATE RECEIVED : 26-MAR-1992

REPORT NUMBER : D92-2932-5

REPORT DATE : 14-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
          : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-325  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 25-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 2-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2  
\_\_\_\_\_  
David R. Godwin, Ph.D.  
Chief Executive Officer





# NDRC LABORATORIES, INC.

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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED: 26-MAR-1992

REPORT NUMBER: D92-2932

REPORT DATE: 14-APR-1992

SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Total Solids  
Technician: KOB  
Extraction Date: ----  
Date Analyzed: 4/1/92  
QC Date: 4/1/92  
QC Sample Number: D92-2972-2

Analysis Method: EPA 160.3  
Extraction Method: ----  
MS/MSD RPD: ----  
Average Spike Recovery: ----  
Duplicate RPD: 0 %  
Method Blank: ----  
Blank Spike Recovery: ----

ANALYSIS: TOC  
Technician: WSD/LU  
Extraction Date: ----  
Date Analyzed: 4/6/92  
QC Date: 4/6/92  
QC Sample Number: H92-1212-1

Analysis Method: EPA 9060  
Extraction Method: ----  
MS/MSD RPD: ----  
Average Spike Recovery: ----  
Duplicate RPD: 7.4 %  
Method Blank: <20 mg/Kg  
Blank Spike Recovery: 104 %

ANALYSIS: TOC  
Technician: WSD/LU  
Extraction Date: ----  
Date Analyzed: 4/6/92  
QC Date: 4/6/92  
QC Sample Number: Seasand

Analysis Method: EPA 9060  
Extraction Method: ----  
MS/MSD RPD: 19 %  
Average Spike Recovery: 90 %  
Duplicate RPD: ----  
Method Blank: <20 mg/Kg  
Blank Spike Recovery: ----

2B  
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: NDRC-DALLAS

Lab Code: HP002

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/07/92

Matrix Spike - EPA Sample No.: 092-2937-01

Level: (low/med) low

| COMPOUND           | SPIKE ADDED (ug/Kg) | SAMPLE CONCENTRATION (ug/Kg) | MS CONCENTRATION (ug/Kg) | MS % REC # | QC LIMITS REC. |
|--------------------|---------------------|------------------------------|--------------------------|------------|----------------|
| 1,1-Dichloroethene | 100.0               | 0.00                         | 75.40                    | 75.4       | 59-172         |
| Trichloroethene    | 100.0               | 0.00                         | 90.50                    | 90.5       | 62-137         |
| Benzene            | 100.0               | 0.00                         | 95.48                    | 95.5       | 66-142         |
| Toluene            | 100.0               | 0.00                         | 95.93                    | 95.9       | 59-139         |
| Chlorobenzene      | 100.0               | 0.00                         | 97.56                    | 104        | 60-133         |

| COMPOUND           | SPIKE ADDED (ug/Kg) | MSD CONCENTRATION (ug/Kg) | MSD % REC # | % RPD # | QC LIMITS RPD REC. |
|--------------------|---------------------|---------------------------|-------------|---------|--------------------|
| 1,1-Dichloroethene | 100.0               | 81.54                     | 81.5        | 8       | 22   59-172        |
| Trichloroethene    | 100.0               | 98.63                     | 98.6        | 9       | 24   62-137        |
| Benzene            | 100.0               | 106.09                    | 106         | 11      | 21   66-142        |
| Toluene            | 100.0               | 100.06                    | 100         | 4       | 21   59-139        |
| Chlorobenzene      | 100.0               | 102.33                    | 102         | 4       | 21   60-133        |

# Column to be used to flag recovery and RPD values with an asterisk

\* values outside of qc limits

RPD: 0 out of 5 outside limits  
Spike recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

US EPA ARCHIVE DOCUMENT

**CASE NARRATIVE  
REQUIRED**

PO-WCI-001 **VOLATILES**

**Request For Chemical Analysis And Chain Of Custody Record**

EMPLOYEE - OWNED  
**Burns & McDonnell**  
ENGINEERS - ARCHITECTS - CONSULTANTS  
4800 East 63rd Street  
Kansas City, MO 64130  
(816) 338-4375

Client: **QC REPORT**  
Address: \_\_\_\_\_  
City, State, Zip: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Attention: **BILL WEIS**

Laboratory: **NDRC LABS, INC.**  
Address: **1101 COMMERCE DRIVE**  
City, State, Zip: **RICHARDSON, TX 75081**  
Telephone: **214-238-5591**  
Laboratory Reference Number: \_\_\_\_\_

Document Control No.: **32592**  
(NA if Not Applicable)

Project Number **91-319-1** Project Name \_\_\_\_\_

Sampler(s) (Signature) \_\_\_\_\_

| Station Number                    | Station Location | Date    | Time  | Sample Type |       |     |       |      | Number of Containers | Analysis | Remarks | Lab Sample Number |        |
|-----------------------------------|------------------|---------|-------|-------------|-------|-----|-------|------|----------------------|----------|---------|-------------------|--------|
|                                   |                  |         |       | Liquid      | Solid | Gas | Comp. | Grab |                      |          |         |                   |        |
| SB-1                              | CME-1            | 3/25/92 | 1:05P | ✓           |       |     |       | ✓    | 1                    |          | X       | 250 ml            | 2932-1 |
| SB-1                              | CME-2            | 3/25/92 |       | ✓           |       |     |       | ✓    | 1                    | X        |         | "                 |        |
| SB-1                              | CME-3            | 3/25/92 |       | ✓           |       |     |       | ✓    | 1                    | X        |         | "                 |        |
| SB-1                              | CME-4            | 3/25/92 |       | ✓           |       |     |       | ✓    | 1                    | X        |         | "                 |        |
| -                                 | TPB-325          | 3/25/92 |       | ✓           |       |     |       |      | 2                    | X        |         | 240 ml            |        |
| <b>NO DISPOSAL FEE DUE 4-7-92</b> |                  |         |       |             |       |     |       |      |                      |          |         |                   |        |

Relinquished By: (Signature) **[Signature]** Date/Time **3/25/92/10:18P** Received By: (Signature) \_\_\_\_\_ Date/Time \_\_\_\_\_ Received By: (Signature) \_\_\_\_\_

Relinquished By: (Signature) \_\_\_\_\_ Date/Time \_\_\_\_\_ Received By Laboratory: (Signature) **B. Wilson** Date/Time **3/26/92** Remarks **<4°C**

**LABORATORY  
REPORT  
NUMBER**

**D92-3009**



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED: 27-MAR-1992

REPORT NUMBER: D91-3009-1-3

REPORT DATE: 14-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
Kansas City, MO 64130  
ATTENTION : Mr. Paul Clark  
PROJECT : 91-319-1 EGGKTA  
DATE SAMPLED : 26-MAR-1992

---

## CASE NARRATIVE COMMENTS:

No unusual problems were encountered during the sample analysis for this project.

Please refer to the attached Case Narrative Summary for a comparison of sample identifications and analytical requests.

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2  
\_\_\_\_\_  
David R. Godwin, Ph.D.  
Chief Executive Officer

CUSTOMER : Burns & McDonnell  
 PROJECT : 91-319-1 EGGKTA

=====

SAMPLE ID : D92-3009-1                      DATE SAMPLED : 26-MAR-1992  
 ID MARKS : SB-2 CME-1

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240_FL_S  |                  | ZJS      7-APR-1992  |
| SOLID_TPER |                  | KOB      2-APR-1992  |
| VOA_TIC    |                  | ZJS      7-APR-1992  |

=====

SAMPLE ID : D92-3009-2                      DATE SAMPLED : 26-MAR-1992  
 ID MARKS : SB-2 CME-2

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240_FL_S  |                  | ZJS      8-APR-1992  |
| SOLID_TPER |                  | KOB      2-APR-1992  |
| VOA_TIC    |                  | ZJS      8-APR-1992  |

=====

SAMPLE ID : D92-3009-3                      DATE SAMPLED : 26-MAR-1992  
 ID MARKS : TB-326

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS      1-APR-1992  |
| VOA_TIC   |                  | ZJS      1-APR-1992  |

=====

| ANALYSIS ID | DESCRIPTION                                 |
|-------------|---|
| 8240_FL_S   | Volatile Organics, Full List, Solid Matrix  |
| SOLID_TPER  | Total Solids by OVEN                        |
| VOA_TIC     | Tentatively Identified Compounds - VOA      |
| 8240_FL_L   | Volatile Organics, Full List, Liquid Matrix |

=====



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DALLAS

HOUSTON

DATE RECEIVED : 27-MAR-1992

REPORT NUMBER : D92-3009-1

REPORT DATE : 9-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-2 CME-1  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 26-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 7-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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DALLAS

HOUSTON

REPORT NUMBER : D92-3009-1  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | 14.3 µg/Kg   |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 90.8 %          |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 101 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 99.2 %          |

NDRC Laboratories, Inc.

*David R. Godwin*  
David R. Godwin, Ph.D.  
Chief Executive Officer



NDRC Laboratories, Inc.

*David R. Ford*  
David R. Godwin  
Chief Executive



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 27-MAR-1992

REPORT NUMBER : D92-3009-1

REPORT DATE : 9-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-2 CME-1  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 26-MAR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 83.5 %  |
| Analyzed using EPA 160.3 on 2-APR-1992 by KOB |                 |         |

NDRCLaboratories, Inc.

*David R. Godwin* ✓ 2  
David R. Godwin, Ph.D.  
Chief Executive Officer



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DALLAS

HOUSTON

DATE RECEIVED : 27-MAR-1992

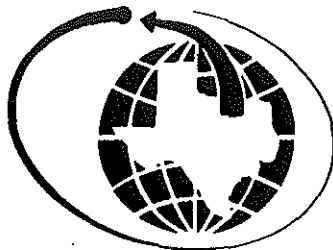
REPORT NUMBER : D92-3009-2

REPORT DATE : 9-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-2 CME-2  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 26-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | 223 µg/Kg    |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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REPORT NUMBER : D92-3009-2  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 100 %           |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 96.0 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 97.1 %          |

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2  
David R. Godwin, Ph.D.  
Chief Executive Officer



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DALLAS

HOUSTON

DATE RECEIVED : 27-MAR-1992

REPORT NUMBER : D92-3009-2

REPORT DATE : 9-APR-1992

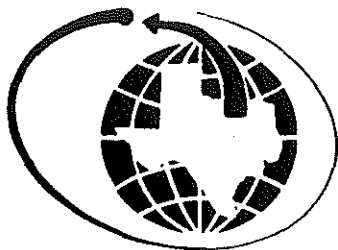
SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
                  : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-2 CME-2  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 26-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2  
\_\_\_\_\_  
David R. Godwin, Ph.D.  
Chief Executive Officer



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 27-MAR-1992

REPORT NUMBER : D92-3009-2

REPORT DATE : 9-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-2 CME-2  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 26-MAR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 78.2 %  |
| Analyzed using EPA 160.3 on 2-APR-1992 by KOB |                 |         |

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2  
David R. Godwin, Ph.D.  
Chief Executive Officer



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DALLAS

HOUSTON

DATE RECEIVED : 27-MAR-1992

REPORT NUMBER : D92-3009-3

REPORT DATE : 9-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-326  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 26-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 1-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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BEAUMONT

DALLAS

HOUSTON

REPORT NUMBER : D92-3009-3  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | < 5.0 µg/L  |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 96.8 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 103 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 93.1 %          |

NDRCLaboratories, Inc.

*David R. Godwin* ✓ 2  
David R. Godwin, Ph.D.  
Chief Executive Officer





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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 27-MAR-1992

REPORT NUMBER : D92-3009-3

REPORT DATE : 9-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-326  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 26-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 1-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

NDRC Laboratories, Inc.

*David R. Godwin*  
David R. Godwin, Ph.D.  
Chief Executive Officer

US EPA ARCHIVE DOCUMENT



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HOUSTON

DATE RECEIVED: 27-MAR-1992

REPORT NUMBER: D92-3009

REPORT DATE: 9-APR-1992

SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Total Solids  
Technician: KOB  
Extraction Date: ----  
Date Analyzed: 4/1/92  
QC Date: 4/1/92  
QC Sample Number: D92-3047-14

Analysis Method: EPA 160.3  
Extraction Method: ----  
MS/MSD RPD: ----  
Average Spike Recovery: ----  
Duplicate RPD: 0.2 %  
Method Blank: ----  
Blank Spike Recovery: ----

## WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: 1234-56

Lab Code: HP002

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/01/92

Matrix Spike - EPA Sample No.: D92-2907-01

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>CONCENTRATION<br>(ug/L) | MS<br>CONCENTRATION<br>(ug/L) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|--------------------|--------------------------|-----------------------------------|-------------------------------|------------------|----------------------|
| 1,1-Dichloroethene | 100.01                   | 0.001                             | 104.07                        | 104              | 161-1451             |
| Trichloroethene    | 100.01                   | 0.001                             | 111.24                        | 111              | 171-1201             |
| Benzene            | 100.01                   | 0.001                             | 115.97                        | 116              | 176-1271             |
| Toluene            | 100.01                   | 0.001                             | 121.56                        | 122              | 176-1251             |
| Chlorobenzene      | 100.01                   | 0.001                             | 119.05                        | 119              | 175-1301             |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | MSD<br>CONCENTRATION<br>(ug/L) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD<br>REC. |
|--------------------|--------------------------|--------------------------------|-------------------|------------|--------------------------|
| 1,1-Dichloroethene | 100.01                   | 104.30                         | 104.01            | 0          | 14 161-1451              |
| Trichloroethene    | 100.01                   | 110.78                         | 111.01            | 0          | 14 171-1201              |
| Benzene            | 100.01                   | 117.28                         | 117.01            | 1          | 11 176-1271              |
| Toluene            | 100.01                   | 111.14                         | 111.01            | 9          | 13 176-1251              |
| Chlorobenzene      | 100.01                   | 119.11                         | 119.01            | 0          | 13 175-1301              |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

:TC

COMMENTS: SW-846 EPA METHOD 8240

CASE NARRATIVE

PO-WC1-001

REQUIRED  
Request For Chemical Analysis And Chain Of Custody Record

QC REPORT



Client : NO DISPOSAL  
 Address : FEE!  
 City, State, Zip : \_\_\_\_\_  
 Telephone : \_\_\_\_\_  
 Attention : BILL WEIS

Laboratory : NDRC LABORATORIES, Inc.  
 Address : 1101 COMMERCE DRIVE  
 City, State, Zip : RICHARDSON, TX 75081  
 Telephone : 214-238-5591  
 Laboratory Reference Number : \_\_\_\_\_

Document Control No. : 32692  
 (NA if Not Applicable)

ORIGINAL

Project Number 91-319-1 Project Name EGGKTA

Sampler(s) (Signature) [Signature] / [Signature]

| Station Number       | Station Location        | Date    | Time   | Sample Type |       |     |       |      | Number of Containers | Analysis | Remarks         | Lab Sample Number |
|----------------------|-------------------------|---------|--------|-------------|-------|-----|-------|------|----------------------|----------|-----------------|-------------------|
|                      |                         |         |        | Liquid      | Solid | Gas | Comp. | Grab |                      |          |                 |                   |
| SB-2                 | CME-1 soil              | 3/26/92 | 8:10am |             | ✓     |     |       | ✓    | 1                    | X        | 1-250 ml - GCMS | 1                 |
| SB-2                 | CME-2 ↓                 | 3/26/92 | 8:50am |             | ✓     |     |       | ✓    | 1                    | X        | 1-250 ml ↓      | 2                 |
| -                    | TB-326 liq.             | 3/26/92 | 4:00pm | ✓           |       |     |       |      | 2                    | X        | 2-40 ml - GCMS  | 3                 |
| <del>(soil) MS</del> | <del>MS</del>           |         |        |             |       |     |       |      |                      |          |                 | <del>4</del>      |
| <del>1</del>         | <del>MS</del>           |         |        |             |       |     |       |      |                      |          |                 | <del>5</del>      |
| <del>1</del>         | <del>Method Blank</del> |         |        |             |       |     |       |      |                      |          |                 | <del>6</del>      |
| <del>(liq) MS</del>  | <del>MS</del>           |         |        |             |       |     |       |      |                      |          |                 | <del>7</del>      |
| <del>1</del>         | <del>MS</del>           |         |        |             |       |     |       |      |                      |          |                 | <del>8</del>      |
| <del>1</del>         | <del>Method Blank</del> |         |        |             |       |     |       |      |                      |          |                 | <del>9</del>      |

Due 4-8-92  
VOLATILES

3009

VOC  
↓

|  |   |  |   |                           |
|--|---|--|---|---------------------------|
| Relinquished By : (Signature)<br>1. <u>[Signature]</u> | Date/Time<br><u>3/26/92</u><br><u>4:30 PM</u> | Received By : (Signature)<br>2. _____                    | Date/Time<br><u>3-27-92</u><br><u>11:00</u> | Remarks<br><u>&lt;4°C</u> |
| Relinquished By : (Signature)<br>3. _____              | Date/Time                                     | Received By Laboratory : (Signature)<br><u>B. Wilson</u> | Date/Time                                   | Remarks                   |

**LABORATORY  
REPORT  
NUMBER**

**D92-3067**



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DALLAS

HOUSTON

DATE RECEIVED: 30-MAR-1992

REPORT NUMBER: D92-3067-1-15

REPORT DATE: 22-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis  
PROJECT : 91-319-1 EGGKTA  
DATE SAMPLED : 27-MAR-1992

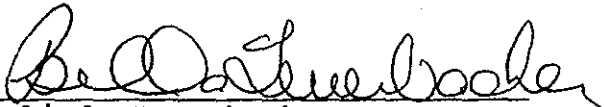
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## CASE NARRATIVE COMMENTS:

No unusual problems were encountered during the sample analysis for this project.

Please refer to the attached Case Narrative Summary for a comparison of sample identifications and analytical requests.

NDRC Laboratories, Inc.

  
Belinda Feuerbacher  
Project Manager

CUSTOMER : Burns & McDonnell  
PROJECT : 91-319-1 EGGKTA

=====

SAMPLE ID : D92-3067-1      DATE SAMPLED : 27-MAR-1992  
ID MARKS : GMW-14 CME-1

| ANALYSIS   | PRP | BY PREP DATE | ANL BY | ANALYSIS DATE |
|------------|-----|--------------|--------|---------------|
| 8240_FL_S  |     |              | ZJS    | 8-APR-1992    |
| 8270A_FL_S | TAP | 5-APR-1992   | MCS    | 9-APR-1992    |
| 8270B_FL_S | TAP | 5-APR-1992   | MCS    | 9-APR-1992    |
| ABN_TIC    |     |              | MCS    | 9-APR-1992    |
| SOLID_TPER |     |              | KOB    | 3-APR-1992    |
| VOA_TIC    |     |              | ZJS    | 8-APR-1992    |

=====

SAMPLE ID : D92-3067-2      DATE SAMPLED : 27-MAR-1992  
ID MARKS : GMW-14 CME-2

| ANALYSIS   | PRP | BY PREP DATE | ANL BY | ANALYSIS DATE |
|------------|-----|--------------|--------|---------------|
| 8080_S     | TAP | 3-APR-1992   | SRW    | 14-APR-1992   |
| CN_TOTAL_S |     |              | WSJ    | 31-MAR-1992   |
| SOLID_TPER |     |              | KOB    | 3-APR-1992    |

=====

SAMPLE ID : D92-3067-3      DATE SAMPLED : 27-MAR-1992  
ID MARKS : GMW-14 CME-3

| ANALYSIS   | PRP | BY PREP DATE | ANL BY | ANALYSIS DATE |
|------------|-----|--------------|--------|---------------|
| M_AG_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_AL_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_AS_T_S_V | DJL | 31-MAR-1992  | GME    | 8-APR-1992    |
| M_BA_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_BE_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_CA_T_S_I | DJL | 31-MAR-1992  | KJS    | 1-APR-1992    |
| M_CD_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_CO_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_CR_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_CU_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_FE_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_HG_T_S_V | DJL | 31-MAR-1992  | GME    | 2-APR-1992    |
| M_K_T_S_I  | DJL | 31-MAR-1992  | KJS    | 1-APR-1992    |
| M_MG_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_MN_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_NA_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_NI_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_PB_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_SB_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_SE_T_S_F | DJL | 31-MAR-1992  | RKD    | 1-APR-1992    |
| M_TL_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_V_T_S_I  | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| M_ZN_T_S_I | DJL | 31-MAR-1992  | KJS    | 31-MAR-1992   |
| SOLID_TPER |     |              | KOB    | 3-APR-1992    |

CUSTOMER : Burns & McDonnell  
 PROJECT : 91-319-1 EGGKTA

=====

SAMPLE ID : D92-3067-4            DATE SAMPLED : 27-MAR-1992  
 ID MARKS : GMW-14 CME-4

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE      |
|------------|------------------|---------------------------|
| 8240_FL_S  |                  | ZJS            8-APR-1992 |
| SOLID_TPER |                  | KOB            3-APR-1992 |
| VOA_TIC    |                  | ZJS            8-APR-1992 |

=====

SAMPLE ID : D92-3067-5            DATE SAMPLED : 27-MAR-1992  
 ID MARKS : GMW-14 CME-5

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE      |
|------------|------------------|---------------------------|
| 8240_FL_S  |                  | ZJS            8-APR-1992 |
| SOLID_TPER |                  | KOB            3-APR-1992 |
| VOA_TIC    |                  | ZJS            8-APR-1992 |

=====

SAMPLE ID : D92-3067-6            DATE SAMPLED : 27-MAR-1992  
 ID MARKS : TB-327

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE      |
|-----------|------------------|---------------------------|
| 8240_FL_L |                  | ZJS            2-APR-1992 |
| VOA_TIC   |                  | ZJS            2-APR-1992 |

US EPA ARCHIVE DOCUMENT



CUSTOMER : Burns & McDonnell  
 PROJECT : 91-319-1 EGGKTA

| ANALYSIS ID | DESCRIPTION                                 |
|-------------|---|
| 8240_FL_S   | Volatile Organics, Full List, Solid Matrix  |
| 8270A_FL_S  | Acid Extractables, Full List, Solid Matrix  |
| 8270B_FL_S  | Base-Neutral Extractables, Full List, Solid |
| ABN_TIC     | Tentatively Identified Compounds - ABN      |
| SOLID_TPER  | Total Solids by OVEN                        |
| VOA_TIC     | Tentatively Identified Compounds - VOA      |
| 8080_S      | Chlorinated Pesticides/PCBs, Solid Matrix   |
| CN_TOTAL_S  | Cyanide, Total, Solid Matrix                |
| M_AG_T_S_I  | Silver, Total, Solid, by ICP                |
| M_AL_T_S_I  | Aluminum, Total, Solid, by ICP              |
| M_AS_T_S_V  | Arsenic, Total, Solid, by GVAA              |
| M_BA_T_S_I  | Barium, Total, Solid, by ICP                |
| M_BE_T_S_I  | Beryllium Total, Solid, by ICP              |
| M_CA_T_S_I  | Calcium, Total, Solid, by ICP               |
| M_CD_T_S_I  | Cadmium, Total, Solid, by ICP               |
| M_CO_T_S_I  | Cobalt, Total, Solid, by ICP                |
| M_CR_T_S_I  | Chromium, Total, Solid, by ICP              |
| M_CU_T_S_I  | Copper, Total, Solid, by ICP                |
| M_FE_T_S_I  | Iron, Total, Solid, by ICP                  |
| M_HG_T_S_V  | Mercury, Total, Solid, by GVAA              |
| M_K_T_S_I   | Potassium, Total, Solid, by ICP             |
| M_MG_T_S_I  | Magnesium, Total, Solid, by ICP             |
| M_MN_T_S_I  | Manganese, Total, Solid, by ICP             |
| M_NA_T_S_I  | Sodium, Total, Solid, by ICP                |
| M_NI_T_S_I  | Nickel, Total, Solid, by ICP                |
| M_PB_T_S_I  | Lead, Total, Solid, by ICP                  |
| M_SB_T_S_I  | Antimony, Total, Solid, by ICP              |
| M_SE_T_S_F  | Selenium, Total, Solid, by GFAA             |
| M_TL_T_S_I  | Thallium, Total, Solid, by ICP              |
| M_V_T_S_I   | Vanadium, Total, Solid, by ICP              |
| M_ZN_T_S_I  | Zinc, Total, Solid, by ICP                  |
| 8240_FL_L   | Volatile Organics, Full List, Liquid Matrix |



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 30-MAR-1992

REPORT NUMBER : D92-3067-1

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-1  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992  
DILUTION FACTOR : 100

| VOLATILE ORGANICS     |                        |                          |
|-----------------------|------------------------|--------------------------|
| TEST REQUESTED        | DETECTION LIMIT        | RESULTS                  |
| Chloromethane         | 1000 $\mu\text{g/Kg}$  | < 1000 $\mu\text{g/Kg}$  |
| Bromomethane          | 1000 $\mu\text{g/Kg}$  | < 1000 $\mu\text{g/Kg}$  |
| Vinyl chloride        | 1000 $\mu\text{g/Kg}$  | < 1000 $\mu\text{g/Kg}$  |
| Chloroethane          | 1000 $\mu\text{g/Kg}$  | < 1000 $\mu\text{g/Kg}$  |
| Methylene chloride    | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| Acetone               | 10000 $\mu\text{g/Kg}$ | < 10000 $\mu\text{g/Kg}$ |
| Carbon disulfide      | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| 1,1-Dichloroethene    | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| 1,1-Dichloroethane    | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| 1,2-Dichloroethene    | 500 $\mu\text{g/Kg}$   | 426000 $\mu\text{g/Kg}$  |
| Chloroform            | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| 1,2-Dichloroethane    | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| 2-Butanone            | 5000 $\mu\text{g/Kg}$  | < 5000 $\mu\text{g/Kg}$  |
| 1,1,1-Trichloroethane | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| Carbon tetrachloride  | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| Vinyl acetate         | 5000 $\mu\text{g/Kg}$  | < 5000 $\mu\text{g/Kg}$  |
| Bromodichloromethane  | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |



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DALLAS

HOUSTON

REPORT NUMBER : D92-3067-1  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                       |                         |
|---------------------------|-----------------------|-------------------------|
| TEST REQUESTED            | DETECTION LIMIT       | RESULTS                 |
| 1,2-Dichloropropane       | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| cis-1,3-Dichloropropene   | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| Trichloroethene           | 500 $\mu\text{g/Kg}$  | 215000 $\mu\text{g/Kg}$ |
| Chlorodibromomethane      | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| 1,1,2-Trichloroethane     | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| Benzene                   | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| trans-1,3-Dichloropropene | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| Bromoform                 | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| 2-Chloroethylvinyl ether  | 1000 $\mu\text{g/Kg}$ | < 1000 $\mu\text{g/Kg}$ |
| 4-Methyl-2-pentanone      | 5000 $\mu\text{g/Kg}$ | < 5000 $\mu\text{g/Kg}$ |
| 2-Hexanone                | 5000 $\mu\text{g/Kg}$ | < 5000 $\mu\text{g/Kg}$ |
| Tetrachloroethene         | 500 $\mu\text{g/Kg}$  | 656000 $\mu\text{g/Kg}$ |
| Toluene                   | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| 1,1,2,2-Tetrachloroethane | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| Chlorobenzene             | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| Ethylbenzene              | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| Styrene                   | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| Xylenes                   | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |

| QUALITY CONTROL DATA       |                       |                 |
|----------------------------|-----------------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL           | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 $\mu\text{g/Kg}$ | 87.4 %          |
| Toluene-d8 (SS)            | 50.0 $\mu\text{g/Kg}$ | 99.4 %          |
| Bromofluorobenzene (SS)    | 50.0 $\mu\text{g/Kg}$ | 100 %           |

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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 30-MAR-1992

REPORT NUMBER : D92-3067-1

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-1  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992  
PREPARATION METHOD : EPA 3540  
PREPARED BY : TAP  
PREPARED ON : 5-APR-1992  
ANALYSIS METHOD : EPA 8270  
ANALYZED BY : MCS  
ANALYZED ON : 9-APR-1992  
DILUTION FACTOR : 1

| ACID EXTRACTABLE ORGANICS  |                              |                                |
|----------------------------|------------------------------|--------------------------------|
| TEST REQUESTED             | DETECTION LIMIT              | RESULTS                        |
| Phenol                     | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| 2-Chlorophenol             | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| 2-Methylphenol             | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| 4-Methylphenol             | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| 2-Nitrophenol              | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| 2,4-Dimethylphenol         | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| Benzoic acid               | 3300 $\mu\text{g}/\text{Kg}$ | < 3300 $\mu\text{g}/\text{Kg}$ |
| 2,4-Dichlorophenol         | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| 4-Chloro-3-methylphenol    | 1300 $\mu\text{g}/\text{Kg}$ | < 1300 $\mu\text{g}/\text{Kg}$ |
| 2,4,6-Trichlorophenol      | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| 2,4,5-Trichlorophenol      | 3300 $\mu\text{g}/\text{Kg}$ | < 3300 $\mu\text{g}/\text{Kg}$ |
| 2,4-Dinitrophenol          | 3300 $\mu\text{g}/\text{Kg}$ | < 3300 $\mu\text{g}/\text{Kg}$ |
| 4-Nitrophenol              | 3300 $\mu\text{g}/\text{Kg}$ | < 3300 $\mu\text{g}/\text{Kg}$ |
| 4,6-Dinitro-2-methylphenol | 3300 $\mu\text{g}/\text{Kg}$ | < 3300 $\mu\text{g}/\text{Kg}$ |
| Pentachlorophenol          | 3300 $\mu\text{g}/\text{Kg}$ | < 3300 $\mu\text{g}/\text{Kg}$ |



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REPORT NUMBER : D92-3067-1  
ANALYSIS METHOD : EPA 8270

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| ACID EXTRACTABLE ORGANICS |                 |         |
|---------------------------|-----------------|---------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS |

| QUALITY CONTROL DATA      |                      |                 |
|---------------------------|----------------------|-----------------|
| SURROGATE COMPOUND        | SPIKE LEVEL          | SPIKE RECOVERED |
| Phenol-d5 (SS)            | 100 $\mu\text{g/Kg}$ | 61.7 %          |
| 2-Fluorophenol (SS)       | 100 $\mu\text{g/Kg}$ | 57.2 %          |
| 2,4,6-Tribromophenol (SS) | 100 $\mu\text{g/Kg}$ | 43.2 %          |

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HOUSTON

DATE RECEIVED : 30-MAR-1992

REPORT NUMBER : D92-3067-1

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-1  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992  
PREPARATION METHOD : EPA 3540  
PREPARED BY : TAP  
PREPARED ON : 5-APR-1992  
ANALYSIS METHOD : EPA 8270  
ANALYZED BY : MCS  
ANALYZED ON : 9-APR-1992  
DILUTION FACTOR : 1

| BASE-NEUTRAL EXTRACTABLE ORGANICS |                              |                                |
|-----------------------------------|------------------------------|--------------------------------|
| TEST REQUESTED                    | DETECTION LIMIT              | RESULTS                        |
| Bis(2-chloroethyl)ether           | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| 1,3-Dichlorobenzene               | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| 1,4-Dichlorobenzene               | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| Benzyl alcohol                    | 1300 $\mu\text{g}/\text{Kg}$ | < 1300 $\mu\text{g}/\text{Kg}$ |
| 1,2-Dichlorobenzene               | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| Bis(2-chloroisopropyl)ether       | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| N-Nitroso-Di-N-propylamine        | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| Hexachloroethane                  | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| Nitrobenzene                      | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| Isophorone                        | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| Bis(2-chloroethoxy)methane        | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| 1,2,4-Trichlorobenzene            | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| Naphthalene                       | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |
| 4-Chloroaniline                   | 1300 $\mu\text{g}/\text{Kg}$ | < 1300 $\mu\text{g}/\text{Kg}$ |
| Hexachlorobutadiene               | 660 $\mu\text{g}/\text{Kg}$  | < 660 $\mu\text{g}/\text{Kg}$  |

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REPORT NUMBER : D92-3067-1  
ANALYSIS METHOD : EPA 8270

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| BASE-NEUTRAL EXTRACTABLE ORGANICS |                 |              |
|-----------------------------------|-----------------|--------------|
| TEST REQUESTED                    | DETECTION LIMIT | RESULTS      |
| 2-Methylnaphthalene               | 660 µg/Kg       | < 660 µg/Kg  |
| Hexachlorocyclopentadiene         | 660 µg/Kg       | < 660 µg/Kg  |
| 2-Chloronaphthalene               | 660 µg/Kg       | < 660 µg/Kg  |
| 2-Nitroaniline                    | 3300 µg/Kg      | < 3300 µg/Kg |
| Dimethylphthalate                 | 660 µg/Kg       | < 660 µg/Kg  |
| Acenaphthylene                    | 660 µg/Kg       | < 660 µg/Kg  |
| 2,6-Dinitrotoluene                | 660 µg/Kg       | < 660 µg/Kg  |
| 3-Nitroaniline                    | 3300 µg/Kg      | < 3300 µg/Kg |
| Acenaphthene                      | 660 µg/Kg       | < 660 µg/Kg  |
| Dibenzofuran                      | 660 µg/Kg       | < 660 µg/Kg  |
| 2,4-Dinitrotoluene                | 660 µg/Kg       | < 660 µg/Kg  |
| Diethylphthalate                  | 660 µg/Kg       | < 660 µg/Kg  |
| 4-Chlorophenylphenyl ether        | 660 µg/Kg       | < 660 µg/Kg  |
| Fluorene                          | 660 µg/Kg       | < 660 µg/Kg  |
| 4-Nitroaniline                    | 3300 µg/Kg      | < 3300 µg/Kg |
| N-Nitrosodiphenylamine            | 660 µg/Kg       | < 660 µg/Kg  |
| 4-Bromophenylphenyl ether         | 660 µg/Kg       | < 660 µg/Kg  |
| Hexachlorobenzene                 | 660 µg/Kg       | < 660 µg/Kg  |
| Phenanthrene                      | 660 µg/Kg       | < 660 µg/Kg  |
| Anthracene                        | 660 µg/Kg       | < 660 µg/Kg  |
| Di-n-butylphthalate               | 660 µg/Kg       | < 660 µg/Kg  |
| Fluoranthene                      | 660 µg/Kg       | < 660 µg/Kg  |
| Pyrene                            | 660 µg/Kg       | < 660 µg/Kg  |
| Butyl benzyl phthalate            | 660 µg/Kg       | < 660 µg/Kg  |
| 3,3'-Dichlorobenzidine            | 1300 µg/Kg      | < 1300 µg/Kg |
| Benzo(a)anthracene                | 660 µg/Kg       | < 660 µg/Kg  |

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REPORT NUMBER : D92-3067-1  
ANALYSIS METHOD : EPA 8270

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| BASE-NEUTRAL EXTRACTABLE ORGANICS |                      |                        |
|-----------------------------------|----------------------|------------------------|
| TEST REQUESTED                    | DETECTION LIMIT      | RESULTS                |
| Chrysene                          | 660 $\mu\text{g/Kg}$ | < 660 $\mu\text{g/Kg}$ |
| Bis(2-ethylhexyl)phthalate        | 660 $\mu\text{g/Kg}$ | < 660 $\mu\text{g/Kg}$ |
| Di-n-octylphthalate               | 660 $\mu\text{g/Kg}$ | < 660 $\mu\text{g/Kg}$ |
| Benzo(b)fluoranthene              | 660 $\mu\text{g/Kg}$ | < 660 $\mu\text{g/Kg}$ |
| Benzo(k)fluoranthene              | 660 $\mu\text{g/Kg}$ | < 660 $\mu\text{g/Kg}$ |
| Benzo(a)pyrene                    | 660 $\mu\text{g/Kg}$ | < 660 $\mu\text{g/Kg}$ |
| Indeno(1,2,3-cd)pyrene            | 660 $\mu\text{g/Kg}$ | < 660 $\mu\text{g/Kg}$ |
| Dibenzo(a,h)anthracene            | 660 $\mu\text{g/Kg}$ | < 660 $\mu\text{g/Kg}$ |
| Benzo(g,h,i)perylene              | 660 $\mu\text{g/Kg}$ | < 660 $\mu\text{g/Kg}$ |

| QUALITY CONTROL DATA  |                       |                 |
|-----------------------|-----------------------|-----------------|
| SURROGATE COMPOUND    | SPIKE LEVEL           | SPIKE RECOVERED |
| Nitrobenzene-d5 (SS)  | 50.0 $\mu\text{g/Kg}$ | 70.9 %          |
| 2-Fluorobiphenyl (SS) | 50.0 $\mu\text{g/Kg}$ | 80.6 %          |
| Terphenyl-d14 (SS)    | 50.0 $\mu\text{g/Kg}$ | 101 %           |

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DATE RECEIVED : 30-MAR-1992

REPORT NUMBER : D92-3067-1

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-1  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992  
ANALYZED BY : MCS  
ANALYZED ON : 9-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |                         |
|----------------------------------|----------------|----------|-------------------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT                  |
| 4-Methyldecane                   | 12.53          | ABN      | 1100 $\mu\text{g/Kg}$   |
| Undecane                         | 14.26          | ABN      | 1500 $\mu\text{g/Kg}$   |
| 2,5-Dimethyldecane               | 15.41          | ABN      | 680 $\mu\text{g/Kg}$    |
| 2,6-Dimethylundecane             | 16.61          | ABN      | 1400 $\mu\text{g/Kg}$   |
| Hexylcyclohexane                 | 17.14          | ABN      | 680 $\mu\text{g/Kg}$    |
| Unidentified alkane              | 17.73          | ABN      | 1500 $\mu\text{g/Kg}$   |
| Tridecane                        | 18.24          | ABN      | 1600 $\mu\text{g/Kg}$   |
| Unidentified cyclic hydrocarbon  | 19.09          | ABN      | 940 $\mu\text{g/Kg}$    |
| Tetradecane                      | 20.03          | ABN      | 1800 $\mu\text{g/Kg}$   |
| Octylcyclohexane                 | 20.91          | ABN      | 1000 $\mu\text{g/Kg}$   |
| 2,6,10,14-Tetramethylpentadecane | 21.09          | ABN      | 1300 $\mu\text{g/Kg}$   |
| Unidentified alkanes (oil)       | 34.14          | ABN      | 690000 $\mu\text{g/Kg}$ |

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ADDRESS : 4800 East 63rd Street  
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ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-1  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |                       |
|----------------------------------|----------------|----------|-----------------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT                |
| No compounds detected            |                | VOA      | 1000 $\mu\text{g/Kg}$ |

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SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-1  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 80.1 %  |
| Analyzed using EPA 160.3 on 3-APR-1992 by KOB |                 |         |

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HOUSTON

DATE RECEIVED : 30-MAR-1992

REPORT NUMBER : D92-3067-2

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-2  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992  
PREPARATION METHOD : EPA 3540  
PREPARED BY : TAP  
PREPARED ON : 3-APR-1992  
ANALYSIS METHOD : EPA 8080  
ANALYZED BY : SRW  
ANALYZED ON : 14-APR-1992  
DILUTION FACTOR : 1

| CHLORINATED PESTICIDES AND PCBS |                 |              |
|---------------------------------|-----------------|--------------|
| TEST REQUESTED                  | DETECTION LIMIT | RESULTS      |
| Aldrin                          | 2.7 µg/Kg       | < 2.7 µg/Kg  |
| Alpha-BHC                       | 2.0 µg/Kg       | < 2.0 µg/Kg  |
| Beta-BHC                        | 4.02 µg/Kg      | < 4.02 µg/Kg |
| Delta-BHC                       | 6.03 µg/Kg      | < 6.03 µg/Kg |
| Gamma-BHC(Lindane)              | 2.68 µg/Kg      | < 2.68 µg/Kg |
| Chlordane                       | 9.38 µg/Kg      | < 9.38 µg/Kg |
| 4,4'-DDD                        | 7.37 µg/Kg      | < 7.37 µg/Kg |
| 4,4'-DDE                        | 2.68 µg/Kg      | < 2.68 µg/Kg |
| 4,4'-DDT                        | 8.04 µg/Kg      | < 8.04 µg/Kg |
| Dieldrin                        | 1.34 µg/Kg      | < 1.34 µg/Kg |
| Endosulfan I                    | 9.38 µg/Kg      | < 9.38 µg/Kg |
| Endosulfan II                   | 2.68 µg/Kg      | < 2.68 µg/Kg |
| Endosulfan Sulfate              | 44.2 µg/Kg      | < 44.2 µg/Kg |
| Endrin                          | 4.02 µg/Kg      | < 4.02 µg/Kg |
| Endrin Aldehyde                 | 15.4 µg/Kg      | < 15.4 µg/Kg |



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REPORT NUMBER : D92-3067-2  
ANALYSIS METHOD : EPA 8080

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| CHLORINATED PESTICIDES AND PCBs |                              |                                |
|---------------------------------|------------------------------|--------------------------------|
| TEST REQUESTED                  | DETECTION LIMIT              | RESULTS                        |
| Heptachlor                      | 2.01 $\mu\text{g}/\text{Kg}$ | < 2.01 $\mu\text{g}/\text{Kg}$ |
| Heptachlor Epoxide              | 55.6 $\mu\text{g}/\text{Kg}$ | < 55.6 $\mu\text{g}/\text{Kg}$ |
| Methoxychlor                    | 118 $\mu\text{g}/\text{Kg}$  | < 118 $\mu\text{g}/\text{Kg}$  |
| Toxaphene                       | 161 $\mu\text{g}/\text{Kg}$  | < 161 $\mu\text{g}/\text{Kg}$  |
| Aroclor-1016                    | 6.03 $\mu\text{g}/\text{Kg}$ | < 6.03 $\mu\text{g}/\text{Kg}$ |
| Aroclor-1221                    | 6.03 $\mu\text{g}/\text{Kg}$ | < 6.03 $\mu\text{g}/\text{Kg}$ |
| Aroclor-1232                    | 6.03 $\mu\text{g}/\text{Kg}$ | < 6.03 $\mu\text{g}/\text{Kg}$ |
| Aroclor-1242                    | 6.03 $\mu\text{g}/\text{Kg}$ | < 6.03 $\mu\text{g}/\text{Kg}$ |
| Aroclor-1248                    | 6.03 $\mu\text{g}/\text{Kg}$ | < 6.03 $\mu\text{g}/\text{Kg}$ |
| Aroclor-1254                    | 6.03 $\mu\text{g}/\text{Kg}$ | < 6.03 $\mu\text{g}/\text{Kg}$ |
| Aroclor-1260                    | 6.03 $\mu\text{g}/\text{Kg}$ | < 6.03 $\mu\text{g}/\text{Kg}$ |

| QUALITY CONTROL DATA              |                             |                 |
|-----------------------------------|-----------------------------|-----------------|
| SURROGATE COMPOUND                | SPIKE LEVEL                 | SPIKE RECOVERED |
| Decachlorobiphenyl (SS)           | 6.7 $\mu\text{g}/\text{Kg}$ | 87.1 %          |
| 2,4,5,6-Tetrachloro-m-xylene (SS) | 6.7 $\mu\text{g}/\text{Kg}$ | 60.0 %          |

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REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-2  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992

| MISCELLANEOUS ANALYSES   |                 |             |
|--|-----------------|-------------|
| TEST REQUESTED   | DETECTION LIMIT | RESULTS     |
| Cyanide, Total   | 0.1 mg/Kg       | < 0.1 mg/Kg |
| Dilution Factor : 1<br>Analyzed using EPA 9010 on 31-MAR-1992 by WSJ |                 |             |
| Total Solids   | 0.01 %          | 81.5 %      |
| Analyzed using EPA 160.3 on 3-APR-1992 by KOB                        |                 |             |

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HOUSTON

DATE RECEIVED : 30-MAR-1992

REPORT NUMBER : D92-3067-3

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-3  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992

| TOTAL METALS  |                 |             |
|---|-----------------|-------------|
| TEST REQUESTED  | DETECTION LIMIT | RESULTS     |
| Silver  | 1.0 mg/Kg       | < 1.0 mg/Kg |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS   |                 |             |
| Aluminum  | 100 mg/Kg       | 9600 mg/Kg  |
| Dilution Factor : 100<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS |                 |             |
| Arsenic   | 1 mg/Kg         | 9 mg/Kg     |
| Dilution Factor : 10<br>Prepared using EPA 3010 on 31-MAR-1992 by DJL<br>Analyzed using EPA 7062 on 8-APR-1992 by GME   |                 |             |
| Barium  | 1.0 mg/Kg       | 118 mg/Kg   |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS   |                 |             |
| Beryllium   | 1.0 mg/Kg       | < 1.0 mg/Kg |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS   |                 |             |
| Calcium   | 10 mg/Kg        | 868 mg/Kg   |
| Dilution Factor : 10<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 1-APR-1992 by KJS   |                 |             |



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REPORT NUMBER : D92-3067-3

PAGE 2

| TOTAL METALS  |                 |             |
|---|-----------------|-------------|
| TEST REQUESTED  | DETECTION LIMIT | RESULTS     |
| Cadmium   | 1.0 mg/Kg       | < 1.0 mg/Kg |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS   |                 |             |
| Cobalt  | 1.0 mg/Kg       | 7.8 mg/Kg   |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS   |                 |             |
| Chromium  | 1.0 mg/Kg       | 7.0 mg/Kg   |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS   |                 |             |
| Copper  | 1.0 mg/Kg       | 10.9 mg/Kg  |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS   |                 |             |
| Iron  | 100 mg/Kg       | 16600 mg/Kg |
| Dilution Factor : 100<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS |                 |             |
| Mercury   | 0.01 mg/Kg      | 0.03 mg/Kg  |
| Dilution Factor : 1<br>Prepared using EPA 7471 on 31-MAR-1992 by DJL<br>Analyzed using EPA 7471 on 2-APR-1992 by GME    |                 |             |
| Potassium   | 1.0 mg/Kg       | 586 mg/Kg   |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 1-APR-1992 by KJS    |                 |             |
| Magnesium   | 10 mg/Kg        | 2040 mg/Kg  |
| Dilution Factor : 10<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS  |                 |             |





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REPORT NUMBER : D92-3067-3

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| TOTAL METALS  |                 |             |
|---|-----------------|-------------|
| TEST REQUESTED  | DETECTION LIMIT | RESULTS     |
| Manganese   | 1.0 mg/Kg       | 425 mg/Kg   |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS |                 |             |
| Sodium  | 1.0 mg/Kg       | 81.9 mg/Kg  |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS |                 |             |
| Nickel  | 1.0 mg/Kg       | 12.5 mg/Kg  |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS |                 |             |
| Lead  | 1.0 mg/Kg       | 8.7 mg/Kg   |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS |                 |             |
| Antimony  | 1.0 mg/Kg       | < 1.0 mg/Kg |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS |                 |             |
| Selenium  | 0.4 mg/Kg       | < 0.4 mg/Kg |
| Dilution Factor : 4<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 7740 on 1-APR-1992 by RKD  |                 |             |
| Thallium  | 1.0 mg/Kg       | < 1.0 mg/Kg |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS |                 |             |
| Vanadium  | 0.1 mg/Kg       | 20.0 mg/Kg  |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS |                 |             |

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REPORT NUMBER : D92-3067-3

PAGE 4

| TOTAL METALS  |                 |            |
|---|-----------------|------------|
| TEST REQUESTED  | DETECTION LIMIT | RESULTS    |
| Zinc  | 1.0 mg/Kg       | 32.5 mg/Kg |
| Dilution Factor : 1<br>Prepared using EPA 3050 on 31-MAR-1992 by DJL<br>Analyzed using EPA 6010 on 31-MAR-1992 by KJS |                 |            |

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HOUSTON

DATE RECEIVED : 30-MAR-1992

REPORT NUMBER : D92-3067-3

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-3  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 80.0 %  |
| Analyzed using EPA 160.3 on 3-APR-1992 by KOB |                 |         |

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DATE RECEIVED : 30-MAR-1992

REPORT NUMBER : D92-3067-4

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-4  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | 13.9 µg/Kg   |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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REPORT NUMBER : D92-3067-4  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 93.5 %          |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 104 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 100 %           |

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DATE RECEIVED : 30-MAR-1992

REPORT NUMBER : D92-3067-4

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-4  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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DATE RECEIVED : 30-MAR-1992

REPORT NUMBER : D92-3067-4

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-4  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 78.8 %  |
| Analyzed using EPA 160.3 on 3-APR-1992 by KOB |                 |         |

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DATE RECEIVED : 30-MAR-1992

REPORT NUMBER : D92-3067-5

REPORT DATE : 15-APR-1992

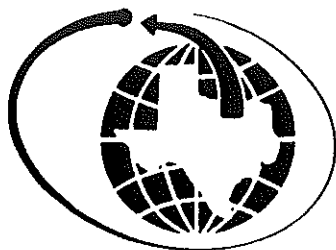
SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-5  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | 13.9 µg/Kg   |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |

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REPORT NUMBER : D92-3067-5  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

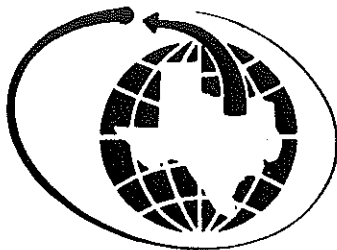
| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 95.8 %          |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 97.4 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 107 %           |

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HOUSTON

DATE RECEIVED : 30-MAR-1992

REPORT NUMBER : D92-3067-5

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-14 CME-5  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 80.6 %  |
| Analyzed using EPA 160.3 on 3-APR-1992 by KOB |                 |         |

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David R. Godwin, Ph.D.  
Chief Executive Officer



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DATE RECEIVED : 30-MAR-1992

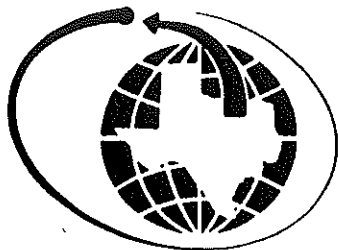
REPORT NUMBER : D92-3067-6

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-327  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 2-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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HOUSTON

REPORT NUMBER : D92-3067-6  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | < 5.0 µg/L  |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,1,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 94.6 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 97.1 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 100 %           |

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Chief Executive Officer

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DALLAS

HOUSTON

DATE RECEIVED : 30-MAR-1992

REPORT NUMBER : D92-3067-6

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-327  
PROJECT : 91-319-1 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 27-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 2-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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David R. Godwin, Ph.D.  
Chief Executive Officer



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DALLAS

HOUSTON

DATE RECEIVED: 30-MAR-1992

REPORT NUMBER: D92-3067

REPORT DATE: 15-APR-1992

SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Total Solids  
Technician: KOB  
Extraction Date: ----  
Date Analyzed: 4/3/92  
QC Date: 4/3/92  
QC Sample Number: D92-3067-2

Analysis Method: EPA 160.3  
Extraction Method: ----  
MS/MSD RPD: ----  
Average Spike Recovery: ----  
Duplicate RPD: 0.2 %  
Method Blank: ----  
Blank Spike Recovery: ----

ANALYSIS: Arsenic  
Technician: GME  
Extraction Date: 3/31/92  
Date Analyzed: 4/08/92  
QC Date: 4/08/92  
QC Sample Number: Reagent Water

Analysis Method: EPA 7062  
Extraction Method: EPA 3050  
MS/MSD RPD: 12 %  
Average Spike Recovery: 100 %  
Duplicate RPD: 4 %  
Method Blank: <0.1 mg/Kg  
Blank Spike Recovery: 102 %

ANALYSIS: Mercury  
Technician: GME  
Extraction Date: 3/31/92  
Date Analyzed: 4/02/92  
QC Date: 4/02/92  
QC Sample Number: D92-3067-3

Analysis Method: EPA 7471  
Extraction Method: EPA 7471  
MS/MSD RPD: 3.1 %  
Average Spike Recovery: 89 %  
Duplicate RPD: 0 %  
Method Blank: <0.01 mg/Kg  
Blank Spike Recovery: 95 %

ANALYSIS: Selenium  
Technician: RKD  
Extraction Date: 3/31/92  
Date Analyzed: 4/01/92  
QC Date: 4/01/92  
QC Sample Number: D92-3067-3

Analysis Method: EPA 7740  
Extraction Method: EPA 3050  
MS/MSD RPD: 5 %  
Average Spike Recovery: 97 %  
Duplicate RPD: 5 %  
Method Blank: <0.1 mg/Kg  
Blank Spike Recovery: 110 %

ANALYSIS: Silver  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2987-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 2 %  
Average Spike Recovery: 97 %  
Duplicate RPD: 16.6 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 102 %



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HOUSTON

Report Number: D92-3067

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SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Aluminum  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2973-3

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 12.2 %  
Average Spike Recovery: 91 %  
Duplicate RPD: 1 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 109 %

ANALYSIS: Barium  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2973-3

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 16.1 %  
Average Spike Recovery: 87 %  
Duplicate RPD: 1 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 103 %

ANALYSIS: Beryllium  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2987-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 1.4 %  
Average Spike Recovery: 95 %  
Duplicate RPD: 0 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 106 %

ANALYSIS: Calcium  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 4/01/92  
QC Date: 4/01/92  
QC Sample Number: D92-3145-5

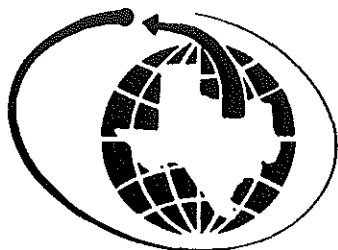
Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 1.1 %  
Average Spike Recovery: 109 %  
Duplicate RPD: 2.1 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 100 %

ANALYSIS: Cadmium  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2987-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 1 %  
Average Spike Recovery: 91 %  
Duplicate RPD: 1.3 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 94 %

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## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Cobalt  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2987-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 1 %  
Average Spike Recovery: 86 %  
Duplicate RPD: 3.1 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 108 %

ANALYSIS: Chromium  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2987-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 2.6 %  
Average Spike Recovery: 89 %  
Duplicate RPD: 15.1 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 99 %

ANALYSIS: Copper  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2987-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 1 %  
Average Spike Recovery: 82 %  
Duplicate RPD: 2 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 104 %

ANALYSIS: Iron  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2973-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 17.4 %  
Average Spike Recovery: 90 %  
Duplicate RPD: 0 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 103 %

ANALYSIS: Potassium  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 4/01/92  
QC Date: 4/01/92  
QC Sample Number: D92-3145-5

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 3.5 %  
Average Spike Recovery: 107 %  
Duplicate RPD: 3.2 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 107 %



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SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Magnesium  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2987-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 22.1 %  
Average Spike Recovery: 88 %  
Duplicate RPD: 1.6 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 105 %

ANALYSIS: Manganese  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2987-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 1.8 %  
Average Spike Recovery: 78 %  
Duplicate RPD: 1.3 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 106 %

ANALYSIS: Sodium  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 4/01/92  
QC Date: 4/01/92  
QC Sample Number: D92-3145-5

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 2.5 %  
Average Spike Recovery: 94 %  
Duplicate RPD: 4.8 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 97 %

ANALYSIS: Nickel  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2987-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 1 %  
Average Spike Recovery: 88 %  
Duplicate RPD: 2.2 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 107 %

ANALYSIS: Lead  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2987-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 5 %  
Average Spike Recovery: 82 %  
Duplicate RPD: 6.5 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 101 %

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## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Antimony  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2973-3

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 18.9 %  
Average Spike Recovery: 87 %  
Duplicate RPD: 0 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 99 %

ANALYSIS: Thallium  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2987-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 7.2 %  
Average Spike Recovery: 86 %  
Duplicate RPD: 0 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 102 %

ANALYSIS: Vanadium  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2987-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 1.2 %  
Average Spike Recovery: 80 %  
Duplicate RPD: 1.3 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 102 %

ANALYSIS: Zinc  
Technician: KJS  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2987-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3050  
MS/MSD RPD: 3.2 %  
Average Spike Recovery: 84 %  
Duplicate RPD: 0.2 %  
Method Blank: <1.0 mg/Kg  
Blank Spike Recovery: 106 %

ANALYSIS: Reactive Cyanide  
Technician: WSJ  
Extraction Date: 3/31/92  
Date Analyzed: 3/31/92  
QC Date: 3/31/92  
QC Sample Number: D92-2725-16

Analysis Method: EPA 9010  
Extraction Method: EPA 9010  
MS/MSD RPD: 3.1 %  
Average Spike Recovery: 106 %  
Duplicate RPD: 0 %  
Method Blank: <0.01 mg/Kg  
Blank Spike Recovery: 110 %



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Report Number: D92-3067

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## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Gamma-BHC (Lindane)      Analysis Method: EPA 8080  
Technician: RLP      Extraction Method: EPA 3540  
Extraction Date: 4/03/92      MS/MSD RPD: \*  
Date Analyzed: 4/14/92      Average Spike Recovery: \*  
QC Date: 4/14/92      Duplicate RPD: ----  
QC Sample Number: D92-3161-3      Method Blank: <2.7 µg/Kg  
Blank Spike Recovery: 121 %

ANALYSIS: Heptachlor      Analysis Method: EPA 8080  
Technician: RLP      Extraction Method: EPA 3540  
Extraction Date: 4/03/92      MS/MSD RPD: \*  
Date Analyzed: 4/14/92      Average Spike Recovery: \*  
QC Date: 4/14/92      Duplicate RPD: ----  
QC Sample Number: D92-3161-3      Method Blank: <2.0 µg/Kg  
Blank Spike Recovery: 108 %

ANALYSIS: Aldrin      Analysis Method: EPA 8080  
Technician: RLP      Extraction Method: EPA 3540  
Extraction Date: 4/03/92      MS/MSD RPD: \*  
Date Analyzed: 4/14/92      Average Spike Recovery: \*  
QC Date: 4/14/92      Duplicate RPD: ----  
QC Sample Number: D92-3161-3      Method Blank: <2.7 µg/Kg  
Blank Spike Recovery: 99.4 %

ANALYSIS: Dieldrin      Analysis Method: EPA 8080  
Technician: RLP      Extraction Method: EPA 3540  
Extraction Date: 4/03/92      MS/MSD RPD: \*  
Date Analyzed: 4/14/92      Average Spike Recovery: \*  
QC Date: 4/14/92      Duplicate RPD: ----  
QC Sample Number: D92-3161-3      Method Blank: <1.3 µg/Kg  
Blank Spike Recovery: 97.4 %

ANALYSIS: Endrin      Analysis Method: EPA 8080  
Technician: RLP      Extraction Method: EPA 3540  
Extraction Date: 4/03/92      MS/MSD RPD: \*  
Date Analyzed: 4/14/92      Average Spike Recovery: \*  
QC Date: 4/14/92      Duplicate RPD: ----  
QC Sample Number: D92-3161-3      Method Blank: <4.0 µg/Kg  
Blank Spike Recovery: 108 %

\* Matrix Interference

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HOUSTON

Report Number: D92-3067

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SUBMITTED BY: Burns & McDonnell

LABORATORY ANALYSIS  
QUALITY CONTROL REPORT

|                              |  |
|------------------------------|--|
| ANALYSIS: PP-DDT             | Analysis Method: EPA 8080                  |
| Technician: RLP              | Extraction Method: EPA 3540                |
| Extraction Date: 4/03/92     | MS/MSD RPD: *                              |
| Date Analyzed: 4/14/92       | Average Spike Recovery: *                  |
| QC Date: 4/14/92             | Duplicate RPD: ----                        |
| QC Sample Number: D92-3161-3 | Method Blank: <8.0 $\mu\text{g}/\text{Kg}$ |
|                              | Blank Spike Recovery: 102 %                |

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215  
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: NDRC-DALLAS

Lab Code: H9002

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/08/92

Matrix Spike - EPA Sample No.: D92-3047-01

Level: (low/med) low

| COMPOUND           | SPIKE ADDED (ug/Kg) | SAMPLE CONCENTRATION (ug/Kg) | MS CONCENTRATION (ug/Kg) | MS % REC # | QC LIMITS REC. |
|--------------------|---------------------|------------------------------|--------------------------|------------|----------------|
| 1,1-Dichloroethene | 100.0               | 0.00                         | 88.59                    | 88.6       | 59-172         |
| Trichloroethene    | 100.0               | 0.00                         | 96.26                    | 96.3       | 62-137         |
| Benzene            | 100.0               | 0.00                         | 108.38                   | 108        | 66-142         |
| Toluene            | 100.0               | 0.00                         | 102.53                   | 103        | 59-139         |
| Chlorobenzene      | 100.0               | 0.00                         | 104.15                   | 104        | 60-133         |

| COMPOUND           | SPIKE ADDED (ug/Kg) | MSD CONCENTRATION (ug/Kg) | MSD % REC # | % RPD # | QC LIMITS RPD REC. |
|--------------------|---------------------|---------------------------|-------------|---------|--------------------|
| 1,1-Dichloroethene | 100.0               | 85.82                     | 85.8        | 3       | 22   59-172        |
| Trichloroethene    | 100.0               | 91.77                     | 91.8        | 5       | 24   62-137        |
| Benzene            | 100.0               | 100.32                    | 100         | 8       | 21   66-142        |
| Toluene            | 100.0               | 102.44                    | 102         | 0       | 21   59-139        |
| Chlorobenzene      | 100.0               | 99.45                     | 99.5        | 5       | 21   60-133        |

\* Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

## SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: 1234-56

Lab Code: HP001

Case No.: AD-76

SAS No. E 4/03/92

SDG No. A 4/8/92

Matrix Spike - EPA Sample No.: 3204-1

Level: (low/med) LOW

| COMPOUND                 | SPIKE<br>ADDED<br>(ug/Kg) | SAMPLE<br>CONCENTRATION<br>(ug/Kg) | MS<br>CONCENTRATION<br>(ug/Kg) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|--------------------------|---------------------------|------------------------------------|--------------------------------|------------------|----------------------|
| Phenol                   | 3330.00                   | 0.00                               | 1920.00                        | 58               | 126-90               |
| 2-Chlorophenol           | 3330.00                   | 0.00                               | 1930.00                        | 58               | 125-102              |
| 1,4-Dichlorobenzene      | 1670.00                   | 0.00                               | 780.00                         | 47               | 128-104              |
| N-Nitroso-di-n-prop. (1) | 1670.00                   | 0.00                               | 1060.00                        | 63               | 141-126              |
| 1,2,4-Trichlorobenzene   | 1670.00                   | 0.00                               | 750.00                         | 45               | 138-107              |
| 4-Chloro-3-methylphenol  | 3330.00                   | 0.00                               | 1910.00                        | 57               | 126-103              |
| Acenaphthene             | 1670.00                   | 0.00                               | 810.00                         | 49               | 131-137              |
| 4-Nitrophenol            | 3330.00                   | 0.00                               | 1490.00                        | 45               | 111-114              |
| 2,4-Dinitrotoluene       | 1670.00                   | 0.00                               | 820.00                         | 49               | 128-89               |
| Pentachlorophenol        | 3330.00                   | 0.00                               | 2310.00                        | 69               | 117-109              |
| Pyrene                   | 1670.00                   | 0.00                               | 560.00                         | 34 *             | 135-142              |

| COMPOUND                 | SPIKE<br>ADDED<br>(ug/Kg) | MSD<br>CONCENTRATION<br>(ug/Kg) | MSD<br>%<br>REC # | MSD<br>%<br>RPD # | QC<br>LIMITS<br>RPD | REC.    |
|--------------------------|---------------------------|---------------------------------|-------------------|-------------------|---------------------|---------|
| Phenol                   | 3330.00                   | 1730.00                         | 52                | 10                | 35                  | 126-90  |
| 2-Chlorophenol           | 3330.00                   | 1850.00                         | 56                | 3                 | 50                  | 125-102 |
| 1,4-Dichlorobenzene      | 1670.00                   | 830.00                          | 50                | 6                 | 27                  | 128-104 |
| N-Nitroso-di-n-prop. (1) | 1670.00                   | 940.00                          | 57                | 10                | 38                  | 141-126 |
| 1,2,4-Trichlorobenzene   | 1670.00                   | 860.00                          | 52                | 14                | 23                  | 138-107 |
| 4-Chloro-3-methylphenol  | 3330.00                   | 1860.00                         | 56                | 1                 | 33                  | 126-103 |
| Acenaphthene             | 1670.00                   | 810.00                          | 49                | 0                 | 19                  | 131-137 |
| 4-Nitrophenol            | 3330.00                   | 2120.00                         | 64                | 34                | 50                  | 111-114 |
| 2,4-Dinitrotoluene       | 1670.00                   | 860.00                          | 51                | 4                 | 47                  | 128-89  |
| Pentachlorophenol        | 3330.00                   | 2290.00                         | 69                | 0                 | 47                  | 117-109 |
| Pyrene                   | 1670.00                   | 510.00                          | 31 *              | 9                 | 36                  | 135-142 |

(1) N-Nitroso-di-n-propylamine

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 11 outside limits

Spike Recovery: 2 out of 22 outside limits

COMMENTS: SW-846 EPA METHOD 8270



US EPA ARCHIVE DOCUMENT

REPORT PO-WCI-001

ORIGINAL

CASE NARRATIVE REQUIRED  
**Chemical Analysis And Chain Of Custody Record**

EMPLOYEE - OWNED  
**Burns & McDonnell**  
 ENGINEERS - ARCHITECTS - CONSULTANTS  
 4800 East 63rd Street  
 Kansas City, MO 64130  
 (816) 333-4375

Client : \_\_\_\_\_  
 Address : \_\_\_\_\_  
 City, State, Zip : \_\_\_\_\_  
 Telephone : \_\_\_\_\_  
 Attention : BILL WELLS

Laboratory : NDRC LABS, INC  
 Address : 1101 COMMERCE DRIVE  
 City, State, Zip : RICHMOND, TN 37804  
 Telephone : 248-238-5591  
 Laboratory Reference Number : \_\_\_\_\_

**VOLATILES**

Document Control No. : 32792  
 (NA If Not Applicable)

| Project Number                               |                  | Project Name   |              |        |       | Number of Containers | Analysis |       |         |            |         |                | Lab Sample Number |         |
|--|------------------|----------------|--------------|--------|-------|----------------------|----------|-------|---------|------------|---------|----------------|-------------------|---------|
| <u>91-319-1</u>                              |                  | <u>EGG KTA</u> |              |        |       |                      | VOC      | SVOC  | CYANIDE | PEST. PCBs | MERCURY | OTHER METALS   |                   | Remarks |
| Station Number                               | Station Location | Date           | Time         | Liquid | Solid |                      | Gas      | Comp. | Grab    |            |         |                |                   |         |
| Sampler(s) <u>Bob Clark / Shawn Stattery</u> |                  |                |              |        |       |                      |          |       |         |            |         |                |                   |         |
| <u>GMW-14</u>                                | <u>CME-1</u>     | <u>3/27/92</u> | <u>2:55P</u> | X      |       |                      |          | X     |         |            |         | <u>250ml</u>   | <u>3067</u>       |         |
| <u>GMW-14</u>                                | <u>CME-2</u>     | <u>3/27/92</u> | <u>2:55P</u> | X      |       |                      |          | X     |         | X          |         | <u>250ml</u>   | <u>2</u>          |         |
| <u>GMW-14</u>                                | <u>CME-3</u>     | <u>3/27/92</u> | <u>3:06P</u> | X      |       |                      |          | X     |         | X          |         | <u>250ml</u>   | <u>3</u>          |         |
| <u>GMW-14</u>                                | <u>CME-4</u>     | <u>3/27/92</u> | <u>3:24P</u> | X      |       |                      |          | X     | X       |            |         | <u>250ml</u>   | <u>4</u>          |         |
| <u>GMW-14</u>                                | <u>CME-5</u>     | <u>3/27/92</u> | <u>4:09P</u> | X      |       |                      |          | X     | X       |            |         | <u>250ml</u>   | <u>5</u>          |         |
| <u>-</u>                                     | <u>TB-327</u>    | <u>3/27/92</u> |              | X      |       |                      |          |       |         |            |         | <u>2-40ml.</u> | <u>6</u>          |         |

Due 4-9-92  
Soil  
1-250ml  
WIG &  
G. CME-19  
 Remarks

1. Relinquished By : (Signature) Bob Clark Date/Time 3/27/92 2:55P Received By : (Signature) \_\_\_\_\_ Date/Time \_\_\_\_\_  
 2. Relinquished By : (Signature) \_\_\_\_\_ Date/Time \_\_\_\_\_ Received By : (Signature) \_\_\_\_\_ Date/Time \_\_\_\_\_  
 3. Relinquished By : (Signature) \_\_\_\_\_ Date/Time \_\_\_\_\_ Received By Laboratory : (Signature) Collin Baker Date/Time/D. 3/28/92 Remarks NO DISPOSAL FEE!



**LABORATORY  
REPORT  
NUMBER**

**D92-3164**



# NDRC LABORATORIES, INC.

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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED: 1-APR-1992

REPORT NUMBER: D92-3164-1-7

REPORT DATE: 20-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis  
  
PROJECT : 91-319-1  
  
DATE SAMPLED : 31-MAR-1992


---

## CASE NARRATIVE COMMENTS:

No unusual problems were encountered during the sample analysis for this project.

Please refer to the attached Case Narrative Summary for a comparison of sample identifications and analytical requests.

NDRC Laboratories, Inc.

  
Belinda Feuerbacher  
Project Manager

CUSTOMER : Burns & McDonnell  
PROJECT : 91-319-1

=====

SAMPLE ID : D92-3164-1            DATE SAMPLED : 31-MAR-1992  
ID MARKS : SB-3 CME-1

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE  |
|------------|------------------|-----------------------|
| 8240_FL_S  |                  | ZJS        8-APR-1992 |
| SOLID_TPER |                  | KOB        7-APR-1992 |
| VOA_TIC    |                  | ZJS        8-APR-1992 |

=====

SAMPLE ID : D92-3164-2            DATE SAMPLED : 31-MAR-1992  
ID MARKS : SB-3 CME-2

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE  |
|------------|------------------|-----------------------|
| 8240_FL_S  |                  | ZJS        8-APR-1992 |
| SOLID_TPER |                  | KOB        7-APR-1992 |
| TOC_S      |                  | NRT        8-APR-1992 |
| VOA_TIC    |                  | ZJS        8-APR-1992 |

=====

SAMPLE ID : D92-3164-3            DATE SAMPLED : 31-MAR-1992  
ID MARKS : SB-6 CME-1

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE  |
|------------|------------------|-----------------------|
| 8240_FL_S  |                  | ZJS        8-APR-1992 |
| SOLID_TPER |                  | KOB        7-APR-1992 |
| VOA_TIC    |                  | ZJS        8-APR-1992 |

=====

SAMPLE ID : D92-3164-4            DATE SAMPLED : 31-MAR-1992  
ID MARKS : SB-6 CME-2

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE  |
|------------|------------------|-----------------------|
| 8240_FL_S  |                  | ZJS        8-APR-1992 |
| SOLID_TPER |                  | KOB        7-APR-1992 |
| TOC_S      |                  | NRT        8-APR-1992 |
| VOA_TIC    |                  | ZJS        8-APR-1992 |

=====

SAMPLE ID : D92-3164-5            DATE SAMPLED : 31-MAR-1992  
ID MARKS : SB-6 CME-3

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE  |
|------------|------------------|-----------------------|
| 8240_FL_S  |                  | ZJS        8-APR-1992 |
| SOLID_TPER |                  | KOB        7-APR-1992 |
| VOA_TIC    |                  | ZJS        8-APR-1992 |

=====

SAMPLE ID : D92-3164-6            DATE SAMPLED : 31-MAR-1992  
ID MARKS : GMW-14 RB-1

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE  |
|-----------|------------------|-----------------------|
| 8240_FL_L |                  | ZJS        7-APR-1992 |
| VOA_TIC   |                  | ZJS        7-APR-1992 |

CUSTOMER : Burns & McDonnell  
PROJECT : 91-319-1

=====

SAMPLE ID : D92-3164-7            DATE SAMPLED : 31-MAR-1992  
ID MARKS : TB-331 Trip Blank

=====

| ANALYSIS  | PRP BY | PREP DATE | ANL BY | ANALYSIS DATE |
|-----------|--------|-----------|--------|---------------|
| 8240_FL_L |        |           | ZJS    | 7-APR-1992    |
| VOA_TIC   |        |           | ZJS    | 7-APR-1992    |

=====

=====

| ANALYSIS ID | DESCRIPTION                                 |
|-------------|---|
| 8240_FL_S   | Volatile Organics, Full List, Solid Matrix  |
| SOLID_TPER  | Total Solids by OVEN                        |
| VOA_TIC     | Tentatively Identified Compounds - VOA      |
| TOC_S       | Total Organic Carbon                        |
| 8240_FL_L   | Volatile Organics, Full List, Liquid Matrix |

=====



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-1

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-3 CME-1  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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HOUSTON

REPORT NUMBER : D92-3164-1  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 94.0 %          |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 104 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 96.0 %          |

NDRCL Laboratories, Inc.

*David R. Godwin*  
David R. Godwin, Ph.D.  
Chief Executive Officer

US EPA ARCHIVE DOCUMENT



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DALLAS

HOUSTON

DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-1

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-3 CME-1  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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\_\_\_\_\_  
David R. Godwin, Ph.D.  
Chief Executive Officer



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DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-1

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-3 CME-1  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 79.3 %  |
| Analyzed using EPA 160.3 on 7-APR-1992 by KOB |                 |         |

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Chief Executive Officer





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HOUSTON

DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-2

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-3 CME-2  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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HOUSTON

REPORT NUMBER : D92-3164-2  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 95.5 %          |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 101 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 98.0 %          |

NDRC Laboratories, Inc.

*David R. Godwin*  
David R. Godwin, Ph.D.  
Chief Executive Officer



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-2  
REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-3 CME-2  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

NDRC Laboratories, Inc.

*David R. Godwin v 2*

David R. Godwin, Ph.D.  
Chief Executive Officer



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-2

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-3 CME-2  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992

| MISCELLANEOUS ANALYSES  |                 |           |
|---|-----------------|-----------|
| TEST REQUESTED  | DETECTION LIMIT | RESULTS   |
| Total Solids  | 0.01 %          | 81.7 %    |
| Analyzed using EPA 160.3 on 7-APR-1992 by KOB                       |                 |           |
| Total Organic Carbon  | 20 mg/Kg        | 585 mg/Kg |
| Dilution Factor : 1<br>Analyzed using EPA 9060 on 8-APR-1992 by NRT |                 |           |

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David R. Godwin, Ph.D.  
Chief Executive Officer



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-3

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-6 CME-1  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | 133 µg/Kg    |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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DALLAS

HOUSTON

REPORT NUMBER : D92-3164-3  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | 157 µg/Kg    |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | 1730 µg/Kg   |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 99.4 %          |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 103 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 96.0 %          |

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Chief Executive Officer



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DALLAS

HOUSTON

DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-3

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
                  : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-6 CME-1  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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DATE RECEIVED : 1-APR-1992

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REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-6 CME-1  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 81.8 %  |
| Analyzed using EPA 160.3 on 7-APR-1992 by KOB |                 |         |

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DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-4  
REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-6 CME-2  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |

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REPORT NUMBER : D92-3164-4  
ANALYSIS METHOD : EPA 8240

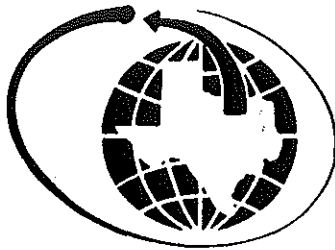
PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 91.6 %          |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 103 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 95.4 %          |

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DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-4

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-6 CME-2  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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HOUSTON

DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-4

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-6 CME-2  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992

| MISCELLANEOUS ANALYSES  |                 |           |
|---|-----------------|-----------|
| TEST REQUESTED  | DETECTION LIMIT | RESULTS   |
| Total Solids  | 0.01 %          | 78.4 %    |
| Analyzed using EPA 160.3 on 7-APR-1992 by KOB                       |                 |           |
| Total Organic Carbon  | 20 mg/Kg        | 878 mg/Kg |
| Dilution Factor : 1<br>Analyzed using EPA 9060 on 8-APR-1992 by NRT |                 |           |

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DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-5

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-6 CME-3  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | 74.4 µg/Kg   |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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REPORT NUMBER : D92-3164-5  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                       |                         |
|---------------------------|-----------------------|-------------------------|
| TEST REQUESTED            | DETECTION LIMIT       | RESULTS                 |
| 1,2-Dichloropropane       | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| cis-1,3-Dichloropropene   | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Trichloroethene           | 5.0 $\mu\text{g/Kg}$  | 19.8 $\mu\text{g/Kg}$   |
| Chlorodibromomethane      | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| 1,1,2-Trichloroethane     | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Benzene                   | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| trans-1,3-Dichloropropene | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Bromoform                 | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| 2-Chloroethylvinyl ether  | 10.0 $\mu\text{g/Kg}$ | < 10.0 $\mu\text{g/Kg}$ |
| 4-Methyl-2-pentanone      | 50.0 $\mu\text{g/Kg}$ | < 50.0 $\mu\text{g/Kg}$ |
| 2-Hexanone                | 50.0 $\mu\text{g/Kg}$ | < 50.0 $\mu\text{g/Kg}$ |
| Tetrachloroethene         | 5.0 $\mu\text{g/Kg}$  | 126 $\mu\text{g/Kg}$    |
| Toluene                   | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| 1,1,2,2-Tetrachloroethane | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Chlorobenzene             | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Ethylbenzene              | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Styrene                   | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Xylenes                   | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |

| QUALITY CONTROL DATA       |                       |                 |
|----------------------------|-----------------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL           | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 $\mu\text{g/Kg}$ | 99.0 %          |
| Toluene-d8 (SS)            | 50.0 $\mu\text{g/Kg}$ | 102 %           |
| Bromofluorobenzene (SS)    | 50.0 $\mu\text{g/Kg}$ | 97.0 %          |

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DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-5  
REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-6 CME-3  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 8-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |               |
|----------------------------------|----------------|----------|---------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT        |
| No compounds detected            |                | VOA      | 10 $\mu$ g/Kg |

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DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-5

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-6 CME-3  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 80.0 %  |
| Analyzed using EPA 160.3 on 7-APR-1992 by KOB |                 |         |

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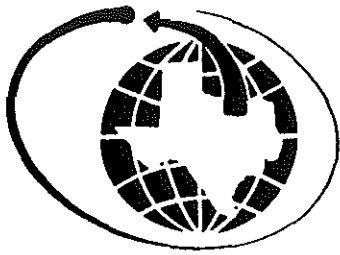
DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-6  
REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 RB-1  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 7-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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REPORT NUMBER : D92-3164-6  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | < 5.0 µg/L  |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 96.0 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 99.7 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 99.2 %          |

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*David R. Godwin*  
David R. Godwin, Ph.D.  
Chief Executive Officer



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-6

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 RB-1  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 7-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-7

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-331 Trip Blank  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 7-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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BEAUMONT

DALLAS

HOUSTON

REPORT NUMBER : D92-3164-7  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | < 5.0 µg/L  |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 96.0 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 100 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 97.8 %          |

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Chief Executive Officer

US EPA ARCHIVE DOCUMENT



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 1-APR-1992

REPORT NUMBER : D92-3164-7

REPORT DATE : 15-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
                  : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-331 Trip Blank  
PROJECT : 91-319-1  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 31-MAR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 7-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |              |
|----------------------------------|----------------|----------|--------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT       |
| No compounds detected            |                | VOA      | 10 $\mu$ g/L |

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DALLAS

HOUSTON

DATE RECEIVED: 1-APR-1992

REPORT NUMBER: D92-3164

REPORT DATE: 15-APR-1992

SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Total Solids  
Technician: KOB  
Extraction Date: ----  
Date Analyzed: 4/7/92  
QC Date: 4/7/92  
QC Sample Number: D92-3164-4

Analysis Method: EPA 160.3  
Extraction Method: ----  
MS/MSD RPD: ----  
Average Spike Recovery: ----  
Duplicate RPD: 0.3 %  
Method Blank: ----  
Blank Spike Recovery: ----

ANALYSIS: TOC  
Technician: WSD/LU  
Extraction Date: ----  
Date Analyzed: 4/8/92  
QC Date: 4/8/92  
QC Sample Number: Seasand

Analysis Method: EPA 9060  
Extraction Method: ----  
MS/MSD RPD: 7.6 %  
Average Spike Recovery: 91 %  
Duplicate RPD: ----  
Method Blank: <20 mg/Kg  
Blank Spike Recovery: 110 %

US EPA ARCHIVE DOCUMENT

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: NDRC-DALLAS

Lab Code: HP001

Case No.: AD-76

SAS No.: SHEN

SUB No.: 04/08/92

Matrix spike - EPA Sample No.: D92-3164-02

Level: (low/med) low

| COMPOUND           | SPIKE ADDED (ug/Kg) | SAMPLE CONCENTRATION (ug/Kg) | MS CONCENTRATION (ug/kg) | MS % REC # | QC LIMITS REC. |
|--------------------|---------------------|------------------------------|--------------------------|------------|----------------|
| 1,1-Dichloroethene | 100.0               | 0.00                         | 90.81                    | 90.8       | 59-172         |
| Trichloroethene    | 100.0               | 0.00                         | 102.08                   | 102        | 62-137         |
| Benzene            | 100.0               | 0.00                         | 104.46                   | 104        | 66-142         |
| Toluene            | 100.0               | 0.00                         | 106.32                   | 106        | 59-139         |
| Chlorobenzene      | 100.0               | 0.00                         | 105.48                   | 105        | 60-133         |

| COMPOUND           | SPIKE ADDED (ug/Kg) | MSD CONCENTRATION (ug/Kg) | MSD % REC # | % RPD # | QC LIMITS RPD REC. |
|--------------------|---------------------|---------------------------|-------------|---------|--------------------|
| 1,1-Dichloroethene | 100.0               | 82.51                     | 82.5        | 10      | 22 59-172          |
| Trichloroethene    | 100.0               | 98.99                     | 99.0        | 3       | 24 62-137          |
| Benzene            | 100.0               | 102.32                    | 102         | 2       | 21 66-142          |
| Toluene            | 100.0               | 101.74                    | 102         | 4       | 21 59-139          |
| Chlorobenzene      | 100.0               | 100.21                    | 100         | 5       | 21 60-133          |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240



# ORIGINAL

PO-WCI-001

## Request For Chemical Analysis And Chain Of Custody Record

CASE NARRATIVE  
REQUIRED

EMPLOYEE - OWNED  
**Burns & McDonnell**  
 ENGINEERS - ARCHITECTS - CONSULTANTS  
 4800 East 63rd Street  
 Kansas City, MO 64130  
 (816) 333-4375

Client : \_\_\_\_\_  
 Address : \_\_\_\_\_  
 City, State, Zip : \_\_\_\_\_  
 Telephone : \_\_\_\_\_  
 Attention : BILL WEIS

Laboratory : NDRC LABS  
 Address : 1089 E COLLINS  
 City, State, Zip : RICHMOND, VA 75001  
 Telephone : 214-238-5591  
 Laboratory Reference Number : \_\_\_\_\_

### QC REPORT

### VOLATILES

Due 4-13-92

Project Number 91-319-1 Project Name EGLKTA

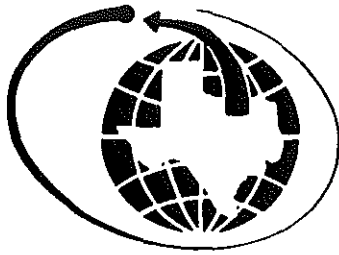
Sampler(s) (Signature) Paul R. Clark / Shawn Sletten

| Station Number      | Station Location | Date    | Time | Sample Type |       |     |       |      | Number of Containers | Analysis | Remarks               | Lab Sample Number |
|---------------------|------------------|---------|------|-------------|-------|-----|-------|------|----------------------|----------|-----------------------|-------------------|
|                     |                  |         |      | Liquid      | Solid | Gas | Comp. | Grab |                      |          |                       |                   |
| SB-3                | CME-1            | 3/31/92 | 1:15 |             | X     |     |       | X    | 1                    | X        | 1-250ml-GCMS          | 3164-1            |
| SB-3                | CME-2            | 3/31/92 | 2:15 |             | X     |     |       | X    | 5                    | X X      | 5 ↓ - 1-GCMS<br>2-WIC | 2                 |
| SB-6                | CME-1            | 3/31/92 | 3:00 |             | X     |     |       | X    | 1                    | X        | 1-250ml-GCMS          | 3                 |
| SB-6                | CME-2            | 3/31/92 | 3:25 |             | X     |     |       | X    | 2                    | X        | 2 ↓ - 1-GCMS<br>1-WIC | 4                 |
| SB-6                | CME-3            | 3/31/92 | 4:15 |             | X     |     |       | X    | 1                    | X        | 1-250ml-GCMS          | 5                 |
| GMW-14              | RB-1             | 3/31/92 | 8:55 | X           |       |     |       | X    | 2                    | X        | 2-UOAS-GCMS           | 6                 |
| TB-331              | TRIP BLANK       | 3/31/92 | 5:30 | X           |       |     |       | X    | 2                    | X        | ↓                     | 7                 |
| Report QC on 3164-2 |                  |         |      |             |       |     |       |      |                      |          | NO DISPOSAL           |                   |

|   |                                  |   |                                     |                                  |                           |
|---|----------------------------------|---|-------------------------------------|----------------------------------|---------------------------|
| Relinquished By : (Signature)<br><u>Paul R. Clark</u> | Date/Time<br><u>3/31/92 5:45</u> | Received By : (Signature)<br><u>B. Wilson</u> | Relinquished By : (Signature)<br>2. | Date/Time<br><u>4-1-92 11:00</u> | Received By : (Signature) |
| Relinquished By : (Signature)                         | Date/Time                        | Received By Laboratory : (Signature)          | Date/Time                           | Remarks                          |                           |

**LABORATORY  
REPORT  
NUMBER**

**D92-3227**



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED: 2-APR-1992

REPORT NUMBER: D92-3227-1-9

REPORT DATE: 22-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis  
  
PROJECT : 91-319-1 EGGKTA  
  
DATE SAMPLED : 1-APR-1992

---

## CASE NARRATIVE COMMENTS:

The initial analysis of Volatile Organics, EPA 8240, on sample D92-3227-1 was completed on April 10, 1992 using 5 grams of sample. Due to the concentrations of tetrachloroethene, the sample was re-analyzed on April 14, 1992 using a dilution of 1/25 to obtain this compound within calibration range.

The initial analysis of Volatile Organics, EPA 8240, on sample D92-3227-2 was completed on April 10, 1992 using 5 grams of sample. Due to the concentrations of tetrachloroethene, the sample was re-analyzed on April 13, 1992 using a dilution of 1/25 to obtain this compound within calibration range.

The initial analysis of Volatile Organics, EPA 8240, on sample D92-3227-3 was completed on April 10, 1992 using 5 grams of sample. Due to the concentrations of tetrachloroethene, the sample was re-analyzed on April 14, 1992 using a dilution of 1/25 to obtain this compound within calibration range.

The initial analysis of Volatile Organics, EPA 8240, on sample D92-3227-4 was completed on April 10, 1992 using 5 grams of sample. Due to the concentrations of trichloroethene and tetrachloroethene, the sample was re-analyzed on April 14, 1992 using a dilution of 1/25 to obtain this compound within calibration range.

The initial analysis of Volatile Organics, EPA 8240, on sample D92-3227-5 was completed on April 11, 1992 using 5 grams of sample. Due to the concentrations of trichloroethene and tetrachloroethene, the sample was re-analyzed on April 15, 1992 using a dilution of 1/25 to obtain this compound within calibration range.



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DALLAS

HOUSTON

DATE RECEIVED: 2-APR-1992

REPORT NUMBER: D92-3227-1-9

REPORT DATE: 22-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis  
  
PROJECT : 91-319-1 EGGKTA  
  
DATE SAMPLED : 1-APR-1992

---

## CASE NARRATIVE COMMENTS:

The initial analysis of Volatile Organics, EPA 8240, on sample D92-3227-6 was completed on April 11, 1992 using 5 grams of sample. Due to the concentrations of tetrachloroethene, the sample was re-analyzed on April 15, 1992 using a dilution of 1/100 to obtain this compound within calibration range.

The initial analysis of Volatile Organics, EPA 8240, on sample D92-3227-8 was completed on April 11, 1992 using 5 grams of sample. Due to the concentrations of vinyl chloride, the sample was re-analyzed on April 13, 1992 using a dilution of 1/25 to obtain this compound within calibration range. Due to the concentrations of trichloroethene, the sample was re-analyzed on April 15, 1992 using a dilution of 1/250 to obtain this compound within calibration range.

No unusual problems were encountered during the sample analysis for this project.

Please refer to the attached Case Narrative Summary for a comparison of sample identifications and analytical requests.

NDRC Laboratories, Inc.

Belinda Feuerbacher  
Project Manager

US EPA ARCHIVE DOCUMENT

CUSTOMER : Burns & McDonnell  
 PROJECT : 91-319-1-003 EEGKTA

=====

SAMPLE ID : D92-3227-1            DATE SAMPLED : 1-APR-1992  
 ID MARKS : GMW-15 CME-1

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS 10-APR-1992      |
| SOLID TPER |                  | KOB 8-APR-1992       |
| VOA TIC    |                  | ZJS 10-APR-1992      |

=====

SAMPLE ID : D92-3227-2            DATE SAMPLED : 1-APR-1992  
 ID MARKS : GMW-15 CME-2

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS 10-APR-1992      |
| SOLID TPER |                  | KOB 8-APR-1992       |
| VOA TIC    |                  | ZJS 10-APR-1992      |

=====

SAMPLE ID : D92-3227-3            DATE SAMPLED : 1-APR-1992  
 ID MARKS : GMW-15 CME-4

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS 10-APR-1992      |
| SOLID TPER |                  | KOB 8-APR-1992       |
| TOC S      |                  | NRT 14-APR-1992      |
| VOA TIC    |                  | ZJS 10-APR-1992      |

=====

SAMPLE ID : D92-3227-4            DATE SAMPLED : 1-APR-1992  
 ID MARKS : GMW-15 CME-7

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS 10-APR-1992      |
| SOLID TPER |                  | KOB 8-APR-1992       |
| VOA TIC    |                  | ZJS 10-APR-1992      |

=====

SAMPLE ID : D92-3227-5            DATE SAMPLED : 1-APR-1992  
 ID MARKS : GMW-15 CME-8

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS 11-APR-1992      |
| SOLID TPER |                  | KOB 8-APR-1992       |
| VOA TIC    |                  | ZJS 11-APR-1992      |

=====

SAMPLE ID : D92-3227-6            DATE SAMPLED : 1-APR-1992  
 ID MARKS : GMW-15 CME-20

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS 11-APR-1992      |
| SOLID TPER |                  | KOB 8-APR-1992       |
| VOA TIC    |                  | ZJS 11-APR-1992      |

CUSTOMER : Burns & McDonnell  
 PROJECT : 91-319-1-003 EEGKTA

=====

SAMPLE ID : D92-3227-7            DATE SAMPLED : 1-APR-1992  
 ID MARKS : GMW-12 GW-1

| ANALYSIS | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|----------|------------------|----------------------|
| 8000_S   |                  | JAW      9-APR-1992  |

=====

SAMPLE ID : D92-3227-8            DATE SAMPLED : 1-APR-1992  
 ID MARKS : GMW-14 GW-1

| ANALYSIS   | PRP BY PREP DATE    | ANL BY ANALYSIS DATE |
|------------|---------------------|----------------------|
| 8240_FL_L  |                     | ZJS      11-APR-1992 |
| 8270A_FL_L | TAP      3-APR-1992 | EMA      8-APR-1992  |
| 8270B_FL_L | TAP      3-APR-1992 | EMA      8-APR-1992  |
| ABN_TIC    |                     | EMA      8-APR-1992  |
| VOA_TIC    |                     | ZJS      11-APR-1992 |

=====

SAMPLE ID : D92-3227-9            DATE SAMPLED : 1-APR-1992  
 ID MARKS : TB-40192A

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS      13-APR-1992 |
| VOA_TIC   |                  | ZJS      13-APR-1992 |

=====

| ANALYSIS ID | DESCRIPTION                                  |
|-------------|--|
| 8240_FL_S   | Volatile Organics, Full List, Solid Matrix   |
| SOLID_TPER  | Total Solids by OVEN                         |
| VOA_TIC     | Tentatively Identified Compounds - VOA       |
| TOC_S       | Total Organic Carbon                         |
| 8000_S      | General Solvent Analysis, Solid Matrix       |
| 8240_FL_L   | Volatile Organics, Full List, Liquid Matrix  |
| 8270A_FL_L  | Acid Extractables, Full List, Liquid Matrix  |
| 8270B_FL_L  | Base-Neutral Extractables, Full List, Liquid |
| ABN_TIC     | Tentatively Identified Compounds - ABN       |

US EPA ARCHIVE DOCUMENT





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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-1

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-1  
PROJECT : 91-319-1-003 BEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | 101 µg/Kg    |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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DALLAS

HOUSTON

REPORT NUMBER : D92-3227-1  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | 69.8 µg/Kg   |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | 2300 µg/Kg   |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 99.1 %          |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 105 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 99.7 %          |

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DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-1  
REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-1  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-1  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 79.6 %  |
| Analyzed using EPA 160.3 on 8-APR-1992 by KOB |                 |         |

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DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-2  
REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-2  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | 7.2 µg/Kg    |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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REPORT NUMBER : D92-3227-2  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | 2620 µg/Kg   |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 94.7 %          |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 107 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 98.8 %          |

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DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-2

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-2  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-2  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 78.4 %  |
| Analyzed using EPA 160.3 on 8-APR-1992 by KOB |                 |         |

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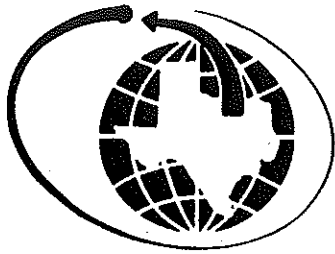
REPORT NUMBER : D92-3227-3

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-4  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | 82.2 µg/Kg   |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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REPORT NUMBER : D92-3227-3  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | 76.3 µg/Kg   |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | 1160 µg/Kg   |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 99.8 %          |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 102 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 99.0 %          |

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REPORT NUMBER : D92-3227-3

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-4  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-4  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992

| MISCELLANEOUS ANALYSES  |                 |           |
|---|-----------------|-----------|
| TEST REQUESTED  | DETECTION LIMIT | RESULTS   |
| Total Solids  | 0.01 %          | 79.3 %    |
| Analyzed using EPA 160.3 on 8-APR-1992 by KOB                         |                 |           |
| Total Organic Carbon  | 400 mg/Kg       | 940 mg/Kg |
| Dilution Factor : 20<br>Analyzed using EPA 9060 on 14-APR-1992 by NRT |                 |           |

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DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-4

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-7  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | 6.2 µg/Kg    |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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REPORT NUMBER : D92-3227-4  
ANALYSIS METHOD : EPA 8240

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| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | 840 µg/Kg    |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | 1100 µg/Kg   |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 100 %           |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 97.8 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 96.6 %          |

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Chief Executive Officer

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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-4  
REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
                          : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-7  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |                            |
|----------------------------------|----------------|----------|----------------------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT                     |
| No compounds detected            |                | VOA      | 10 $\mu\text{g}/\text{Kg}$ |

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HOUSTON

DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-4  
REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-7  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 78.2 %  |
| Analyzed using EPA 160.3 on 8-APR-1992 by KOB |                 |         |

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HOUSTON

DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-5  
REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-8  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 11-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | 18.3 µg/Kg   |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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REPORT NUMBER : D92-3227-5  
ANALYSIS METHOD : EPA 8240

PAGE 2

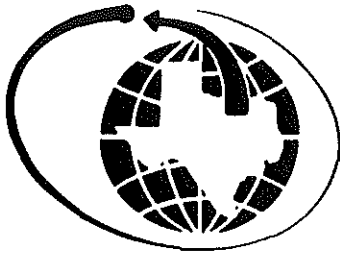
| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | 5500 µg/Kg   |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | 13400 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 103 %           |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 98.0 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 103 %           |

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Chief Executive Officer





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REPORT NUMBER : D92-3227-5  
REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
                  : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-8  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 11-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-5

REPORT DATE : 21-APR-1992

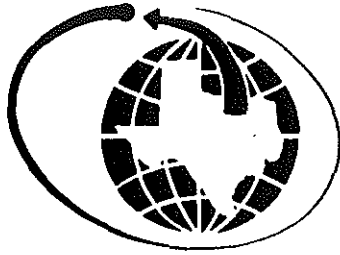
SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-8  
PROJECT : 91-319-1-003 BEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 77.3 %  |
| Analyzed using EPA 160.3 on 8-APR-1992 by KOB |                 |         |

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DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-6  
REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-20  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 11-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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REPORT NUMBER : D92-3227-6  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | 4260 µg/Kg   |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 100 %           |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 99.5 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 98.0 %          |

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Chief Executive Officer

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DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-6

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

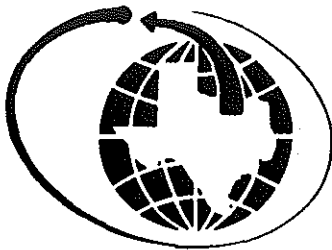
SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-20  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 11-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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REPORT NUMBER : D92-3227-6

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-15 CME-20  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 78.2 %  |
| Analyzed using EPA 160.3 on 8-APR-1992 by KOB |                 |         |

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HOUSTON

DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-7  
REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Oil  
ID MARKS : GMW-12 GW-1  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYSIS METHOD : EPA 8000  
ANALYZED BY : JAW  
ANALYZED ON : 9-APR-1992  
DILUTION FACTOR : 5

| GENERAL SOLVENT SCAN |                 |              |
|----------------------|-----------------|--------------|
| TEST REQUESTED       | DETECTION LIMIT | RESULTS      |
| Acetone              | 500 mg/Kg       | < 500 mg/Kg  |
| Benzene              | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Benzyl alcohol       | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Butanol              | 500 mg/Kg       | < 500 mg/Kg  |
| t-Butanol            | 500 mg/Kg       | < 500 mg/Kg  |
| 2-Butanone(MEK)      | 500 mg/Kg       | < 500 mg/Kg  |
| n-Butyl acetate      | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Butyl Carbitol       | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Butyl cellosolve     | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Carbon tetrachloride | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Cellosolve           | 500 mg/Kg       | < 500 mg/Kg  |
| Cellosolve acetate   | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Chlorobenzene        | 50.0 mg/Kg      | < 50.0 mg/Kg |
| m-Cresol             | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Cresols              | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Cyclohexane          | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Cyclohexanol         | 50.0 mg/Kg      | < 50.0 mg/Kg |



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REPORT NUMBER : D92-3227-7  
ANALYSIS METHOD : EPA 8000

PAGE 2

| GENERAL SOLVENT SCAN        |                 |              |
|-----------------------------|-----------------|--------------|
| TEST REQUESTED              | DETECTION LIMIT | RESULTS      |
| Cyclohexanone               | 50.0 mg/Kg      | < 50.0 mg/Kg |
| 1,2-Dichlorobenzene         | 50.0 mg/Kg      | < 50.0 mg/Kg |
| 1,3-Dichlorobenzene         | 50.0 mg/Kg      | < 50.0 mg/Kg |
| 1,4-Dichlorobenzene         | 50.0 mg/Kg      | < 50.0 mg/Kg |
| 1,2-Dichloroethene          | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Diesel fuel                 | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Ethanol                     | 500 mg/Kg       | < 500 mg/Kg  |
| Ethyl acetate               | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Ethyl benzene               | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Freon TF                    | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Gasoline                    | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Heptane                     | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Hexane                      | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Isobutanol                  | 500 mg/Kg       | < 500 mg/Kg  |
| Kerosene                    | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Medium Petroleum Distillate | 50.0 mg/Kg      | 248 mg/Kg    |
| Methanol                    | 500 mg/Kg       | < 500 mg/Kg  |
| Methyl acetate              | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Methyl cellosolve           | 500 mg/Kg       | < 500 mg/Kg  |
| Methylene chloride          | 50.0 mg/Kg      | < 50.0 mg/Kg |
| 4-Methyl-2-pentanone(MIBK)  | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Methyl isoamyl ketone       | 50.0 mg/Kg      | < 50.0 mg/Kg |
| N-Methyl-2-pyrrolidone      | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Mineral spirits             | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Naphtha                     | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Naphthalene                 | 50.0 mg/Kg      | < 50.0 mg/Kg |

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DALLAS

HOUSTON

REPORT NUMBER : D92-3227-7  
ANALYSIS METHOD : EPA 8000

PAGE 3

| GENERAL SOLVENT SCAN          |                 |              |
|-------------------------------|-----------------|--------------|
| TEST REQUESTED                | DETECTION LIMIT | RESULTS      |
| Phenol                        | 50.0 mg/Kg      | < 50.0 mg/Kg |
| 2-Propanol (IPA)              | 500 mg/Kg       | < 500 mg/Kg  |
| Propyl acetate                | 50.0 mg/Kg      | < 50.0 mg/Kg |
| n-Propylbenzene               | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Propylene Glycol Methyl Ether | 50.0 mg/Kg      | < 50.0 mg/Kg |
| PGME Acetate                  | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Stoddard solvent              | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Styrene                       | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Tetrachloroethene             | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Tetrahydrofuran               | 500 mg/Kg       | < 500 mg/Kg  |
| Toluene                       | 50.0 mg/Kg      | < 50.0 mg/Kg |
| 1,2,4-Trichlorobenzene        | 50.0 mg/Kg      | < 50.0 mg/Kg |
| 1,1,1-Trichloroethane         | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Trichloroethene               | 50.0 mg/Kg      | < 50.0 mg/Kg |
| 1,1,2-Trichloroethane         | 50.0 mg/Kg      | < 50.0 mg/Kg |
| 1,2,4-Trimethylbenzene        | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Unidentified Glycol Ethers    | 50.0 mg/Kg      | < 50.0 mg/Kg |
| Xylenes                       | 50.0 mg/Kg      | < 50.0 mg/Kg |

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David R. Godwin, Ph.D.  
Chief Executive Officer



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-8

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 GW-1  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 11-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | 1730 µg/L   |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | 21.0 µg/L   |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 17600 µg/L  |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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REPORT NUMBER : D92-3227-8  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 42500 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | 27.9 µg/L   |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 233 µg/L    |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 104 %           |
| Toluene-d8 (SS)            | 50.0 µg/L   | 106 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 98.7 %          |

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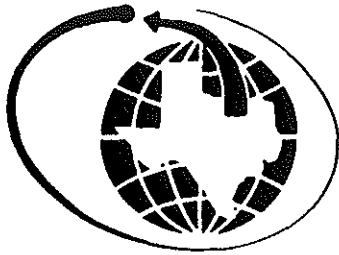
DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-8  
REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 GW-1  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
PREPARATION METHOD : EPA 3520  
PREPARED BY : TAP  
PREPARED ON : 3-APR-1992  
ANALYSIS METHOD : EPA 8270  
ANALYZED BY : EMA  
ANALYZED ON : 8-APR-1992  
DILUTION FACTOR : 1

| ACID EXTRACTABLE ORGANICS  |                 |             |
|----------------------------|-----------------|-------------|
| TEST REQUESTED             | DETECTION LIMIT | RESULTS     |
| Phenol                     | 10.0 µg/L       | < 10.0 µg/L |
| 2-Chlorophenol             | 10.0 µg/L       | < 10.0 µg/L |
| 2-Methylphenol             | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methylphenol             | 10.0 µg/L       | < 10.0 µg/L |
| 2-Nitrophenol              | 10.0 µg/L       | < 10.0 µg/L |
| 2,4-Dimethylphenol         | 10.0 µg/L       | < 10.0 µg/L |
| Benzoic acid               | 50.0 µg/L       | < 50.0 µg/L |
| 2,4-Dichlorophenol         | 10.0 µg/L       | < 10.0 µg/L |
| 4-Chloro-3-methylphenol    | 20.0 µg/L       | < 20.0 µg/L |
| 2,4,6-Trichlorophenol      | 10.0 µg/L       | < 10.0 µg/L |
| 2,4,5-Trichlorophenol      | 50.0 µg/L       | < 50.0 µg/L |
| 2,4-Dinitrophenol          | 50.0 µg/L       | < 50.0 µg/L |
| 4-Nitrophenol              | 50.0 µg/L       | < 50.0 µg/L |
| 4,6-Dinitro-2-methylphenol | 50.0 µg/L       | < 50.0 µg/L |
| Pentachlorophenol          | 50.0 µg/L       | < 50.0 µg/L |



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REPORT NUMBER : D92-3227-8  
ANALYSIS METHOD : EPA 8270

PAGE 2

| ACID EXTRACTABLE ORGANICS |                 |         |
|---------------------------|-----------------|---------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS |

| QUALITY CONTROL DATA      |                     |                 |
|---------------------------|---------------------|-----------------|
| SURROGATE COMPOUND        | SPIKE LEVEL         | SPIKE RECOVERED |
| Phenol-d5 (SS)            | 100 $\mu\text{g/L}$ | 1.9 % *         |
| 2-Fluorophenol (SS)       | 100 $\mu\text{g/L}$ | 1.1 % *         |
| 2,4,6-Tribromophenol (SS) | 100 $\mu\text{g/L}$ | 2.8 % *         |

\* Interference matrix effect

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DATE RECEIVED : 2-APR-1992

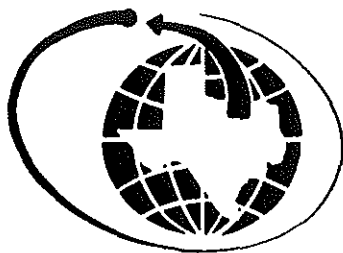
REPORT NUMBER : D92-3227-8

REPORT DATE : 21-APR-1992

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ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 GW-1  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
PREPARATION METHOD : EPA 3520  
PREPARED BY : TAP  
PREPARED ON : 3-APR-1992  
ANALYSIS METHOD : EPA 8270  
ANALYZED BY : EMA  
ANALYZED ON : 8-APR-1992  
DILUTION FACTOR : 1

| BASE-NEUTRAL EXTRACTABLE ORGANICS |                 |             |
|-----------------------------------|-----------------|-------------|
| TEST REQUESTED                    | DETECTION LIMIT | RESULTS     |
| Bis(2-chloroethyl)ether           | 10.0 µg/L       | < 10.0 µg/L |
| 1,3-Dichlorobenzene               | 10.0 µg/L       | < 10.0 µg/L |
| 1,4-Dichlorobenzene               | 10.0 µg/L       | < 10.0 µg/L |
| Benzyl alcohol                    | 20.0 µg/L       | < 20.0 µg/L |
| 1,2-Dichlorobenzene               | 10.0 µg/L       | < 10.0 µg/L |
| Bis(2-chloroisopropyl)ether       | 10.0 µg/L       | < 10.0 µg/L |
| N-Nitroso-Di-N-propylamine        | 10.0 µg/L       | < 10.0 µg/L |
| Hexachloroethane                  | 10.0 µg/L       | < 10.0 µg/L |
| Nitrobenzene                      | 10.0 µg/L       | < 10.0 µg/L |
| Isophorone                        | 10.0 µg/L       | < 10.0 µg/L |
| Bis(2-chloroethoxy)methane        | 10.0 µg/L       | < 10.0 µg/L |
| 1,2,4-Trichlorobenzene            | 10.0 µg/L       | < 10.0 µg/L |
| Naphthalene                       | 10.0 µg/L       | < 10.0 µg/L |
| 4-Chloroaniline                   | 20.0 µg/L       | < 20.0 µg/L |
| Hexachlorobutadiene               | 10.0 µg/L       | < 10.0 µg/L |



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REPORT NUMBER : D92-3227-8  
ANALYSIS METHOD : EPA 8270

PAGE 2

| BASE-NEUTRAL EXTRACTABLE ORGANICS |                 |             |
|-----------------------------------|-----------------|-------------|
| TEST REQUESTED                    | DETECTION LIMIT | RESULTS     |
| 2-Methylnaphthalene               | 10.0 µg/L       | < 10.0 µg/L |
| Hexachlorocyclopentadiene         | 10.0 µg/L       | < 10.0 µg/L |
| 2-Chloronaphthalene               | 10.0 µg/L       | < 10.0 µg/L |
| 2-Nitroaniline                    | 50.0 µg/L       | < 50.0 µg/L |
| Dimethylphthalate                 | 10.0 µg/L       | < 10.0 µg/L |
| Acenaphthylene                    | 10.0 µg/L       | < 10.0 µg/L |
| 2,6-Dinitrotoluene                | 10.0 µg/L       | < 10.0 µg/L |
| 3-Nitroaniline                    | 50.0 µg/L       | < 50.0 µg/L |
| Acenaphthene                      | 10.0 µg/L       | < 10.0 µg/L |
| Dibenzofuran                      | 10.0 µg/L       | < 10.0 µg/L |
| 2,4-Dinitrotoluene                | 10.0 µg/L       | < 10.0 µg/L |
| Diethylphthalate                  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Chlorophenylphenyl ether        | 10.0 µg/L       | < 10.0 µg/L |
| Fluorene                          | 10.0 µg/L       | < 10.0 µg/L |
| 4-Nitroaniline                    | 50.0 µg/L       | < 50.0 µg/L |
| N-Nitrosodiphenylamine            | 10.0 µg/L       | < 10.0 µg/L |
| 4-Bromophenylphenyl ether         | 10.0 µg/L       | < 10.0 µg/L |
| Hexachlorobenzene                 | 10.0 µg/L       | < 10.0 µg/L |
| Phenanthrene                      | 10.0 µg/L       | < 10.0 µg/L |
| Anthracene                        | 10.0 µg/L       | < 10.0 µg/L |
| Di-n-butylphthalate               | 10.0 µg/L       | < 10.0 µg/L |
| Fluoranthene                      | 10.0 µg/L       | < 10.0 µg/L |
| Pyrene                            | 10.0 µg/L       | < 10.0 µg/L |
| Butyl benzyl phthalate            | 10.0 µg/L       | < 10.0 µg/L |
| 3,3'-Dichlorobenzidine            | 20.0 µg/L       | < 20.0 µg/L |
| Benzo(a)anthracene                | 10.0 µg/L       | < 10.0 µg/L |

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REPORT NUMBER : D92-3227-8  
ANALYSIS METHOD : EPA 8270

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| BASE-NEUTRAL EXTRACTABLE ORGANICS |                 |             |
|-----------------------------------|-----------------|-------------|
| TEST REQUESTED                    | DETECTION LIMIT | RESULTS     |
| Chrysene                          | 10.0 µg/L       | < 10.0 µg/L |
| Bis(2-ethylhexyl)phthalate        | 10.0 µg/L       | < 10.0 µg/L |
| Di-n-octylphthalate               | 10.0 µg/L       | < 10.0 µg/L |
| Benzo(b)fluoranthene              | 10.0 µg/L       | < 10.0 µg/L |
| Benzo(k)fluoranthene              | 10.0 µg/L       | < 10.0 µg/L |
| Benzo(a)pyrene                    | 10.0 µg/L       | < 10.0 µg/L |
| Indeno(1,2,3-cd)pyrene            | 10.0 µg/L       | < 10.0 µg/L |
| Dibenzo(a,h)anthracene            | 10.0 µg/L       | < 10.0 µg/L |
| Benzo(g,h,i)perylene              | 10.0 µg/L       | < 10.0 µg/L |

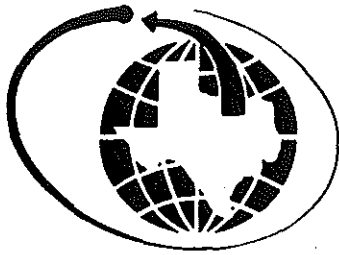
| QUALITY CONTROL DATA  |             |                 |
|-----------------------|-------------|-----------------|
| SURROGATE COMPOUND    | SPIKE LEVEL | SPIKE RECOVERED |
| Nitrobenzene-d5 (SS)  | 50.0 µg/L   | 55.3 %          |
| 2-Fluorobiphenyl (SS) | 50.0 µg/L   | 53.4 %          |
| Terphenyl-d14 (SS)    | 50.0 µg/L   | 51.0 %          |

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DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-8

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
          : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 GW-1  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYZED BY : EMA  
ANALYZED ON : 8-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| Unidentified cyclic amine        | 13.25          | ABN      | 11 µg/L |

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SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 GW-1  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 11-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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DATE RECEIVED : 2-APR-1992

REPORT NUMBER : D92-3227-9

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-40192A  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 13-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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REPORT NUMBER : D92-3227-9  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | < 5.0 µg/L  |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 100 %           |
| Toluene-d8 (SS)            | 50.0 µg/L   | 96.9 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 99.0 %          |

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ADDRESS : 4800 East 63rd Street  
                  : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-40192A  
PROJECT : 91-319-1-003 EEGKTA  
PURCHASE ORDER NO : WCI-001  
DATE SAMPLED : 1-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 13-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2  
David R. Godwin, Ph.D.  
Chief Executive Officer



# NDRC LABORATORIES, INC.

A member of Incheape Environmental

1089 East Collins Blvd., Richardson, Texas 75081 • (214) 238-5591 • FAX (214) 238-5592

BEAUMONT

DALLAS

HOUSTON

Report Number: D92-3227

Page 2 of 2

SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

|                              |                               |
|------------------------------|-------------------------------|
| ANALYSIS: O-Dichlorobenzene  | Analysis Method: EPA 8000     |
| Technician: JAW              | Extraction Method: EPA 3580   |
| Extraction Date: 4/6/92      | MS/MSD RPD: 10.2 %            |
| Date Analyzed: 4/6/92        | Average Spike Recovery: 126 % |
| QC Date: 4/6/92              | Duplicate RPD: ----           |
| QC Sample Number: D92-3290-1 | Method Blank: <0.001 %        |
|                              | Blank Spike Recovery: 119 %   |

|                              |                               |
|------------------------------|-------------------------------|
| ANALYSIS: TOC                | Analysis Method: EPA 9060     |
| Technician: NRT              | Extraction Method: EPA 9060   |
| Extraction Date: 4/14/92     | MS/MSD RPD: 0 %               |
| Date Analyzed: 4/14/92       | Average Spike Recovery: 100 % |
| QC Date: 4/14/92             | Duplicate RPD: 6.6 %          |
| QC Sample Number: H92-1475-1 | Method Blank: <20 mg/Kg       |
|                              | Blank Spike Recovery: 100 %   |

## WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: 1234-56

Lab Code: HP000

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/13/92

Matrix Spike - EPA Sample No.: D92-3227-09

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>CONCENTRATION<br>(ug/L) | MS<br>CONCENTRATION<br>(ug/L) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|--------------------|--------------------------|-----------------------------------|-------------------------------|------------------|----------------------|
| 1,1-Dichloroethene | 100.00                   | 0.00                              | 105                           | 105              | 161-145              |
| Trichloroethene    | 100.00                   | 6.30                              | 113                           | 107              | 171-120              |
| Benzene            | 100.00                   | 0.00                              | 112                           | 112              | 176-127              |
| Toluene            | 100.00                   | 0.00                              | 112                           | 112              | 176-125              |
| Chlorobenzene      | 100.00                   | 0.00                              | 116                           | 116              | 175-130              |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | MSD<br>CONCENTRATION<br>(ug/L) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD   REC. |
|--------------------|--------------------------|--------------------------------|-------------------|------------|-------------------------|
| 1,1-Dichloroethene | 100.00                   | 104                            | 104               | 1          | 14   161-145            |
| Trichloroethene    | 100.00                   | 112                            | 106               | 0.9        | 14   171-120            |
| Benzene            | 100.00                   | 109                            | 109               | 3          | 11   176-127            |
| Toluene            | 100.00                   | 110                            | 110               | 2          | 13   176-125            |
| Chlorobenzene      | 100.00                   | 113                            | 113               | 3          | 13   175-130            |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name\*New CLP Forms

Contract\*NDRC-DALLAS

Lab Code\* HP002

Case No.\* AD-76

SAS No.\* SHEN

SDG No.\* 04/15/92

Matrix Spike - EPA Sample No.\* D92-3227-06

Level\*(low/med) low

| COMPOUND           | SPIKE ADDED (ug/Kg) | SAMPLE CONCENTRATION (ug/Kg) | MS CONCENTRATION (ug/Kg) | MS % REC # | QC LIMITS REC. |
|--------------------|---------------------|------------------------------|--------------------------|------------|----------------|
| 1,1-Dichloroethene | 100.0               | 0.00                         | 87.5                     | 88         | 59-172         |
| Trichloroethene    | 100.0               | 0.00                         | 110                      | 110        | 62-137         |
| Benzene            | 100.0               | 0.00                         | 103                      | 103        | 66-142         |
| Toluene            | 100.0               | 0.00                         | 108                      | 108        | 59-139         |
| Chlorobenzene      | 100.0               | 0.00                         | 114                      | 114        | 60-133         |

| COMPOUND           | SPIKE ADDED (ug/Kg) | MSD CONCENTRATION (ug/Kg) | MSD % REC # | % RPD # | QC LIMITS RPD REC. |
|--------------------|---------------------|---------------------------|-------------|---------|--------------------|
| 1,1-Dichloroethene | 100.0               | 95.1                      | 95          | 8       | 22   59-172        |
| Trichloroethene    | 100.0               | 114                       | 114         | 4       | 24   62-137        |
| Benzene            | 100.0               | 109                       | 109         | 3       | 21   66-142        |
| Toluene            | 100.0               | 114                       | 114         | 5       | 21   59-139        |
| Chlorobenzene      | 100.0               | 117                       | 117         | 3       | 21   60-133        |

\* Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240



3A  
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: 1234-56

Lab Code: HP001

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/11/92

Matrix Spike - EPA Sample No.: D92-3363-03

| COMPOUND           | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC # | QC LIMITS REC. |
|--------------------|--------------------|-----------------------------|-------------------------|------------|----------------|
| 1,1-Dichloroethene | 100.00             | 0.00                        | 106.00                  | 106.0      | 161-145        |
| Trichloroethene    | 100.00             | 0.00                        | 108.00                  | 108.0      | 171-120        |
| Benzene            | 100.00             | 0.00                        | 98.50                   | 98.5       | 176-127        |
| Toluene            | 100.00             | 0.00                        | 96.30                   | 96.3       | 176-125        |
| Chlorobenzene      | 100.00             | 0.00                        | 107.00                  | 107.0      | 175-130        |

| COMPOUND           | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC # | % RPD # | QC LIMITS RPD REC. |
|--------------------|--------------------|--------------------------|-------------|---------|--------------------|
| 1,1-Dichloroethene | 100.00             | 98.90                    | 98.9        | 8       | 14 161-145         |
| Trichloroethene    | 100.00             | 104.00                   | 104.0       | 4       | 14 171-120         |
| Benzene            | 100.00             | 95.90                    | 95.9        | 4       | 11 176-127         |
| Toluene            | 100.00             | 94.00                    | 94.0        | 2       | 13 176-125         |
| Chlorobenzene      | 100.00             | 104.00                   | 104.0       | 3       | 13 175-130         |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

US EPA ARCHIVE DOCUMENT

## SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: NDRC-DALLAS

Lab Code: HP002

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/10/92

Matrix Spike - EPA Sample No.: D92-3464-03

Level: (low/med) low

| COMPOUND           | SPIKE<br>ADDED<br>(ug/Kg) | SAMPLE<br>CONCENTRATION<br>(ug/Kg) | MS<br>CONCENTRATION<br>(ug/Kg) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|--------------------|---------------------------|------------------------------------|--------------------------------|------------------|----------------------|
| 1,1-Dichloroethene | 100.0                     | 0.00                               | 106.00                         | 106.0            | 159-172              |
| Trichloroethene    | 100.0                     | 0.00                               | 104.00                         | 104.0            | 162-137              |
| Benzene            | 100.0                     | 0.00                               | 98.60                          | 98.6             | 166-142              |
| Toluene            | 100.0                     | 0.00                               | 100.00                         | 100.0            | 159-139              |
| Chlorobenzene      | 100.0                     | 0.00                               | 101.00                         | 101.0            | 160-133              |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/Kg) | MSD<br>CONCENTRATION<br>(ug/Kg) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD<br>REC. |
|--------------------|---------------------------|---------------------------------|-------------------|------------|--------------------------|
| 1,1-Dichloroethene | 100.0                     | 98.40                           | 98.4              | 8          | 22 159-172               |
| Trichloroethene    | 100.0                     | 101.00                          | 101.0             | 4          | 24 162-137               |
| Benzene            | 100.0                     | 98.40                           | 98.4              | 0          | 21 166-142               |
| Toluene            | 100.0                     | 96.00                           | 96.0              | 4          | 21 159-139               |
| Chlorobenzene      | 100.0                     | 100.00                          | 100.0             | 1          | 21 160-133               |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

3B  
SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: NDRC-DALLAS

Lab Code: HP001

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/13/92

Matrix Spike - EPA Sample No.: D92-3047-05

Level: (low/med) low

| COMPOUND           | SPIKE<br>ADDED<br>(ug/Kg) | SAMPLE<br>CONCENTRATION<br>(ug/Kg) | MS<br>CONCENTRATION<br>(ug/Kg) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|--------------------|---------------------------|------------------------------------|--------------------------------|------------------|----------------------|
| 1,1-Dichloroethene | 100.0                     | 0.00                               | 88.0                           | 88               | 159-172              |
| Trichloroethene    | 100.0                     | 0.00                               | 78.2                           | 78               | 162-137              |
| Benzene            | 100.0                     | 0.00                               | 98.1                           | 98               | 166-142              |
| Toluene            | 100.0                     | 0.00                               | 98.5                           | 99               | 159-139              |
| Chlorobenzene      | 100.0                     | 0.00                               | 98.2                           | 98               | 160-133              |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/Kg) | MSD<br>CONCENTRATION<br>(ug/Kg) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD   REC. |
|--------------------|---------------------------|---------------------------------|-------------------|------------|-------------------------|
| 1,1-Dichloroethene | 100.0                     | 86.6                            | 87                | 1          | 22   159-172            |
| Trichloroethene    | 100.0                     | 78.8                            | 79                | 1          | 24   162-137            |
| Benzene            | 100.0                     | 98.6                            | 99                | 1          | 21   166-142            |
| Toluene            | 100.0                     | 98.4                            | 98                | 1          | 21   159-139            |
| Chlorobenzene      | 100.0                     | 97.3                            | 97                | 1          | 21   160-133            |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

US EPA ARCHIVE DOCUMENT

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: NDRC-DALLAS

Lab Code: HP002

Case No.: AD-76

SAS No.: SHEN

SOC No.: 04/15/92

Matrix Spike - EPA Sample No.: D92-3464-07

Level: (low/med) low

| COMPOUND           | SPIKE ADDED (ug/Kg) | SAMPLE CONCENTRATION (ug/Kg) | MS CONCENTRATION (ug/Kg) | MS % REC # | QC LIMITS REC. |
|--------------------|---------------------|------------------------------|--------------------------|------------|----------------|
| 1,1-Dichloroethene | 100.0               | 0.00                         | 85.5                     | 90         | 59-172         |
| Trichloroethene    | 100.0               | 0.00                         | 96.6                     | 97         | 62-137         |
| Benzene            | 100.0               | 0.00                         | 100                      | 100        | 66-142         |
| Toluene            | 100.0               | 0.00                         | 95.8                     | 96         | 59-139         |
| Chlorobenzene      | 100.0               | 0.00                         | 94.7                     | 95         | 60-133         |

| COMPOUND           | SPIKE ADDED (ug/Kg) | MSD CONCENTRATION (ug/Kg) | MSD % REC # | % REC # | QC LIMITS REC. |
|--------------------|---------------------|---------------------------|-------------|---------|----------------|
| 1,1-Dichloroethene | 100.0               | 91.4                      | 91          | 1       | 52-152         |
| Trichloroethene    | 100.0               | 90.0                      | 90          | 7       | 24-137         |
| Benzene            | 100.0               | 95.9                      | 96          | 4       | 21-147         |
| Toluene            | 100.0               | 96.4                      | 96          | 0       | 21-139         |
| Chlorobenzene      | 100.0               | 99.5                      | 100         | 5       | 21-133         |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SA-846 EPA METHOD 8240

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: NDRC-DALLAS

Lab Code: HP001

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/15/92

( Matrix spike - EPA Sample No.: D92-5466-07 Level: (low/med) low

| COMPOUND           | SPIKE ADDED (ug/Kg) | SAMPLE CONCENTRATION (ug/Kg) | MS CONCENTRATION (ug/Kg) | MS % REC # | QC LIMITS REC. |
|--------------------|---------------------|------------------------------|--------------------------|------------|----------------|
| 1,1-Dichloroethene | 100.0               | 0.00                         | 98.2                     | 98         | 59-172         |
| Trichloroethene    | 100.0               | 0.00                         | 98.0                     | 98         | 62-137         |
| Benzene            | 100.0               | 0.00                         | 97.0                     | 97         | 66-142         |
| Toluene            | 100.0               | 0.00                         | 96.4                     | 96         | 59-139         |
| Chlorobenzene      | 100.0               | 0.00                         | 96.7                     | 97         | 60-153         |

| COMPOUND           | SPIKE ADDED (ug/Kg) | MSD CONCENTRATION (ug/Kg) | MSD % REC # | % RPD # | QC LIMITS RPD REC. |
|--------------------|---------------------|---------------------------|-------------|---------|--------------------|
| 1,1-Dichloroethene | 100.0               | 108                       | 108         | 10      | 22 59-172          |
| Trichloroethene    | 100.0               | 92.7                      | 93          | 5       | 24 62-137          |
| Benzene            | 100.0               | 96.9                      | 97          | 0       | 21 66-142          |
| Toluene            | 100.0               | 97.7                      | 98          | 2       | 21 59-139          |
| Chlorobenzene      | 100.0               | 97.4                      | 97          | 0       | 21 60-153          |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits  
 spike recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

US EPA ARCHIVE DOCUMENT

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: 1234-56

Code: HP001

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/15/92

Matrix Spike - EPA Sample No.: D92-3639-01

| COMPOUND           | SPIKE  | SAMPLE        | MS            | MS    | QC     |
|--------------------|--------|---------------|---------------|-------|--------|
|                    | ADDED  | CONCENTRATION | CONCENTRATION | %     | LIMITS |
|                    | (ug/L) | (ug/L)        | (ug/L)        | REC # | REC.   |
| 1,1-Dichloroethene | 100.0  | 0.00          | 85.3          | 85    | 61-145 |
| Trichloroethene    | 100.0  | 0.00          | 95.7          | 96    | 71-120 |
| Benzene            | 100.0  | 0.00          | 99.4          | 99    | 76-127 |
| Toluene            | 100.0  | 0.00          | 99.4          | 99    | 76-125 |
| Chlorobenzene      | 100.0  | 0.00          | 101           | 101   | 75-130 |

| COMPOUND           | SPIKE  | MSD           | MSD   |       | QC LIMITS |        |
|--------------------|--------|---------------|-------|-------|-----------|--------|
|                    | ADDED  | CONCENTRATION | %     | %     | RPD       | REC.   |
|                    | (ug/L) | (ug/L)        | REC # | RPD # |           |        |
| 1,1-Dichloroethene | 100.0  | 79.5          | 80    | 6     | 14        | 61-145 |
| Trichloroethene    | 100.0  | 92.1          | 92    | 4     | 14        | 71-120 |
| Benzene            | 100.0  | 95.6          | 96    | 3     | 11        | 76-127 |
| Toluene            | 100.0  | 96.7          | 97    | 2     | 13        | 76-125 |
| Chlorobenzene      | 100.0  | 97.1          | 97    | 4     | 13        | 75-130 |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240



Request For Chemical Analysis And Chain Of Custody Record

CASE NARRATIVE REQUIRED P.O. # WCI-001

**ORIGINAL VOLATILES**

Client: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City, State, Zip: \_\_\_\_\_  
 Telephone: \_\_\_\_\_  
 Attention: BILL WEIS

Laboratory: NDRC Laboratories, Inc.  
 Address: 1101 Commerce Drive  
 City, State, Zip: Richardson, TX 75081  
 Telephone: (214) 238-5591  
 Laboratory Reference Number: \_\_\_\_\_

Document Control No.: 40192A  
 (NA If Not Applicable)

Project Number: 91-319-1-003  
 Project Name: EGGKTA

Sampler(s) (Signature): Shawn Slattery

| Station Number | Station Location       | Date   | Time   | Sample Type |       |     |       |      | Number of Containers | Analysis | Remarks | Lab Sample Number |      |    |
|----------------|------------------------|--------|--------|-------------|-------|-----|-------|------|----------------------|----------|---------|-------------------|------|----|
|                |                        |        |        | Liquid      | Solid | Gas | Comp. | Grab |                      |          |         |                   |      |    |
| GMW-15         | <del>EME-2</del> CME-1 | 4/1/92 | 9:51A  |             | ✓     |     |       |      | ✓                    | 1        | X       | 1-250ml           | Soil | -1 |
| GMW-15         | CME-2                  | 4/1/92 | 9:59A  |             | ✓     |     |       |      | ✓                    | 1        | X       | 1-250ml           |      | 2  |
| GMW-15         | CME-4                  | 4/1/92 | 10:13A |             | ✓     |     |       |      | ✓                    | 1        | X       | 1-250ml           |      | 3  |
| GMW-15         | CME-4                  | 4/1/92 | 10:13A |             | ✓     |     |       |      | ✓                    | 1        | X       | 1-250ml           |      | 4  |
| GMW-15         | CME-7                  | 4/1/92 | 10:45A |             | ✓     |     |       |      | ✓                    | 1        | X       | 1-250ml           |      | 5  |
| GMW-15         | CME-8                  | 4/1/92 | 10:45A |             | ✓     |     |       |      | ✓                    | 1        | X       | 1-250ml           |      | 6  |
| GMW-15         | CME-20                 | 4/1/92 | 9:00A  |             | ✓     |     |       |      | ✓                    | 1        | X       | 1-250ml           |      | 7  |
| GMW-12         | GW-1                   | 4/1/92 | 12:10P | ✓           |       |     |       |      | ✓                    | 2        |         | 2-40ml            | Oil  | 8  |
| GMW-14         | GW-1                   | 4/1/92 | 10:05A | ✓           |       |     |       |      | ✓                    | 3        | X       | 2-40ml; 1-1000ml  |      | 9  |
| -              | TB-40192A              | 4/1/92 | 3:05P  | ✓           |       |     |       |      | ✓                    | 2        | X       | 2-40ml            |      | 9  |

Analysis  
 VOLATILES  
 T.O.C.  
 SEMI-VOLATILES  
 FINGERPRINT ANALYSIS  
 SOIL  
 TOXICITY  
 PCBs  
 PAHs

Due 4-14-92  
 WIC + GCMS

NODISPOSAL FEE  
 3227

|  |                               |  |  |                     |                                   |
|--|-------------------------------|--|--|---------------------|-----------------------------------|
| Relinquished By: (Signature)<br>1. <u>Shawn Slattery</u> | Date/Time<br>4/1/92<br>3:30PM | Received By: (Signature)<br><u>Colleen Baker</u> | Relinquished By: (Signature)<br>2. _____ | Date/Time<br>4-2-92 | Received By: (Signature)<br>_____ |
| Relinquished By: (Signature)<br>_____                    | Date/Time<br>_____            | Received By Laboratory: (Signature)<br>_____     | Date/Time<br>_____                       | Remarks<br>_____    |                                   |

**LABORATORY  
REPORT  
NUMBER**

**D92-3281**





# NDRC LABORATORIES, INC.

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1089 East Collins Blvd., Richardson, Texas 75081 • (214) 238-5591 • FAX (214) 238-5592

BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED: 3-APR-1992

REPORT NUMBER: D92-3281-1-24

REPORT DATE: 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

PROJECT : 91-319-1-003

DATE SAMPLED : 2-APR-1992

## CASE NARRATIVE COMMENTS:

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-1 was analyzed on April 10, 1992 using a dilution of 1/250. Due to the concentration of tetrachloroethene, the sample was re-analyzed on April 11, 1992 using a dilution of 1/5000 to obtain the compound within calibration range.

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-2 was analyzed on April 10, 1992 using 5 grams of sample. Due to the concentration of acetone, the sample was re-analyzed on April 11, 1992 using a dilution of 1/2 to obtain the compound within calibration range.

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-3 was analyzed on April 10, 1992 using a dilution of 1/25. Due to the concentration of 1,2-Dichloroethene, the sample was re-analyzed on April 11, 1992 using a dilution of 1/25 to obtain the compound within calibration range.

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-4 was analyzed on April 10, 1992 using a dilution of 1/50. Due to the concentration of tetrachloroethene, the sample was re-analyzed on April 11, 1992 using a dilution of 1/1000 to obtain the compound within calibration range.

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-5 was analyzed on April 15, 1992 using a dilution of 1/100. Due to the concentration of tetrachloroethene, the sample was re-analyzed on April 15, 1992 using a dilution of 1/1000 to obtain the compound within calibration range.

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-6 was analyzed on April 10, 1992 using a dilution of 1/250. Due to the concentration of trichloroethene, the sample was re-analyzed on April 11, 1992 using a dilution of 1/250 to obtain the compound within calibration range. Due to the concentration of tetrachloroethene, the sample was re-analyzed on April 15, 1992 using a dilution of 1/5000.



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED: 3-APR-1992

REPORT NUMBER: D92-3281-1-24

REPORT DATE: 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis  
  
PROJECT : 91-319-1-003  
  
DATE SAMPLED : 2-APR-1992

## CASE NARRATIVE COMMENTS:

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-8 was analyzed on April 12, 1992 using 5 mL. Due to the concentration of 1,2-Dichloroethene, trichloroethene and tetrachloroethene, the sample was re-analyzed on April 14, 1992 using a dilution of 1/5 to obtain these compounds within calibration range.

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-10 was analyzed on April 12, 1992 using 5 mL of sample. Due to the concentration of vinyl chloride, 1,2-Dichloroethene, and trichloroethene, the sample was re-analyzed on April 13, 1992 using a dilution of 1/50 to obtain these compounds within calibration range. The sample was also re-analyzed at a dilution of 1/100 on April 14, 1992, due to the concentrations of tetrachloroethene.

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-11 was analyzed on April 12, 1992 using 5 mL of sample. Due to the concentration of vinyl chloride, the sample was re-analyzed on April 14, 1992 using a dilution of 1/50 to obtain these compounds within calibration range. Due to the concentration detected for 1,2-dichloroethene, trichloroethene and tetrachloroethene, the sample was re-analyzed on April 14, 1992 using a dilution of 1/1000.

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-12 was analyzed on April 12, 1992 using 5 mL. Due to the concentration of 1,2-Dichloroethene and trichloroethene, the sample was re-analyzed on April 14, 1992 using a dilution of 1/1000 to obtain these compounds within calibration range.

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-13 was analyzed on April 13, 1992 using 5 mL. Due to the concentration of vinyl chloride, the sample was re-analyzed on April 13, 1992 using a dilution of 1/100 to obtain the compound within calibration range. Due to the concentration of 1,2-Dichloroethene and trichloroethene, the sample was re-analyzed on April 14, 1992 using a dilution of 1/1000.



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED: 3-APR-1992

REPORT NUMBER: D92-3281-1-24

REPORT DATE: 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis  
  
PROJECT : 91-319-1-003  
  
DATE SAMPLED : 2-APR-1992

## CASE NARRATIVE COMMENTS:

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-14 was analyzed on April 12, 1992 using 5 mL. Due to the concentration of 1,2-Dichloroethene, trichloroethene and tetrachloroethene, the sample was re-analyzed on April 13, 1992 using a dilution of 1/50 to obtain these compounds within calibration range.

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-15 was analyzed on April 12, 1992 using 5 mL. Due to the concentration of trichloroethene, the sample was re-analyzed on April 13, 1992 using a dilution of 1/5 to obtain the compound within calibration range.

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-16 was analyzed on April 12, 1992 using 5 mL. Due to the concentration of 1,2-Dichloroethene and trichloroethene, the sample was re-analyzed on April 13, 1992 using a dilution of 1/5 to obtain the compound within calibration range.

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-17 was analyzed on April 12, 1992 using 5 mL. Due to the concentration of vinyl chloride and 1,2-Dichloroethene, the sample was re-analyzed on April 14, 1992 using a dilution of 1/100 to obtain these compounds within calibration range. Due to the concentration of trichloroethene the sample was re-analyzed on April 15, 1992 using a dilution of 1/500.

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-18 was analyzed on April 12, 1992 using 5 mL. Due to the concentration of 1,2-Dichloroethene, the sample was re-analyzed on April 14, 1992 using a dilution of 1/100 to obtain the compound within calibration range. Due to the concentration of trichloroethene and tetrachloroethene sample was re-analyzed on April 15, 1992 using a dilution of 1/500.



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DALLAS

HOUSTON

DATE RECEIVED: 3-APR-1992

REPORT NUMBER: D92-3281-1-24

REPORT DATE: 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis  
PROJECT : 91-319-1-003  
DATE SAMPLED : 2-APR-1992

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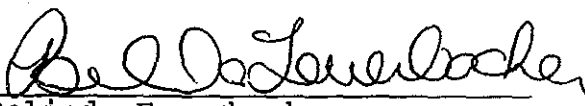
## CASE NARRATIVE COMMENTS:

The initial analysis for Volatile Organics, EPA 8240 on Sample D92-3281-20 was analyzed on April 12, 1992 using 5 mL. Due to the concentration of 1,2-Dichloroethene and trichloroethene, the sample was re-analyzed on April 14, 1992 using a dilution of 1/20 to obtain these compounds within calibration range.

No further problems were encountered during the sample analysis for this project.

Please refer to the attached Case Narrative Summary for a comparison of sample identifications and analytical requests.

NDRC Laboratories, Inc.

  
Belinda Feuerbacher  
Project Manager

CASE NARRATIVE SUMMARY

PAGE 1

CUSTOMER : Burns & McDonnell  
 PROJECT : 91-319-1-003

=====

SAMPLE ID : D92-3281-1                      DATE SAMPLED : 2-APR-1992  
 ID MARKS : SB-4 CME-1

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS      10-APR-1992 |
| SOLID TPER |                  | KOB      9-APR-1992  |
| VOA TIC    |                  | ZJS      10-APR-1992 |

=====

SAMPLE ID : D92-3281-2                      DATE SAMPLED : 2-APR-1992  
 ID MARKS : SB-4 CME-2

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS      10-APR-1992 |
| SOLID TPER |                  | KOB      9-APR-1992  |
| TOC S      |                  | WSJ      10-APR-1992 |
| VOA TIC    |                  | ZJS      10-APR-1992 |

=====

SAMPLE ID : D92-3281-3                      DATE SAMPLED : 2-APR-1992  
 ID MARKS : SB-4 CME-3

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS      10-APR-1992 |
| SOLID TPER |                  | KOB      9-APR-1992  |
| VOA TIC    |                  | ZJS      10-APR-1992 |

=====

SAMPLE ID : D92-3281-4                      DATE SAMPLED : 2-APR-1992  
 ID MARKS : SB-4 CME-4

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS      10-APR-1992 |
| SOLID TPER |                  | KOB      9-APR-1992  |
| VOA TIC    |                  | ZJS      10-APR-1992 |

=====

SAMPLE ID : D92-3281-5                      DATE SAMPLED : 2-APR-1992  
 ID MARKS : SB-4 CME-5

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS      15-APR-1992 |
| SOLID TPER |                  | KOB      9-APR-1992  |
| VOA TIC    |                  | ZJS      15-APR-1992 |

=====

SAMPLE ID : D92-3281-6                      DATE SAMPLED : 2-APR-1992  
 ID MARKS : SB-4 CME-40

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS      10-APR-1992 |
| SOLID TPER |                  | KOB      9-APR-1992  |
| VOA TIC    |                  | ZJS      10-APR-1992 |

US EPA ARCHIVE DOCUMENT

CUSTOMER : Burns & McDonnell  
PROJECT : 91-319-1-003

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SAMPLE ID : D92-3281-7                      DATE SAMPLED : 2-APR-1992  
ID MARKS : GMW-1 GW-1

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS      11-APR-1992 |
| VOA_TIC   |                  | ZJS      11-APR-1992 |

=====

SAMPLE ID : D92-3281-8                      DATE SAMPLED : 2-APR-1992  
ID MARKS : GMW-3 GW-1

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS      12-APR-1992 |
| VOA_TIC   |                  | ZJS      12-APR-1992 |

=====

SAMPLE ID : D92-3281-9                      DATE SAMPLED : 2-APR-1992  
ID MARKS : GMW-4 GW-1

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS      12-APR-1992 |
| VOA_TIC   |                  | ZJS      12-APR-1992 |

=====

SAMPLE ID : D92-3281-10                      DATE SAMPLED : 2-APR-1992  
ID MARKS : GMW-5 GW-1

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS      12-APR-1992 |
| VOA_TIC   |                  | ZJS      12-APR-1992 |

=====

SAMPLE ID : D92-3281-11                      DATE SAMPLED : 2-APR-1992  
ID MARKS : GMW-6 GW-1

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS      12-APR-1992 |
| VOA_TIC   |                  | ZJS      12-APR-1992 |

=====

SAMPLE ID : D92-3281-12                      DATE SAMPLED : 2-APR-1992  
ID MARKS : GMW-7 GW-1

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS      12-APR-1992 |
| VOA_TIC   |                  | ZJS      12-APR-1992 |



CUSTOMER : Burns & McDonnell  
PROJECT : 91-319-1-003

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|                         |                           |
|-------------------------|---------------------------|
| SAMPLE ID : D92-3281-13 | DATE SAMPLED : 2-APR-1992 |
| ID MARKS : GMW-8 GW-1   |                           |

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS 12-APR-1992      |
| VOA_TIC   |                  | ZJS 12-APR-1992      |

=====

|                         |                           |
|-------------------------|---------------------------|
| SAMPLE ID : D92-3281-14 | DATE SAMPLED : 2-APR-1992 |
| ID MARKS : GMW-9 GW-1   |                           |

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS 12-APR-1992      |
| VOA_TIC   |                  | ZJS 12-APR-1992      |

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|                         |                           |
|-------------------------|---------------------------|
| SAMPLE ID : D92-3281-15 | DATE SAMPLED : 2-APR-1992 |
| ID MARKS : GMW-10 GW-1  |                           |

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS 12-APR-1992      |
| VOA_TIC   |                  | ZJS 12-APR-1992      |

=====

|                         |                           |
|-------------------------|---------------------------|
| SAMPLE ID : D92-3281-16 | DATE SAMPLED : 2-APR-1992 |
| ID MARKS : GMW-11 GW-1  |                           |

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS 12-APR-1992      |
| VOA_TIC   |                  | ZJS 12-APR-1992      |

CUSTOMER : Burns & McDonnell  
 PROJECT : 91-319-1-003

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SAMPLE ID : D92-3281-17      DATE SAMPLED : 2-APR-1992  
 ID MARKS : GMW-14 GW-1

| ANALYSIS   | PRP BY | PREP DATE  | ANL BY | ANALYSIS DATE |
|------------|--------|------------|--------|---------------|
| 8080_L     | TAP    | 6-APR-1992 | RLP    | 8-APR-1992    |
| 8240_FL_L  |        |            | ZJS    | 12-APR-1992   |
| 8270A_FL_L | TAP    | 6-APR-1992 | TEK    | 9-APR-1992    |
| 8270B_FL_L | TAP    | 6-APR-1992 | TEK    | 9-APR-1992    |
| ABN_TIC    |        |            | TEK    | 9-APR-1992    |
| CN_TOTAL_L |        |            | WSJ    | 6-APR-1992    |
| M_AG_TUL_F | DJL    | 6-APR-1992 | RKD    | 7-APR-1992    |
| M_AL_TUL_I | DJL    | 6-APR-1992 | KJS    | 7-APR-1992    |
| M_AS_TUL_V | DJL    | 6-APR-1992 | GME    | 7-APR-1992    |
| M_BA_TUL_I | DJL    | 6-APR-1992 | KJS    | 7-APR-1992    |
| M_BE_TUL_F | DJL    | 6-APR-1992 | RKD    | 8-APR-1992    |
| M_CA_TUL_I | DJL    | 6-APR-1992 | KJS    | 9-APR-1992    |
| M_CD_TUL_F | DJL    | 6-APR-1992 | RKD    | 13-APR-1992   |
| M_CO_TUL_I | DJL    | 6-APR-1992 | KJS    | 7-APR-1992    |
| M_CR_TUL_I | DJL    | 6-APR-1992 | KJS    | 7-APR-1992    |
| M_CU_TUL_I | DJL    | 6-APR-1992 | KJS    | 7-APR-1992    |
| M_FE_TUL_I | DJL    | 6-APR-1992 | KJS    | 7-APR-1992    |
| M_HG_TUL_V | DJL    | 6-APR-1992 | GME    | 9-APR-1992    |
| M_K_TUL_I  | DJL    | 6-APR-1992 | KJS    | 9-APR-1992    |
| M_MG_TUL_I | DJL    | 6-APR-1992 | KJS    | 9-APR-1992    |
| M_MN_TUL_I | DJL    | 6-APR-1992 | KJS    | 9-APR-1992    |
| M_NA_TUL_I | DJL    | 6-APR-1992 | KJS    | 8-APR-1992    |
| M_NI_TUL_I | DJL    | 6-APR-1992 | KJS    | 7-APR-1992    |
| M_PB_TUL_F | DJL    | 6-APR-1992 | RKD    | 9-APR-1992    |
| M_SB_TUL_I | DJL    | 6-APR-1992 | KJS    | 7-APR-1992    |
| M_SE_TUL_F | DJL    | 6-APR-1992 | RKD    | 7-APR-1992    |
| M_TL_TUL_F | DJL    | 6-APR-1992 | RKD    | 8-APR-1992    |
| M_V_TUL_I  | DJL    | 6-APR-1992 | KJS    | 7-APR-1992    |
| M_ZN_TUL_I | DJL    | 6-APR-1992 | KJS    | 7-APR-1992    |
| VOA_TIC    |        |            | ZJS    | 12-APR-1992   |

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SAMPLE ID : D92-3281-18      DATE SAMPLED : 2-APR-1992  
 ID MARKS : GMW-15 GW-1

| ANALYSIS  | PRP BY | PREP DATE | ANL BY | ANALYSIS DATE |
|-----------|--------|-----------|--------|---------------|
| 8240_FL_L |        |           | ZJS    | 12-APR-1992   |
| VOA_TIC   |        |           | ZJS    | 12-APR-1992   |

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SAMPLE ID : D92-3281-19      DATE SAMPLED : 2-APR-1992  
 ID MARKS : TB-402

| ANALYSIS  | PRP BY | PREP DATE | ANL BY | ANALYSIS DATE |
|-----------|--------|-----------|--------|---------------|
| 8240_FL_L |        |           | ZJS    | 12-APR-1992   |
| VOA_TIC   |        |           | ZJS    | 12-APR-1992   |

US EPA ARCHIVE DOCUMENT



CUSTOMER : Burns & McDonnell  
 PROJECT : 91-319-1-003

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SAMPLE ID : D92-3281-20      DATE SAMPLED : 2-APR-1992  
 ID MARKS : X GW-1

| ANALYSIS  | PRP BY | PREP DATE | ANL BY | ANALYSIS DATE |
|-----------|--------|-----------|--------|---------------|
| 8240_FL_L | ZJS    |           | ZJS    | 12-APR-1992   |
| VOA_TIC   | ZJS    |           | ZJS    | 12-APR-1992   |

| ANALYSIS ID | DESCRIPTION                                   |
|-------------|---|
| 8240_FL_S   | Volatile Organics, Full List, Solid Matrix    |
| SOLID_TPER  | Total Solids by OVEN                          |
| VOA_TIC     | Tentatively Identified Compounds - VOA        |
| TOC_S       | Total Organic Carbon                          |
| 8240_FL_L   | Volatile Organics, Full List, Liquid Matrix   |
| 8080_L      | Chlorinated Pesticides/PCB, Liquid Matrix     |
| 8270A_FL_L  | Acid Extractables, Full List, Liquid Matrix   |
| 8270B_FL_L  | Base-Neutral Extractables, Full List, Liquid  |
| ABN_TIC     | Tentatively Identified Compounds - ABN        |
| CN_TOTAL_L  | Cyanide, Total, Liquid Matrix                 |
| M_AG_TUL_F  | Silver, Total, Liquid, by GFAA                |
| M_AL_TUL_I  | Aluminum, Total, Liquid by ICP in Micrograms  |
| M_AS_TUL_V  | Arsenic, Total Liquid, By GVAA in Micrograms  |
| M_BA_TUL_I  | Barium, Total, Liquid, by ICP in Micrograms   |
| M_BE_TUL_F  | Beryllium, Total, Liquid by GFAA in Microgram |
| M_CA_TUL_I  | Calcium, Total, Liquid, in Micrograms         |
| M_CD_TUL_F  | Cadmium, Total, Liquid, GFAA in Micrograms    |
| M_CO_TUL_I  | Cobalt, Total, Liquid, by ICP in Micrograms   |
| M_CR_TUL_I  | Chromium, Total, Liquid, by ICP in Micrograms |
| M_CU_TUL_I  | Copper, Total Liquid, by ICP in Micrograms    |
| M_FE_TUL_I  | Iron, Total, Liquid, by ICP in Micrograms     |
| M_HG_TUL_V  | Mercury, Total, Liquid, by GVAA in Micrograms |
| M_K_TUL_I   | Potassium, Total, Liquid, in Micrograms       |
| M_MG_TUL_I  | Magnesium, Total, Liquid, by ICP in Microgram |
| M_MN_TUL_I  | Manganese, Total, Liquid, by ICP Micrograms   |
| M_NA_TUL_I  | Sodium, Total, Liquid, ICP Micrograms         |
| M_NI_TUL_I  | Nickel, Total, Liquid, by ICP in Micrograms   |
| M_PB_TUL_F  | Lead, Total, Liquid, by ICP in Micrograms     |
| M_SB_TUL_I  | Antimony, Total in micrograms                 |
| M_SE_TUL_F  | Selenium, Total, Liquid, by GFAA in Microgram |
| M_TL_TUL_F  | Thallium, Total, Liquid, GFAA, in Micrograms  |
| M_V_TUL_I   | Vanadium, Total, Liquid, in Micrograms        |
| M_ZN_TUL_I  | Zinc, Total, Liquid, by ICP in Micrograms     |



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DATE RECEIVED : 3-APR-1992

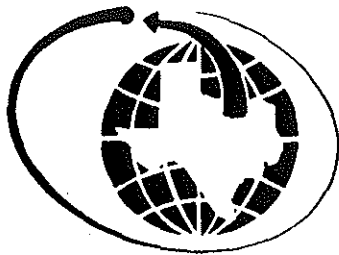
REPORT NUMBER : D92-3281-1

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992  
DILUTION FACTOR : 250

| VOLATILE ORGANICS     |                        |                          |
|-----------------------|------------------------|--------------------------|
| TEST REQUESTED        | DETECTION LIMIT        | RESULTS                  |
| Chloromethane         | 2500 $\mu\text{g/Kg}$  | < 2500 $\mu\text{g/Kg}$  |
| Bromomethane          | 2500 $\mu\text{g/Kg}$  | < 2500 $\mu\text{g/Kg}$  |
| Vinyl chloride        | 2500 $\mu\text{g/Kg}$  | < 2500 $\mu\text{g/Kg}$  |
| Chloroethane          | 2500 $\mu\text{g/Kg}$  | < 2500 $\mu\text{g/Kg}$  |
| Methylene chloride    | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| Acetone               | 25000 $\mu\text{g/Kg}$ | < 25000 $\mu\text{g/Kg}$ |
| Carbon disulfide      | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| 1,1-Dichloroethene    | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| 1,1-Dichloroethane    | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| 1,2-Dichloroethene    | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| Chloroform            | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| 1,2-Dichloroethane    | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| 2-Butanone            | 12500 $\mu\text{g/Kg}$ | < 12500 $\mu\text{g/Kg}$ |
| 1,1,1-Trichloroethane | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| Carbon tetrachloride  | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| Vinyl acetate         | 12500 $\mu\text{g/Kg}$ | < 12500 $\mu\text{g/Kg}$ |
| Bromodichloromethane  | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |



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HOUSTON

REPORT NUMBER : D92-3281-1  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                        |                          |
|---------------------------|------------------------|--------------------------|
| TEST REQUESTED            | DETECTION LIMIT        | RESULTS                  |
| 1,2-Dichloropropane       | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| cis-1,3-Dichloropropene   | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| Trichloroethene           | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| Chlorodibromomethane      | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| 1,1,2-Trichloroethane     | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| Benzene                   | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| trans-1,3-Dichloropropene | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| Bromoform                 | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| 2-Chloroethylvinyl ether  | 2500 $\mu\text{g/Kg}$  | < 2500 $\mu\text{g/Kg}$  |
| 4-Methyl-2-pentanone      | 12500 $\mu\text{g/Kg}$ | < 12500 $\mu\text{g/Kg}$ |
| 2-Hexanone                | 12500 $\mu\text{g/Kg}$ | < 12500 $\mu\text{g/Kg}$ |
| Tetrachloroethene         | 1250 $\mu\text{g/Kg}$  | 684000 $\mu\text{g/Kg}$  |
| Toluene                   | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| 1,1,2,2-Tetrachloroethane | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| Chlorobenzene             | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| Ethylbenzene              | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| Styrene                   | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |
| Xylenes                   | 1250 $\mu\text{g/Kg}$  | < 1250 $\mu\text{g/Kg}$  |

| QUALITY CONTROL DATA                   |                       |                 |
|--|-----------------------|-----------------|
| SURROGATE COMPOUND                     | SPIKE LEVEL           | SPIKE RECOVERED |
| 1,2-Dichloroethane-d <sub>4</sub> (SS) | 50.0 $\mu\text{g/Kg}$ | 97.0 %          |
| Toluene-d <sub>8</sub> (SS)            | 50.0 $\mu\text{g/Kg}$ | 103 %           |
| Bromofluorobenzene (SS)                | 50.0 $\mu\text{g/Kg}$ | 94.1 %          |

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David R. Godwin, Ph.D.  
Chief Executive Officer



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-1

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |                        |
|----------------------------------|----------------|----------|------------------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT                 |
| Nonane                           | 18.46          | VOA      | 28000 $\mu\text{g/Kg}$ |
| Dimethyloctane                   | 19.30          | VOA      | 16000 $\mu\text{g/Kg}$ |
| Propylcyclohexane                | 19.50          | VOA      | 25000 $\mu\text{g/Kg}$ |
| Dimethyl-octene                  | 20.24          | VOA      | 15000 $\mu\text{g/Kg}$ |
| Decane                           | 20.71          | VOA      | 73000 $\mu\text{g/Kg}$ |
| Ethyl-methylbenzene              | 21.03          | VOA      | 15000 $\mu\text{g/Kg}$ |
| Trimethylbenzene                 | 21.32          | VOA      | 30000 $\mu\text{g/Kg}$ |
| Methyl-methylethylbenzene        | 21.75          | VOA      | 19000 $\mu\text{g/Kg}$ |
| Diethylbenzene                   | 22.51          | VOA      | 20000 $\mu\text{g/Kg}$ |
| Methyl-propylbenzene             | 22.83          | VOA      | 7800 $\mu\text{g/Kg}$  |
| Ethyl-dimethylbenzene            | 23.00          | VOA      | 8000 $\mu\text{g/Kg}$  |

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HOUSTON

DATE RECEIVED : 3-APR-1992

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REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 83.2 %  |
| Analyzed using EPA 160.3 on 9-APR-1992 by KOB |                 |         |

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HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-2

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-2  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | 464 µg/Kg    |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | 197 µg/Kg    |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | 137 µg/Kg    |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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REPORT NUMBER : D92-3281-2  
ANALYSIS METHOD : EPA 8240

PAGE 2

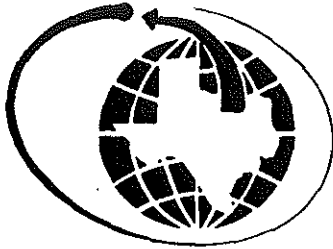
| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 99.0 %          |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 108 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 105 %           |

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HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-2

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-2  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |                     |
|----------------------------------|----------------|----------|---------------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT              |
| Nonane                           | 18.46          | VOA      | 11 $\mu\text{g/Kg}$ |
| Propylcyclohexane                | 19.49          | VOA      | 10 $\mu\text{g/Kg}$ |
| Methylethylbenzene               | 20.55          | VOA      | 38 $\mu\text{g/Kg}$ |
| Trimethylbenzene                 | 20.69          | VOA      | 37 $\mu\text{g/Kg}$ |
| Ethyl-methylbenzene              | 21.04          | VOA      | 15 $\mu\text{g/Kg}$ |
| Trimethylbenzene                 | 21.33          | VOA      | 59 $\mu\text{g/Kg}$ |
| Trimethylbenzene                 | 22.03          | VOA      | 23 $\mu\text{g/Kg}$ |

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REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
          : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-2  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992

| MISCELLANEOUS ANALYSES  |                 |            |
|---|-----------------|------------|
| TEST REQUESTED  | DETECTION LIMIT | RESULTS    |
| Total Solids  | 0.01 %          | 78.1 %     |
| Analyzed using EPA 160.3 on 9-APR-1992 by KOB                         |                 |            |
| Total Organic Carbon  | 400 mg/Kg       | 1740 mg/Kg |
| Dilution Factor : 20<br>Analyzed using EPA 9060 on 10-APR-1992 by WSJ |                 |            |

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HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-3

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-3  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | 184 µg/Kg    |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | 1100 µg/Kg   |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |

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HOUSTON

REPORT NUMBER : D92-3281-3  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | 33.4 µg/Kg   |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | 137 µg/Kg    |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 96.8 %          |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 105 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 97.4 %          |

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Chief Executive Officer

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HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-3

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-3  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |                     |
|----------------------------------|----------------|----------|---------------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT              |
| Trimethylbenzene                 | 21.32          | VOA      | 11 $\mu\text{g/Kg}$ |

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Chief Executive Officer



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REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-3  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 78.2 %  |
| Analyzed using EPA 160.3 on 9-APR-1992 by KOB |                 |         |

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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-4

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-4  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992  
DILUTION FACTOR : 50

| VOLATILE ORGANICS     |                              |                                |
|-----------------------|------------------------------|--------------------------------|
| TEST REQUESTED        | DETECTION LIMIT              | RESULTS                        |
| Chloromethane         | 500 $\mu\text{g}/\text{Kg}$  | < 500 $\mu\text{g}/\text{Kg}$  |
| Bromomethane          | 500 $\mu\text{g}/\text{Kg}$  | < 500 $\mu\text{g}/\text{Kg}$  |
| Vinyl chloride        | 500 $\mu\text{g}/\text{Kg}$  | < 500 $\mu\text{g}/\text{Kg}$  |
| Chloroethane          | 500 $\mu\text{g}/\text{Kg}$  | < 500 $\mu\text{g}/\text{Kg}$  |
| Methylene chloride    | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$  |
| Acetone               | 5000 $\mu\text{g}/\text{Kg}$ | < 5000 $\mu\text{g}/\text{Kg}$ |
| Carbon disulfide      | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$  |
| 1,1-Dichloroethene    | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$  |
| 1,1-Dichloroethane    | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$  |
| 1,2-Dichloroethene    | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$  |
| Chloroform            | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$  |
| 1,2-Dichloroethane    | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$  |
| 2-Butanone            | 2500 $\mu\text{g}/\text{Kg}$ | < 2500 $\mu\text{g}/\text{Kg}$ |
| 1,1,1-Trichloroethane | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$  |
| Carbon tetrachloride  | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$  |
| Vinyl acetate         | 2500 $\mu\text{g}/\text{Kg}$ | < 2500 $\mu\text{g}/\text{Kg}$ |
| Bromodichloromethane  | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$  |



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REPORT NUMBER : D92-3281-4  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                       |                         |
|---------------------------|-----------------------|-------------------------|
| TEST REQUESTED            | DETECTION LIMIT       | RESULTS                 |
| 1,2-Dichloropropane       | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| cis-1,3-Dichloropropene   | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| Trichloroethene           | 250 $\mu\text{g/Kg}$  | 1340 $\mu\text{g/Kg}$   |
| Chlorodibromomethane      | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| 1,1,2-Trichloroethane     | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| Benzene                   | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| trans-1,3-Dichloropropene | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| Bromoform                 | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| 2-Chloroethylvinyl ether  | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| 4-Methyl-2-pentanone      | 2500 $\mu\text{g/Kg}$ | < 2500 $\mu\text{g/Kg}$ |
| 2-Hexanone                | 2500 $\mu\text{g/Kg}$ | < 2500 $\mu\text{g/Kg}$ |
| Tetrachloroethene         | 250 $\mu\text{g/Kg}$  | 227000 $\mu\text{g/Kg}$ |
| Toluene                   | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| 1,1,2,2-Tetrachloroethane | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| Chlorobenzene             | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| Ethylbenzene              | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| Styrene                   | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| Xylenes                   | 250 $\mu\text{g/Kg}$  | 619 $\mu\text{g/Kg}$    |

| QUALITY CONTROL DATA       |                       |                 |
|----------------------------|-----------------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL           | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 $\mu\text{g/Kg}$ | 86.4 %          |
| Toluene-d8 (SS)            | 50.0 $\mu\text{g/Kg}$ | 101 %           |
| Bromofluorobenzene (SS)    | 50.0 $\mu\text{g/Kg}$ | 102 %           |

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*David R. Godwin* ✓ 2  
David R. Godwin, Ph.D.  
Chief Executive Officer



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-4

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-4  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |                      |
|----------------------------------|----------------|----------|----------------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT               |
| Decane                           | 20.73          | VOA      | 600 $\mu\text{g/Kg}$ |
| Trimethylbenzene                 | 21.32          | VOA      | 650 $\mu\text{g/Kg}$ |

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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-4

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-4  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 81.1 %  |
| Analyzed using EPA 160.3 on 9-APR-1992 by KOB |                 |         |

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DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-5

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-5  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 15-APR-1992  
DILUTION FACTOR : 100

| VOLATILE ORGANICS     |                        |                          |
|-----------------------|------------------------|--------------------------|
| TEST REQUESTED        | DETECTION LIMIT        | RESULTS                  |
| Chloromethane         | 1000 $\mu\text{g/Kg}$  | < 1000 $\mu\text{g/Kg}$  |
| Bromomethane          | 1000 $\mu\text{g/Kg}$  | < 1000 $\mu\text{g/Kg}$  |
| Vinyl chloride        | 1000 $\mu\text{g/Kg}$  | < 1000 $\mu\text{g/Kg}$  |
| Chloroethane          | 1000 $\mu\text{g/Kg}$  | < 1000 $\mu\text{g/Kg}$  |
| Methylene chloride    | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| Acetone               | 10000 $\mu\text{g/Kg}$ | < 10000 $\mu\text{g/Kg}$ |
| Carbon disulfide      | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| 1,1-Dichloroethene    | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| 1,1-Dichloroethane    | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| 1,2-Dichloroethene    | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| Chloroform            | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| 1,2-Dichloroethane    | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| 2-Butanone            | 5000 $\mu\text{g/Kg}$  | < 5000 $\mu\text{g/Kg}$  |
| 1,1,1-Trichloroethane | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| Carbon tetrachloride  | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |
| Vinyl acetate         | 5000 $\mu\text{g/Kg}$  | < 5000 $\mu\text{g/Kg}$  |
| Bromodichloromethane  | 500 $\mu\text{g/Kg}$   | < 500 $\mu\text{g/Kg}$   |



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REPORT NUMBER : D92-3281-5  
ANALYSIS METHOD : EPA 8240

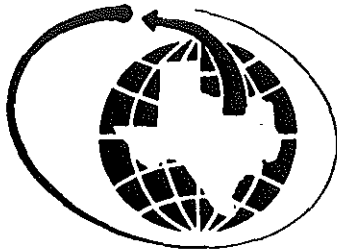
PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 500 µg/Kg       | < 500 µg/Kg  |
| cis-1,3-Dichloropropene   | 500 µg/Kg       | < 500 µg/Kg  |
| Trichloroethene           | 500 µg/Kg       | < 500 µg/Kg  |
| Chlorodibromomethane      | 500 µg/Kg       | < 500 µg/Kg  |
| 1,1,2-Trichloroethane     | 500 µg/Kg       | < 500 µg/Kg  |
| Benzene                   | 500 µg/Kg       | < 500 µg/Kg  |
| trans-1,3-Dichloropropene | 500 µg/Kg       | < 500 µg/Kg  |
| Bromoform                 | 500 µg/Kg       | < 500 µg/Kg  |
| 2-Chloroethylvinyl ether  | 1000 µg/Kg      | < 1000 µg/Kg |
| 4-Methyl-2-pentanone      | 5000 µg/Kg      | < 5000 µg/Kg |
| 2-Hexanone                | 5000 µg/Kg      | < 5000 µg/Kg |
| Tetrachloroethene         | 500 µg/Kg       | 158000 µg/Kg |
| Toluene                   | 500 µg/Kg       | < 500 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 500 µg/Kg       | < 500 µg/Kg  |
| Chlorobenzene             | 500 µg/Kg       | < 500 µg/Kg  |
| Ethylbenzene              | 500 µg/Kg       | < 500 µg/Kg  |
| Styrene                   | 500 µg/Kg       | < 500 µg/Kg  |
| Xylenes                   | 500 µg/Kg       | < 500 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 95.7 %          |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 106 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 99.1 %          |

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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-5

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
                  : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-5  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 15-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |                       |
|----------------------------------|----------------|----------|-----------------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT                |
| No compounds detected            |                | VOA      | 1000 $\mu\text{g/Kg}$ |

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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-5

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-5  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 83.0 %  |
| Analyzed using EPA 160.3 on 9-APR-1992 by KOB |                 |         |

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DATE RECEIVED : 3-APR-1992

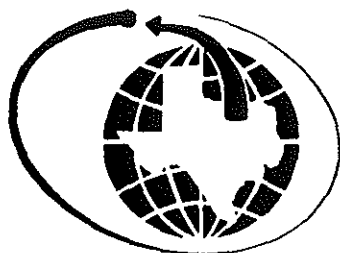
REPORT NUMBER : D92-3281-6

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-40  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | 26.4 µg/Kg   |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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REPORT NUMBER : D92-3281-6  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | 5100 µg/Kg   |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | 636000 µg/Kg |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA                   |             |                 |
|--|-------------|-----------------|
| SURROGATE COMPOUND                     | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d <sub>4</sub> (SS) | 50.0 µg/Kg  | 94.2 %          |
| Toluene-d <sub>8</sub> (SS)            | 50.0 µg/Kg  | 101 %           |
| Bromofluorobenzene (SS)                | 50.0 µg/Kg  | 117 %           |

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David R. Godwin, Ph.D.  
Chief Executive Officer



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DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-6

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-40  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |                     |
|----------------------------------|----------------|----------|---------------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT              |
| Methylheptane                    | 14.72          | VOA      | 27 $\mu\text{g/Kg}$ |
| Methylethylbenzene               | 20.57          | VOA      | 51 $\mu\text{g/Kg}$ |
| Trimethylbenzene                 | 20.73          | VOA      | 60 $\mu\text{g/Kg}$ |
| Ethyl-methylbenzene              | 21.06          | VOA      | 15 $\mu\text{g/Kg}$ |
| Trimethylbenzene                 | 21.34          | VOA      | 63 $\mu\text{g/Kg}$ |
| Trimethylbenzene                 | 22.06          | VOA      | 14 $\mu\text{g/Kg}$ |
| Methylpropylbenzene              | 22.41          | VOA      | 23 $\mu\text{g/Kg}$ |
| Diethylbenzene                   | 22.53          | VOA      | 24 $\mu\text{g/Kg}$ |
| Undecane                         | 22.75          | VOA      | 18 $\mu\text{g/Kg}$ |
| Dihydro-methyl-1H-indene         | 24.64          | VOA      | 12 $\mu\text{g/Kg}$ |

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US EPA ARCHIVE DOCUMENT





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DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-6

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : SB-4 CME-40  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992

| MISCELLANEOUS ANALYSES                        |                 |         |
|---|-----------------|---------|
| TEST REQUESTED                                | DETECTION LIMIT | RESULTS |
| Total Solids                                  | 0.01 %          | 82.8 %  |
| Analyzed using EPA 160.3 on 9-APR-1992 by KOB |                 |         |

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DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-7

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-1 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 11-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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REPORT NUMBER : D92-3281-7  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | < 5.0 µg/L  |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 97.4 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 103 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 95.9 %          |

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Chief Executive Officer



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1089 East Collins Blvd., Richardson, Texas 75081 • (214) 238-5591 • FAX (214) 238-5592

BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-7

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-1 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 11-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2  
David R. Godwin, Ph.D.  
Chief Executive Officer



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DATE RECEIVED : 3-APR-1992

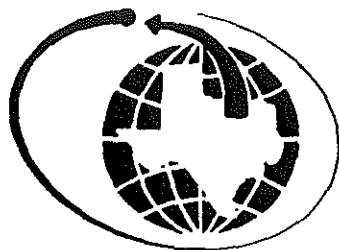
REPORT NUMBER : D92-3281-8

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-3 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | 31.4 µg/L   |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 1430 µg/L   |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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REPORT NUMBER : D92-3281-8  
ANALYSIS METHOD : EPA 8240

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| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 963 µg/L    |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 62.0 µg/L   |
| Toluene                   | 5.0 µg/L        | 9.3 µg/L    |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 98.4 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 107 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 100 %           |

NDRC Laboratories, Inc.

*David R. Godwin*  
David R. Godwin, Ph.D.  
Chief Executive Officer



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HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-8

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-3 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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Chief Executive Officer



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HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-9

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-4 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |





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REPORT NUMBER : D92-3281-9  
ANALYSIS METHOD : EPA 8240

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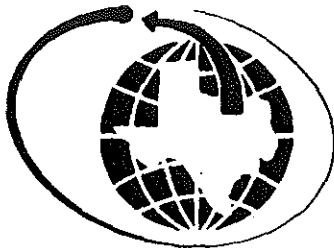
| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | < 5.0 µg/L  |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA                   |             |                 |
|--|-------------|-----------------|
| SURROGATE COMPOUND                     | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d <sub>4</sub> (SS) | 50.0 µg/L   | 100 %           |
| Toluene-d <sub>8</sub> (SS)            | 50.0 µg/L   | 108 %           |
| Bromofluorobenzene (SS)                | 50.0 µg/L   | 99.5 %          |

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*David R. Godwin*  
David R. Godwin, Ph.D.  
Chief Executive Officer

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HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-9

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-4 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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\_\_\_\_\_  
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HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-10

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-5 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | 2320 µg/L   |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | 10.0 µg/L   |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 3540 µg/L   |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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REPORT NUMBER : D92-3281-10  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 2810 µg/L   |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 24400 µg/L  |
| Toluene                   | 5.0 µg/L        | 17.1 µg/L   |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 115 %           |
| Toluene-d8 (SS)            | 50.0 µg/L   | 107 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 98.2 %          |

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Chief Executive Officer

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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-10

REPORT DATE : 21-APR-1992

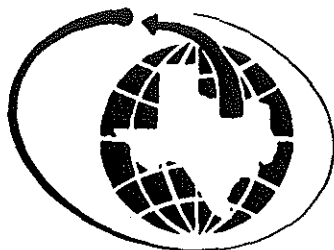
SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-5 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| Tetrahydrofuran                  | 9.04           | VOA      | 24 µg/L |

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2  
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HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-11

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-6 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | 801 µg/L    |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | 79.8 µg/L   |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | 266 µg/L    |
| 1,1-Dichloroethane    | 5.0 µg/L        | 92.2 µg/L   |
| 1,2-Dichloroethene    | 5.0 µg/L        | 35700 µg/L  |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | 5.1 µg/L    |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | 111 µg/L    |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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HOUSTON

REPORT NUMBER : D92-3281-11  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 54600 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | 29.2 µg/L   |
| Benzene                   | 5.0 µg/L        | 8.6 µg/L    |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 88700 µg/L  |
| Toluene                   | 5.0 µg/L        | 27.5 µg/L   |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 108 %           |
| Toluene-d8 (SS)            | 50.0 µg/L   | 108 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 94.2 %          |

NDRC Laboratories, Inc.

*David R. Godwin*  
David R. Godwin, Ph.D.  
Chief Executive Officer



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-11

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
          : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-6 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| Isopropanol                      | 5.35           | VOA      | 23 µg/L |
| 1,1,1,2-Tetrachloroethane        | 17.36          | VOA      | 22 µg/L |

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2  
\_\_\_\_\_  
David R. Godwin, Ph.D.  
Chief Executive Officer





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DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-12

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-7 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | 31.8 µg/L   |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 573 µg/L    |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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REPORT NUMBER : D92-3281-12  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 3360 µg/L   |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 10.2 µg/L   |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 103 %           |
| Toluene-d8 (SS)            | 50.0 µg/L   | 111 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 101 %           |

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David R. Godwin, Ph.D.  
Chief Executive Officer

US EPA ARCHIVE DOCUMENT



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HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-12

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

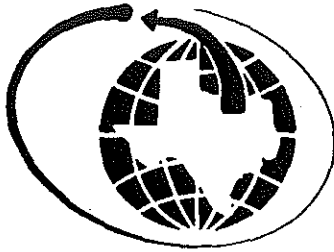
SAMPLE MATRIX : Liquid  
ID MARKS : GMW-7 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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Chief Executive Officer

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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-13

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-8 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | 9910 µg/L   |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | 73.2 µg/L   |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 113000 µg/L |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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REPORT NUMBER : D92-3281-13  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | 17.3 µg/L   |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 111000 µg/L |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | 136 µg/L    |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 13.3 µg/L   |
| Toluene                   | 5.0 µg/L        | 22.9 µg/L   |
| 1,1,1,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 110 %           |
| Toluene-d8 (SS)            | 50.0 µg/L   | 108 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 102 %           |

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Chief Executive Officer



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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-13

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-8 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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Chief Executive Officer



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DATE RECEIVED : 3-APR-1992

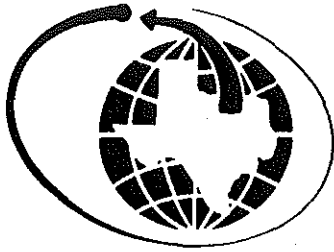
REPORT NUMBER : D92-3281-14

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-9 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 686 µg/L    |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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REPORT NUMBER : D92-3281-14  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 9250 µg/L   |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 1230 µg/L   |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA                   |             |                 |
|--|-------------|-----------------|
| SURROGATE COMPOUND                     | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d <sub>4</sub> (SS) | 50.0 µg/L   | 108 %           |
| Toluene-d <sub>8</sub> (SS)            | 50.0 µg/L   | 110 %           |
| Bromofluorobenzene (SS)                | 50.0 µg/L   | 101 %           |

NDRC Laboratories, Inc.

*David R. Godwin*  
David R. Godwin, Ph.D.  
Chief Executive Officer





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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-14

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
                  : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-9 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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Chief Executive Officer



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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-15

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-10 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 144 µg/L    |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethene | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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REPORT NUMBER : D92-3281-15  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 587 µg/L    |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 99.4 µg/L   |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 102 %           |
| Toluene-d8 (SS)            | 50.0 µg/L   | 111 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 101 %           |

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2  
David R. Godwin, Ph.D.  
Chief Executive Officer



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DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-15

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
          : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-10 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2

David R. Godwin, Ph.D.  
Chief Executive Officer



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DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-16

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-11 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 2420 µg/L   |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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HOUSTON

REPORT NUMBER : D92-3281-16  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 465 µg/L    |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | < 5.0 µg/L  |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 103 %           |
| Toluene-d8 (SS)            | 50.0 µg/L   | 111 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 97.9 %          |

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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-16

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-11 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
PREPARATION METHOD : EPA 608  
PREPARED BY : TAP  
PREPARED ON : 6-APR-1992  
ANALYSIS METHOD : EPA 8080  
ANALYZED BY : RLP  
ANALYZED ON : 8-APR-1992  
DILUTION FACTOR : 1

| CHLORINATED PESTICIDES AND PCBS |                 |         |            |
|---------------------------------|-----------------|---------|------------|
| TEST REQUESTED                  | DETECTION LIMIT | RESULTS |            |
| Aldrin                          | 0.040 µg/L      | <       | 0.040 µg/L |
| Alpha-BHC                       | 0.030 µg/L      | <       | 0.030 µg/L |
| Beta-BHC                        | 0.060 µg/L      | <       | 0.060 µg/L |
| Delta-BHC                       | 0.090 µg/L      | <       | 0.090 µg/L |
| Gamma-BHC(Lindane)              | 0.040 µg/L      | <       | 0.040 µg/L |
| Chlordane                       | 0.140 µg/L      | <       | 0.140 µg/L |
| 4,4'-DDD                        | 0.110 µg/L      | <       | 0.110 µg/L |
| 4,4'-DDE                        | 0.040 µg/L      | <       | 0.040 µg/L |
| 4,4'-DDT                        | 0.120 µg/L      | <       | 0.120 µg/L |
| Dieldrin                        | 0.020 µg/L      | <       | 0.020 µg/L |
| Endosulfan I                    | 0.140 µg/L      | <       | 0.140 µg/L |
| Endosulfan II                   | 0.040 µg/L      | <       | 0.040 µg/L |
| Endosulfan Sulfate              | 0.660 µg/L      | <       | 0.660 µg/L |
| Endrin                          | 0.060 µg/L      | <       | 0.060 µg/L |
| Endrin Aldehyde                 | 0.230 µg/L      | <       | 0.230 µg/L |





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REPORT NUMBER : D92-3281-17  
ANALYSIS METHOD : EPA 8080

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| CHLORINATED PESTICIDES AND PCBS |                 |         |            |
|---------------------------------|-----------------|---------|------------|
| TEST REQUESTED                  | DETECTION LIMIT | RESULTS |            |
| Heptachlor                      | 0.030 µg/L      | <       | 0.030 µg/L |
| Heptachlor Epoxide              | 0.830 µg/L      | <       | 0.830 µg/L |
| Methoxychlor                    | 1.76 µg/L       | <       | 1.76 µg/L  |
| Toxaphene                       | 2.40 µg/L       | <       | 2.40 µg/L  |
| Aroclor-1016                    | 0.090 µg/L      | <       | 0.090 µg/L |
| Aroclor-1221                    | 0.090 µg/L      | <       | 0.090 µg/L |
| Aroclor-1232                    | 0.090 µg/L      | <       | 0.090 µg/L |
| Aroclor-1242                    | 0.090 µg/L      | <       | 0.090 µg/L |
| Aroclor-1248                    | 0.090 µg/L      | <       | 0.090 µg/L |
| Aroclor-1254                    | 0.090 µg/L      | <       | 0.090 µg/L |
| Aroclor-1260                    | 0.090 µg/L      | <       | 0.090 µg/L |

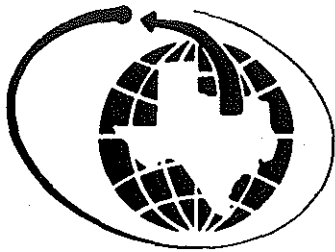
| QUALITY CONTROL DATA              |             |                 |   |
|-----------------------------------|-------------|-----------------|---|
| SURROGATE COMPOUND                | SPIKE LEVEL | SPIKE RECOVERED |   |
| Decachlorobiphenyl (SS)           | 0.2 µg/L    | 41.0 %          | * |
| 2,4,5,6-Tetrachloro-m-xylene (SS) | 0.2 µg/L    | 71.3 %          |   |

\* Interference matrix effect

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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-17

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | 1300 µg/L   |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | 24.2 µg/L   |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 18400 µg/L  |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |

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HOUSTON

REPORT NUMBER : D92-3281-17  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 46500 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | 28.9 µg/L   |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 168 µg/L    |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 114 %           |
| Toluene-d8 (SS)            | 50.0 µg/L   | 105 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 100 %           |

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DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-17

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
PREPARATION METHOD : EPA 3520  
PREPARED BY : TAP  
PREPARED ON : 6-APR-1992  
ANALYSIS METHOD : EPA 8270  
ANALYZED BY : TEK  
ANALYZED ON : 9-APR-1992  
DILUTION FACTOR : 1

| ACID EXTRACTABLE ORGANICS  |                 |             |
|----------------------------|-----------------|-------------|
| TEST REQUESTED             | DETECTION LIMIT | RESULTS     |
| Phenol                     | 10.0 µg/L       | < 10.0 µg/L |
| 2-Chlorophenol             | 10.0 µg/L       | < 10.0 µg/L |
| 2-Methylphenol             | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methylphenol             | 10.0 µg/L       | < 10.0 µg/L |
| 2-Nitrophenol              | 10.0 µg/L       | < 10.0 µg/L |
| 2,4-Dimethylphenol         | 10.0 µg/L       | < 10.0 µg/L |
| Benzoic acid               | 50.0 µg/L       | < 50.0 µg/L |
| 2,4-Dichlorophenol         | 10.0 µg/L       | < 10.0 µg/L |
| 4-Chloro-3-methylphenol    | 20.0 µg/L       | < 20.0 µg/L |
| 2,4,6-Trichlorophenol      | 10.0 µg/L       | < 10.0 µg/L |
| 2,4,5-Trichlorophenol      | 50.0 µg/L       | < 50.0 µg/L |
| 2,4-Dinitrophenol          | 50.0 µg/L       | < 50.0 µg/L |
| 4-Nitrophenol              | 50.0 µg/L       | < 50.0 µg/L |
| 4,6-Dinitro-2-methylphenol | 50.0 µg/L       | < 50.0 µg/L |
| Pentachlorophenol          | 50.0 µg/L       | < 50.0 µg/L |



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REPORT NUMBER : D92-3281-17  
ANALYSIS METHOD : EPA 8270

PAGE 2

| ACID EXTRACTABLE ORGANICS |                 |         |
|---------------------------|-----------------|---------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS |

| QUALITY CONTROL DATA      |             |                 |
|---------------------------|-------------|-----------------|
| SURROGATE COMPOUND        | SPIKE LEVEL | SPIKE RECOVERED |
| Phenol-d5 (SS)            | 100 µg/L    | 48.2 %          |
| 2-Fluorophenol (SS)       | 100 µg/L    | 54.0 %          |
| 2,4,6-Tribromophenol (SS) | 100 µg/L    | 70.0 %          |

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SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
PREPARATION METHOD : EPA 3520  
PREPARED BY : TAP  
PREPARED ON : 6-APR-1992  
ANALYSIS METHOD : EPA 8270  
ANALYZED BY : TEK  
ANALYZED ON : 9-APR-1992  
DILUTION FACTOR : 1

| BASE-NEUTRAL EXTRACTABLE ORGANICS |                 |             |
|-----------------------------------|-----------------|-------------|
| TEST REQUESTED                    | DETECTION LIMIT | RESULTS     |
| Bis(2-chloroethyl)ether           | 10.0 µg/L       | < 10.0 µg/L |
| 1,3-Dichlorobenzene               | 10.0 µg/L       | < 10.0 µg/L |
| 1,4-Dichlorobenzene               | 10.0 µg/L       | < 10.0 µg/L |
| Benzyl alcohol                    | 20.0 µg/L       | < 20.0 µg/L |
| 1,2-Dichlorobenzene               | 10.0 µg/L       | < 10.0 µg/L |
| Bis(2-chloroisopropyl)ether       | 10.0 µg/L       | < 10.0 µg/L |
| N-Nitroso-Di-N-propylamine        | 10.0 µg/L       | < 10.0 µg/L |
| Hexachloroethane                  | 10.0 µg/L       | < 10.0 µg/L |
| Nitrobenzene                      | 10.0 µg/L       | < 10.0 µg/L |
| Isophorone                        | 10.0 µg/L       | < 10.0 µg/L |
| Bis(2-chloroethoxy)methane        | 10.0 µg/L       | < 10.0 µg/L |
| 1,2,4-Trichlorobenzene            | 10.0 µg/L       | < 10.0 µg/L |
| Naphthalene                       | 10.0 µg/L       | < 10.0 µg/L |
| 4-Chloroaniline                   | 20.0 µg/L       | < 20.0 µg/L |
| Hexachlorobutadiene               | 10.0 µg/L       | < 10.0 µg/L |



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REPORT NUMBER : D92-3281-17  
ANALYSIS METHOD : EPA 8270

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| BASE-NEUTRAL EXTRACTABLE ORGANICS |                 |             |
|-----------------------------------|-----------------|-------------|
| TEST REQUESTED                    | DETECTION LIMIT | RESULTS     |
| 2-Methylnaphthalene               | 10.0 µg/L       | < 10.0 µg/L |
| Hexachlorocyclopentadiene         | 10.0 µg/L       | < 10.0 µg/L |
| 2-Chloronaphthalene               | 10.0 µg/L       | < 10.0 µg/L |
| 2-Nitroaniline                    | 50.0 µg/L       | < 50.0 µg/L |
| Dimethylphthalate                 | 10.0 µg/L       | < 10.0 µg/L |
| Acenaphthylene                    | 10.0 µg/L       | < 10.0 µg/L |
| 2,6-Dinitrotoluene                | 10.0 µg/L       | < 10.0 µg/L |
| 3-Nitroaniline                    | 50.0 µg/L       | < 50.0 µg/L |
| Acenaphthene                      | 10.0 µg/L       | < 10.0 µg/L |
| Dibenzofuran                      | 10.0 µg/L       | < 10.0 µg/L |
| 2,4-Dinitrotoluene                | 10.0 µg/L       | < 10.0 µg/L |
| Diethylphthalate                  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Chlorophenylphenyl ether        | 10.0 µg/L       | < 10.0 µg/L |
| Fluorene                          | 10.0 µg/L       | < 10.0 µg/L |
| 4-Nitroaniline                    | 50.0 µg/L       | < 50.0 µg/L |
| N-Nitrosodiphenylamine            | 10.0 µg/L       | < 10.0 µg/L |
| 4-Bromophenylphenyl ether         | 10.0 µg/L       | < 10.0 µg/L |
| Hexachlorobenzene                 | 10.0 µg/L       | < 10.0 µg/L |
| Phenanthrene                      | 10.0 µg/L       | < 10.0 µg/L |
| Anthracene                        | 10.0 µg/L       | < 10.0 µg/L |
| Di-n-butylphthalate               | 10.0 µg/L       | < 10.0 µg/L |
| Fluoranthene                      | 10.0 µg/L       | < 10.0 µg/L |
| Pyrene                            | 10.0 µg/L       | < 10.0 µg/L |
| Butyl benzyl phthalate            | 10.0 µg/L       | < 10.0 µg/L |
| 3,3'-Dichlorobenzidine            | 20.0 µg/L       | < 20.0 µg/L |
| Benzo(a)anthracene                | 10.0 µg/L       | < 10.0 µg/L |

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REPORT NUMBER : D92-3281-17  
ANALYSIS METHOD : EPA 8270

PAGE 3

| BASE-NEUTRAL EXTRACTABLE ORGANICS |                 |             |
|-----------------------------------|-----------------|-------------|
| TEST REQUESTED                    | DETECTION LIMIT | RESULTS     |
| Chrysene                          | 10.0 µg/L       | < 10.0 µg/L |
| Bis(2-ethylhexyl)phthalate        | 10.0 µg/L       | < 10.0 µg/L |
| Di-n-octylphthalate               | 10.0 µg/L       | < 10.0 µg/L |
| Benzo(b)fluoranthene              | 10.0 µg/L       | < 10.0 µg/L |
| Benzo(k)fluoranthene              | 10.0 µg/L       | < 10.0 µg/L |
| Benzo(a)pyrene                    | 10.0 µg/L       | < 10.0 µg/L |
| Indeno(1,2,3-cd)pyrene            | 10.0 µg/L       | < 10.0 µg/L |
| Dibenzo(a,h)anthracene            | 10.0 µg/L       | < 10.0 µg/L |
| Benzo(g,h,i)perylene              | 10.0 µg/L       | < 10.0 µg/L |

| QUALITY CONTROL DATA  |             |                 |
|-----------------------|-------------|-----------------|
| SURROGATE COMPOUND    | SPIKE LEVEL | SPIKE RECOVERED |
| Nitrobenzene-d5 (SS)  | 50.0 µg/L   | 70.6 %          |
| 2-Fluorobiphenyl (SS) | 50.0 µg/L   | 72.0 %          |
| Terphenyl-d14 (SS)    | 50.0 µg/L   | 71.9 %          |

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David R. Godwin, Ph.D.  
Chief Executive Officer

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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-17

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : TEK  
ANALYZED ON : 9-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | ABN      | 10 µg/L |

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DALLAS

HOUSTON

DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-17

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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DATE RECEIVED : 3-APR-1992

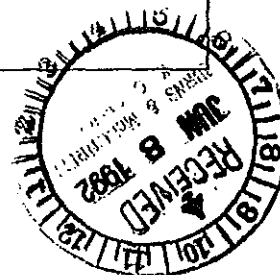
REPORT NUMBER : D92-3281-17

REPORT DATE : 4-JUN-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992

| TOTAL METALS  |                 |            |
|---|-----------------|------------|
| TEST REQUESTED  | DETECTION LIMIT | RESULTS    |
| Silver  | 1.0 µg/L        | < 1.0 µg/L |
| Dilution Factor : 1<br>Prepared using EPA 7761 on 6-APR-1992 by DJL<br>Analyzed using EPA 7761 on 7-APR-1992 by RKD   |                 |            |
| Aluminum  | 10 µg/L         | 511 µg/L   |
| Dilution Factor : 1<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 7-APR-1992 by KJS   |                 |            |
| Arsenic   | 10 µg/L         | < 10 µg/L  |
| Dilution Factor : 1<br>Prepared using EPA 7062 on 6-APR-1992 by DJL<br>Analyzed using EPA 7062 on 7-APR-1992 by GME   |                 |            |
| Barium  | 2 µg/L          | 63 µg/L    |
| Dilution Factor : 1<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 7-APR-1992 by KJS   |                 |            |
| Beryllium   | 0.1 µg/L        | < 0.1 µg/L |
| Dilution Factor : 1<br>Prepared using EPA 3020 on 6-APR-1992 by DJL<br>Analyzed using EPA 7091 on 8-APR-1992 by RKD   |                 |            |
| Calcium   | 5000 µg/L       | 87600 µg/L |
| Dilution Factor : 100<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 9-APR-1992 by KJS |                 |            |



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REPORT NUMBER : D92-3281-17

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| TOTAL METALS   |                 |             |
|--|-----------------|-------------|
| TEST REQUESTED   | DETECTION LIMIT | RESULTS     |
| Cadmium  | 1.0 µg/L        | < 1.0 µg/L  |
| Dilution Factor : 1<br>Prepared using EPA 3020 on 6-APR-1992 by DJL<br>Analyzed using EPA 7131 on 13-APR-1992 by RKD |                 |             |
| Cobalt   | 50 µg/L         | < 50 µg/L   |
| Dilution Factor : 1<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 7-APR-1992 by KJS  |                 |             |
| Chromium   | 7 µg/L          | < 7 µg/L    |
| Dilution Factor : 1<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 7-APR-1992 by KJS  |                 |             |
| Copper   | 6 µg/L          | < 6 µg/L    |
| Dilution Factor : 1<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 7-APR-1992 by KJS  |                 |             |
| Iron   | 6 µg/L          | 70 µg/L     |
| Dilution Factor : 1<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 7-APR-1992 by KJS  |                 |             |
| Mercury  | 0.2 µg/L        | < 0.2 µg/L  |
| Dilution Factor : 1<br>Prepared using EPA 7470 on 6-APR-1992 by DJL<br>Analyzed using EPA 7470 on 9-APR-1992 by GME  |                 |             |
| Potassium  | 100 µg/L        | 1440 µg/L   |
| Dilution Factor : 1<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 9-APR-1992 by KJS  |                 |             |
| Magnesium  | 100 µg/L        | 323000 µg/L |
| Dilution Factor : 10<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 9-APR-1992 by KJS |                 |             |

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| TOTAL METALS   |                     |                        |
|--|---------------------|------------------------|
| TEST REQUESTED   | DETECTION LIMIT     | RESULTS                |
| Manganese  | 1 $\mu\text{g/L}$   | 311 $\mu\text{g/L}$    |
| Dilution Factor : 1<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 9-APR-1992 by KJS  |                     |                        |
| Sodium   | 100 $\mu\text{g/L}$ | 169000 $\mu\text{g/L}$ |
| Dilution Factor : 10<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 8-APR-1992 by KJS |                     |                        |
| Nickel   | 10 $\mu\text{g/L}$  | < 10 $\mu\text{g/L}$   |
| Dilution Factor : 1<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 7-APR-1992 by KJS  |                     |                        |
| Lead   | 1.0 $\mu\text{g/L}$ | 2.4 $\mu\text{g/L}$    |
| Dilution Factor : 1<br>Prepared using EPA 3020 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 9-APR-1992 by RKD  |                     |                        |
| Antimony   | 40 $\mu\text{g/L}$  | < 40 $\mu\text{g/L}$   |
| Dilution Factor : 1<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 7-APR-1992 by KJS  |                     |                        |
| Selenium   | 5.0 $\mu\text{g/L}$ | < 5.0 $\mu\text{g/L}$  |
| Dilution Factor : 1<br>Prepared using EPA 7740 on 6-APR-1992 by DJL<br>Analyzed using EPA 7740 on 7-APR-1992 by RKD  |                     |                        |
| Thallium   | 10 $\mu\text{g/L}$  | < 10 $\mu\text{g/L}$   |
| Dilution Factor : 1<br>Prepared using EPA 3020 on 6-APR-1992 by DJL<br>Analyzed using EPA 7841 on 8-APR-1992 by RKD  |                     |                        |
| Vanadium   | 10 $\mu\text{g/L}$  | < 10 $\mu\text{g/L}$   |
| Dilution Factor : 1<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 7-APR-1992 by KJS  |                     |                        |



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| TOTAL METALS  |                 |           |
|---|-----------------|-----------|
| TEST REQUESTED  | DETECTION LIMIT | RESULTS   |
| Zinc  | 0.5 µg/L        | 10.5 µg/L |
| Dilution Factor : 1<br>Prepared using EPA 3010 on 6-APR-1992 by DJL<br>Analyzed using EPA 6010 on 7-APR-1992 by KJS |                 |           |

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Chief Executive Officer



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REPORT NUMBER : D92-3281-17

REPORT DATE : 21-APR-1992

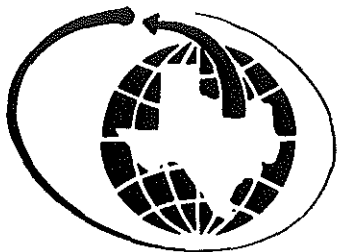
SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-14 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992

| MISCELLANEOUS ANALYSES  |                 |             |
|---|-----------------|-------------|
| TEST REQUESTED  | DETECTION LIMIT | RESULTS     |
| Cyanide, Total  | 0.01 mg/L       | < 0.01 mg/L |
| Dilution Factor : 1<br>Analyzed using EPA 9010 on 6-APR-1992 by WSJ |                 |             |

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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-18

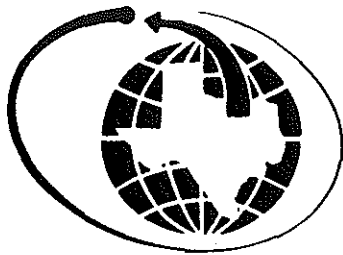
REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-15 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | 153 µg/L    |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | 28.9 µg/L   |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | 80.9 µg/L   |
| 1,1-Dichloroethane    | 5.0 µg/L        | 9.0 µg/L    |
| 1,2-Dichloroethene    | 5.0 µg/L        | 7320 µg/L   |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | 128 µg/L    |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |





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REPORT NUMBER : D92-3281-18  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 60000 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | 15.4 µg/L   |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 76800 µg/L  |
| Toluene                   | 5.0 µg/L        | 10.0 µg/L   |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 108 %           |
| Toluene-d8 (SS)            | 50.0 µg/L   | 109 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 91.9 %          |

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Chief Executive Officer



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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-18

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-15 GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| 1,1,1,2-Tetrachloroethane        | 17.35          | VOA      | 88 µg/L |

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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-19

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-402  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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REPORT NUMBER : D92-3281-19  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | < 5.0 µg/L  |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 97.3 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 103 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 93.7 %          |

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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-19

REPORT DATE : 21-APR-1992

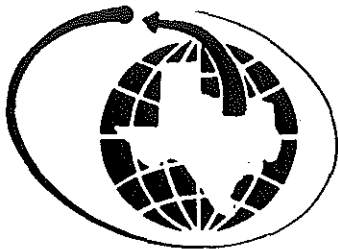
SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-402  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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Chief Executive Officer



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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-20

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : X GW-1  
PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | 26.4 µg/L   |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 552 µg/L    |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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HOUSTON

REPORT NUMBER : D92-3281-20  
ANALYSIS METHOD : EPA 8240

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| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 3570 µg/L   |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 5.6 µg/L    |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 92.2 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 104 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 94.8 %          |

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*David R. Godwin* ✓ 2  
David R. Godwin, Ph.D.  
Chief Executive Officer



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DATE RECEIVED : 3-APR-1992

REPORT NUMBER : D92-3281-20  
REPORT DATE : 21-APR-1992

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PROJECT : 91-319-1-003  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 2-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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*David R. Godwin*  
\_\_\_\_\_  
David R. Godwin, Ph.D.  
Chief Executive Officer

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DALLAS

HOUSTON

DATE RECEIVED: 3-APR-1992

REPORT NUMBER: D92-3281

REPORT DATE: 21-APR-1992

SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Cyanide  
Technician: WSJ  
Extraction Date: 4/6/92  
Date Analyzed: 4/6/92  
QC Date: 4/6/92  
QC Sample Number: Reagent Water

Analysis Method: EPA 9010  
Extraction Method: EPA 9010  
MS/MSD RPD: 3.4 %  
Average Spike Recovery: 108 %  
Duplicate RPD: 0 %  
Method Blank: <0.01 mg/L  
Blank Spike Recovery: 110 %

ANALYSIS: Silver  
Technician: RKD  
Extraction Date: 4/6/92  
Date Analyzed: 4/7/92  
QC Date: 4/7/92  
QC Sample Number: D92-3281-17

Analysis Method: EPA 7761  
Extraction Method: EPA 7761  
MS/MSD RPD: 2 %  
Average Spike Recovery: 83 %  
Duplicate RPD: 2 %  
Method Blank: <1.0 µg/L  
Blank Spike Recovery: 96 %

ANALYSIS: Arsenic  
Technician: GME  
Extraction Date: 4/6/92  
Date Analyzed: 4/7/92  
QC Date: 4/7/92  
QC Sample Number: Reagent Water

Analysis Method: EPA 7062  
Extraction Method: EPA 3010  
MS/MSD RPD: 3.8 %  
Average Spike Recovery: 104 %  
Duplicate RPD: 0 %  
Method Blank: <10 µg/L  
Blank Spike Recovery: 110 %

ANALYSIS: Mercury  
Technician: GME  
Extraction Date: 4/6/92  
Date Analyzed: 4/9/92  
QC Date: 4/9/92  
QC Sample Number: D92-3201-1

Analysis Method: EPA 7740  
Extraction Method: EPA 7740  
MS/MSD RPD: 9.1 %  
Average Spike Recovery: 95 %  
Duplicate RPD: 0 %  
Method Blank: <0.2 µg/L  
Blank Spike Recovery: 107 %

ANALYSIS: Beryllium  
Technician: RKD  
Extraction Date: 4/6/92  
Date Analyzed: 4/8/92  
QC Date: 4/8/92  
QC Sample Number: D92-3255-1

Analysis Method: EPA 7091  
Extraction Method: EPA 3020  
MS/MSD RPD: 4 %  
Average Spike Recovery: 123 %  
Duplicate RPD: 4 %  
Method Blank: <0.1 µg/L  
Blank Spike Recovery: 123 %



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SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Cadmium  
Technician: RKD  
Extraction Date: 4/06/92  
Date Analyzed: 4/13/92  
QC Date: 4/13/92  
QC Sample Number: D92-3281-17

Analysis Method: EPA 7131  
Extraction Method: EPA 3020  
MS/MSD RPD: 9 %  
Average Spike Recovery: 100 %  
Duplicate RPD: 9 %  
Method Blank: <1.0 µg/L  
Blank Spike Recovery: 110 %

ANALYSIS: Selenium  
Technician: RKD  
Extraction Date: 4/6/92  
Date Analyzed: 4/7/92  
QC Date: 4/7/92  
QC Sample Number: D92-3312-2

Analysis Method: EPA 7740  
Extraction Method: EPA 7740  
MS/MSD RPD: 2 %  
Average Spike Recovery: 112 %  
Duplicate RPD: 2 %  
Method Blank: <5.0 µg/L  
Blank Spike Recovery: 113 %

ANALYSIS: Thallium  
Technician: RKD  
Extraction Date: 4/6/92  
Date Analyzed: 4/8/92  
QC Date: 4/8/92  
QC Sample Number: D92-3255-1

Analysis Method: EPA 7841  
Extraction Method: EPA 3020  
MS/MSD RPD: 11 %  
Average Spike Recovery: 88 %  
Duplicate RPD: 11 %  
Method Blank: <10 µg/L  
Blank Spike Recovery: 89 %

ANALYSIS: Lead  
Technician: RKD  
Extraction Date: 4/6/92  
Date Analyzed: 4/9/92  
QC Date: 4/9/92  
QC Sample Number: D92-3296-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3020  
MS/MSD RPD: 7 %  
Average Spike Recovery: 113 %  
Duplicate RPD: 7 %  
Method Blank: <1.0 µg/L  
Blank Spike Recovery: 115 %

ANALYSIS: Total Solids  
Technician: KOB  
Extraction Date: ----  
Date Analyzed: 4/9/92  
QC Date: 4/9/92  
QC Sample Number: D92-3281-3

Analysis Method: EPA 160.3  
Extraction Method: ----  
MS/MSD RPD: ----  
Average Spike Recovery: ----  
Duplicate RPD: 0.1 %  
Method Blank: ----  
Blank Spike Recovery: ----

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Report Number: D92-3281  
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SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Aluminum  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/7/92  
QC Date: 4/7/92  
QC Sample Number: D92-3323-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 2.9 %  
Average Spike Recovery: 105 %  
Duplicate RPD: 3.8 %  
Method Blank: <10 µg/L  
Blank Spike Recovery: 97 %

ANALYSIS: Barium  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/7/92  
QC Date: 4/7/92  
QC Sample Number: D92-3303-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 4 %  
Average Spike Recovery: 82 %  
Duplicate RPD: 0 %  
Method Blank: <2 µg/L  
Blank Spike Recovery: 101 %

ANALYSIS: Calcium  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/9/92  
QC Date: 4/9/92  
QC Sample Number: D92-3328-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 1.8 %  
Average Spike Recovery: 97 %  
Duplicate RPD: 4.5 %  
Method Blank: <50 µg/L  
Blank Spike Recovery: 96 %

ANALYSIS: Cobalt  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/7/92  
QC Date: 4/7/92  
QC Sample Number: D92-3252-2

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 2.5 %  
Average Spike Recovery: 83 %  
Duplicate RPD: 0 %  
Method Blank: <50 µg/L  
Blank Spike Recovery: 98 %

ANALYSIS: Chromium  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/7/92  
QC Date: 4/7/92  
QC Sample Number: D92-3303-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 7 %  
Average Spike Recovery: 82 %  
Duplicate RPD: 7.6 %  
Method Blank: <7 µg/L  
Blank Spike Recovery: 104 %



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SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Copper  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/7/92  
QC Date: 4/7/92  
QC Sample Number: D92-3303-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 2 %  
Average Spike Recovery: 82 %  
Duplicate RPD: 11.6 %  
Method Blank: <6 µg/L  
Blank Spike Recovery: 102 %

ANALYSIS: Iron  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/7/92  
QC Date: 4/7/92  
QC Sample Number: D92-3323-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 3.9 %  
Average Spike Recovery: 80 %  
Duplicate RPD: 0.5 %  
Method Blank: <6 µg/L  
Blank Spike Recovery: 102 %

ANALYSIS: Potassium  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/9/92  
QC Date: 4/9/92  
QC Sample Number: D92-3328-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 7.5 %  
Average Spike Recovery: 105 %  
Duplicate RPD: 0 %  
Method Blank: <100 µg/L  
Blank Spike Recovery: 105 %

ANALYSIS: Magnesium  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/9/92  
QC Date: 4/9/92  
QC Sample Number: D92-3328-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 1.5 %  
Average Spike Recovery: 96 %  
Duplicate RPD: 2.6 %  
Method Blank: <10 µg/L  
Blank Spike Recovery: 91 %

ANALYSIS: Manganese  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/9/92  
QC Date: 4/9/92  
QC Sample Number: D92-3323-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 0.4 %  
Average Spike Recovery: 81 %  
Duplicate RPD: 0.1 %  
Method Blank: <1 µg/L  
Blank Spike Recovery: 103 %



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Report Number: D92-3281

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SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Sodium  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/8/92  
QC Date: 4/8/92  
QC Sample Number: D92-3252-2

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 0.9 %  
Average Spike Recovery: 75 %  
Duplicate RPD: 5.4 %  
Method Blank: <10 µg/L  
Blank Spike Recovery: 107 %

ANALYSIS: Nickel  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/7/92  
QC Date: 4/7/92  
QC Sample Number: D92-3303-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 2.8 %  
Average Spike Recovery: 79 %  
Duplicate RPD: 9.6 %  
Method Blank: <10 µg/L  
Blank Spike Recovery: 98 %

ANALYSIS: Antimony  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/7/92  
QC Date: 4/7/92  
QC Sample Number: D92-3323-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 7 %  
Average Spike Recovery: 87 %  
Duplicate RPD: 0 %  
Method Blank: <40 µg/L  
Blank Spike Recovery: 105 %

ANALYSIS: Vanadium  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/7/92  
QC Date: 4/7/92  
QC Sample Number: D92-3323-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 0.4 %  
Average Spike Recovery: 85 %  
Duplicate RPD: 0 %  
Method Blank: <10 µg/L  
Blank Spike Recovery: 103 %

ANALYSIS: Zinc  
Technician: KJS  
Extraction Date: 4/6/92  
Date Analyzed: 4/7/92  
QC Date: 4/7/92  
QC Sample Number: D92-3303-1

Analysis Method: EPA 6010  
Extraction Method: EPA 3010  
MS/MSD RPD: 1.2 %  
Average Spike Recovery: 82 %  
Duplicate RPD: 1.9 %  
Method Blank: <0.5 µg/L  
Blank Spike Recovery: 101 %



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Report Number: D92-3281

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SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Gamma-BHC (Lindane)      Analysis Method: EPA 8080  
Technician: RLP      Extraction Method: EPA 3510  
Extraction Date: 4/6/92      MS/MSD RPD: 21.7 %  
Date Analyzed: 4/8/92      Average Spike Recovery: 109 %  
QC Date: 4/8/92      Duplicate RPD: ----  
QC Sample Number: D92-3268-5      Method Blank: <0.04 µg/L  
Blank Spike Recovery: 125 %

ANALYSIS: Heptachlor      Analysis Method: EPA 8080  
Technician: RLP      Extraction Method: EPA 3510  
Extraction Date: 4/6/92      MS/MSD RPD: 9.9 %  
Date Analyzed: 4/8/92      Average Spike Recovery: 111 %  
QC Date: 4/8/92      Duplicate RPD: ----  
QC Sample Number: D92-3268-5      Method Blank: <0.03 µg/L  
Blank Spike Recovery: 123 %

ANALYSIS: Aldrin      Analysis Method: EPA 8080  
Technician: RLP      Extraction Method: EPA 3510  
Extraction Date: 4/6/92      MS/MSD RPD: 12.3 %  
Date Analyzed: 4/8/92      Average Spike Recovery: 114 %  
QC Date: 4/8/92      Duplicate RPD: ----  
QC Sample Number: D92-3268-5      Method Blank: <0.04 µg/L  
Blank Spike Recovery: 122 %

ANALYSIS: Dieldrin      Analysis Method: EPA 8080  
Technician: RLP      Extraction Method: EPA 3510  
Extraction Date: 4/6/92      MS/MSD RPD: 1.97 % ←  
Date Analyzed: 4/8/92      Average Spike Recovery: 103 %  
QC Date: 4/8/92      Duplicate RPD: ----  
QC Sample Number: D92-3268-5      Method Blank: <0.02 µg/L  
Blank Spike Recovery: 103 %

ANALYSIS: Endrin      Analysis Method: EPA 8080  
Technician: RLP      Extraction Method: EPA 3510  
Extraction Date: 4/6/92      MS/MSD RPD: 5.5 %  
Date Analyzed: 4/8/92      Average Spike Recovery: 110 %  
QC Date: 4/8/92      Duplicate RPD: ----  
QC Sample Number: D92-3268-5      Method Blank: <0.06 µg/L  
Blank Spike Recovery: 110 %

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HOUSTON

Report Number: D92-3281

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SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: PP-DDT  
Technician: RLP  
Extraction Date: 4/6/92  
Date Analyzed: 4/8/92  
QC Date: 4/8/92  
QC Sample Number: D92-3268-5

Analysis Method: EPA 8080  
Extraction Method: EPA 3510  
MS/MSD RPD: 9 %  
Average Spike Recovery: 91.1 %  
Duplicate RPD: ----  
Method Blank: <0.12 µg/L  
Blank Spike Recovery: 91.4 %

ANALYSIS: TOC  
Technician: WSD/NRT  
Extraction Date: ----  
Date Analyzed: 4/10/92  
QC Date: 4/10/92  
QC Sample Number: Seasand

Analysis Method: EPA 9060  
Extraction Method: ----  
MS/MSD RPD: 2 %  
Average Spike Recovery: 78 %  
Duplicate RPD: ----  
Method Blank: <20 mg/Kg  
Blank Spike Recovery: 83 %

Lab Name: New LLP Forms

Contract: NDRC-DALLAS

Lab Code: HP002

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/10/92

Matrix Spike - EPA Sample No.: D92-3281-02 Level: (low/med) low

| COMPOUND           | SPIKE ADDED (ug/Kg) | SAMPLE CONCENTRATION (ug/Kg) | MS CONCENTRATION (ug/kg) | MS % REC # | QC LIMITS REC. |
|--------------------|---------------------|------------------------------|--------------------------|------------|----------------|
| 1,1-Dichloroethene | 100.0               | 0.00                         | 84.3                     | 84         | 59-172         |
| Trichloroethene    | 100.0               | 0.00                         | 97.4                     | 97         | 62-137         |
| Benzene            | 100.0               | 0.00                         | 102                      | 102        | 66-142         |
| Toluene            | 100.0               | 0.00                         | 107                      | 107        | 59-139         |
| Chlorobenzene      | 100.0               | 0.00                         | 104                      | 104        | 60-135         |

| COMPOUND           | SPIKE ADDED (ug/Kg) | MSD CONCENTRATION (ug/Kg) | MSD % REC # | % RPD # | QC LIMITS RPD REC. |
|--------------------|---------------------|---------------------------|-------------|---------|--------------------|
| 1,1-Dichloroethene | 100.0               | 87.4                      | 87          | 4       | 22 59-172          |
| Trichloroethene    | 100.0               | 100                       | 100         | 3       | 24 62-137          |
| Benzene            | 100.0               | 103                       | 103         | 1       | 21 66-142          |
| Toluene            | 100.0               | 105                       | 105         | 2       | 21 59-139          |
| Chlorobenzene      | 100.0               | 101                       | 101         | 3       | 21 60-135          |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240



## WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: 1234-56

Lab Code: HP001

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/11/92

Matrix Spike - EPA Sample No.: D92-3363-03

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>CONCENTRATION<br>(ug/L) | MS<br>CONCENTRATION<br>(ug/L) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|--------------------|--------------------------|-----------------------------------|-------------------------------|------------------|----------------------|
| 1,1-Dichloroethene | 100.01                   | 0.001                             | 106.00                        | 106.01           | 161-145              |
| Trichloroethene    | 100.01                   | 0.001                             | 108.00                        | 108.01           | 171-120              |
| Benzene            | 100.01                   | 0.001                             | 98.50                         | 98.51            | 176-127              |
| Toluene            | 100.01                   | 0.001                             | 96.30                         | 96.31            | 176-125              |
| Chlorobenzene      | 100.01                   | 0.001                             | 107.00                        | 107.01           | 175-130              |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | MSD<br>CONCENTRATION<br>(ug/L) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD<br>REC. |
|--------------------|--------------------------|--------------------------------|-------------------|------------|--------------------------|
| 1,1-Dichloroethene | 100.01                   | 98.90                          | 98.91             | 8          | 14 161-145               |
| Trichloroethene    | 100.01                   | 104.00                         | 104.01            | 4          | 14 171-120               |
| Benzene            | 100.01                   | 95.90                          | 95.91             | 4          | 11 176-127               |
| Toluene            | 100.01                   | 94.00                          | 94.01             | 2          | 13 176-125               |
| Chlorobenzene      | 100.01                   | 104.00                         | 104.01            | 3          | 13 175-130               |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

## SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: NDRC-DALLAS

Lab Code: HF002 Case No.: AD-76 SAS No.: SHEN SDG No.: 04/14/92

Matrix Spike - EPA Sample No.: D92-3333-01 Level: (low/med) low

| COMPOUND           | SPIKE<br>ADDED<br>(ug/Kg) | SAMPLE<br>CONCENTRATION<br>(ug/Kg) | MS<br>CONCENTRATION<br>(ug/Kg) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|--------------------|---------------------------|------------------------------------|--------------------------------|------------------|----------------------|
| 1,1-Dichloroethene | 100.0                     | 0.00                               | 0.00                           | 0.00             | 59-172               |
| Trichloroethene    | 100.0                     | 0.00                               | 0.00                           | 0.00             | 62-137               |
| Benzene            | 100.0                     | 0.00                               | 0.00                           | 0.00             | 66-142               |
| Toluene            | 100.0                     | 0.00                               | 0.00                           | 0.00             | 59-139               |
| Chlorobenzene      | 100.0                     | 0.00                               | 0.00                           | 0.00             | 60-133               |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/Kg) | MSD<br>CONCENTRATION<br>(ug/Kg) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD   REC. |
|--------------------|---------------------------|---------------------------------|-------------------|------------|-------------------------|
| 1,1-Dichloroethene | 100.0                     | 84.4                            | 84                | 22         | 59-172                  |
| Trichloroethene    | 100.0                     | 91.1                            | 91                | 24         | 62-137                  |
| Benzene            | 100.0                     | 103                             | 103               | 21         | 66-142                  |
| Toluene            | 100.0                     | 109                             | 109               | 21         | 59-139                  |
| Chlorobenzene      | 100.0                     | 106                             | 106               | 21         | 60-133                  |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240  
 THE MATRIX SPIKE IS NOT USED CAUSE OF THE NEEDLE HAD BEEN PLUGGED

## SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: NDRC-DALLAS

Lab Code: HP001

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/11/92

Matrix Spike - EPA Sample No.: D92-3325-01

Level: (low/med) low

| COMPOUND           | SPIKE<br>ADDED<br>(ug/Kg) | SAMPLE<br>CONCENTRATION<br>(ug/Kg) | MS<br>CONCENTRATION<br>(ug/Kg) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|--------------------|---------------------------|------------------------------------|--------------------------------|------------------|----------------------|
| 1,1-Dichloroethene | 100.0                     | 0.00                               | 87.0                           | 87               | 159-172              |
| Trichloroethene    | 100.0                     | 0.00                               | 84.4                           | 84               | 162-137              |
| Benzene            | 100.0                     | 0.00                               | 90.8                           | 91               | 166-142              |
| Toluene            | 100.0                     | 0.00                               | 87.5                           | 88               | 159-139              |
| Chlorobenzene      | 100.0                     | 0.00                               | 87.4                           | 87               | 160-133              |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/Kg) | MSD<br>CONCENTRATION<br>(ug/Kg) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD   REC. |
|--------------------|---------------------------|---------------------------------|-------------------|------------|-------------------------|
| 1,1-Dichloroethene | 100.0                     | 89.6                            | 90                | 3          | 22   159-172            |
| Trichloroethene    | 100.0                     | 91.1                            | 91                | 0          | 24   162-137            |
| Benzene            | 100.0                     | 101                             | 101               | 10         | 21   166-142            |
| Toluene            | 100.0                     | 98.8                            | 99                | 12         | 21   159-139            |
| Chlorobenzene      | 100.0                     | 95.3                            | 95                | 9          | 21   160-133            |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: 1234-56

Lab Code: HP001

Case No.: AD-76

SAS No.: N.T.

SDG No.: 04/12/92

Matrix Spike - EPA Sample No.: D92-3588-01

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>CONCENTRATION<br>(ug/L) | MS<br>CONCENTRATION<br>(ug/L) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|--------------------|--------------------------|-----------------------------------|-------------------------------|------------------|----------------------|
| 1,1-Dichloroethene | 100.0                    | 0.00                              | 101.00                        | 101.0            | 161-145              |
| Trichloroethene    | 100.0                    | 0.00                              | 90.90                         | 90.9             | 171-120              |
| Benzene            | 100.0                    | 0.00                              | 86.50                         | 86.5             | 176-127              |
| Toluene            | 100.0                    | 0.00                              | 89.80                         | 89.8             | 176-125              |
| Chlorobenzene      | 100.0                    | 0.00                              | 91.00                         | 91.0             | 175-130              |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | MSD<br>CONCENTRATION<br>(ug/L) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD<br>REC. |
|--------------------|--------------------------|--------------------------------|-------------------|------------|--------------------------|
| 1,1-Dichloroethene | 100.0                    | 104.00                         | 104.0             | 3          | 14 161-145               |
| Trichloroethene    | 100.0                    | 84.90                          | 84.9              | 6          | 14 171-120               |
| Benzene            | 100.0                    | 90.90                          | 90.9              | 5          | 11 176-127               |
| Toluene            | 100.0                    | 91.80                          | 91.8              | 2          | 13 176-125               |
| Chlorobenzene      | 100.0                    | 92.80                          | 92.8              | 2          | 13 175-130               |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spilue Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

## WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: 1234-56

Lab Code: HP000

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/13/92

Matrix Spike - EPA Sample No.: D92-3227-09

| COMPOUND           | SPIKE  | SAMPLE        | MS            | MS    | QC      |
|--------------------|--------|---------------|---------------|-------|---------|
|                    | ADDED  | CONCENTRATION | CONCENTRATION | %     | LIMITS  |
|                    | (ug/L) | (ug/L)        | (ug/L)        | REC # | REC.    |
| 1,1-Dichloroethene | 100.0  | 0.00          | 105           | 105   | 161-145 |
| Trichloroethene    | 100.0  | 6.30          | 113           | 107   | 171-120 |
| Benzene            | 100.0  | 0.00          | 112           | 112   | 176-127 |
| Toluene            | 100.0  | 0.00          | 112           | 112   | 176-125 |
| Chlorobenzene      | 100.0  | 0.00          | 116           | 116   | 175-130 |

| COMPOUND           | SPIKE  | MSD           | MSD           | %     | %     | QC LIMITS  |
|--------------------|--------|---------------|---------------|-------|-------|------------|
|                    | ADDED  | CONCENTRATION | CONCENTRATION | REC # | RPD # | RPD   REC. |
|                    | (ug/L) | (ug/L)        | (ug/L)        |       |       |            |
| 1,1-Dichloroethene | 100.0  | 104           | 104           | 1     | 14    | 161-145    |
| Trichloroethene    | 100.0  | 112           | 106           | 0.9   | 14    | 171-120    |
| Benzene            | 100.0  | 109           | 109           | 3     | 11    | 176-127    |
| Toluene            | 100.0  | 110           | 110           | 2     | 13    | 176-125    |
| Chlorobenzene      | 100.0  | 113           | 113           | 3     | 13    | 175-130    |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

3A  
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: 1234-56

Lab Code: HP002

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/13/92

Matrix Spike - EPA Sample No.: D92-3614-01

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>CONCENTRATION<br>(ug/L) | MS<br>CONCENTRATION<br>(ug/L) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|--------------------|--------------------------|-----------------------------------|-------------------------------|------------------|----------------------|
| 1,1-Dichloroethene | 100.0                    | 0.00                              | 92.70                         | 92.7             | 161-145              |
| Trichloroethene    | 100.0                    | 0.00                              | 94.70                         | 94.7             | 171-120              |
| Benzene            | 100.0                    | 0.00                              | 104.00                        | 104.0            | 176-127              |
| Toluene            | 100.0                    | 0.00                              | 95.30                         | 95.3             | 176-125              |
| Chlorobenzene      | 100.0                    | 0.00                              | 99.10                         | 99.1             | 175-130              |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | MSD<br>CONCENTRATION<br>(ug/L) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD   REC. |
|--------------------|--------------------------|--------------------------------|-------------------|------------|-------------------------|
| 1,1-Dichloroethene | 100.0                    | 96.40                          | 96.4              | 4          | 14   161-145            |
| Trichloroethene    | 100.0                    | 93.80                          | 93.8              | 1          | 14   171-120            |
| Benzene            | 100.0                    | 97.80                          | 97.8              | 7          | 11   176-127            |
| Toluene            | 100.0                    | 95.30                          | 95.3              | 2          | 13   176-125            |
| Chlorobenzene      | 100.0                    | 97.50                          | 97.5              | 2          | 13   175-130            |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits  
Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

US EPA ARCHIVE DOCUMENT

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: 1234-56

Lab Code: AP001

Case No.: AU-76

SAS No.: SHEN

SDG No.: 04/14/92

Matrix Spike - EPA Sample No.: 092-3643-01

| COMPOUND           | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC # | QC LIMITS REC. |
|--------------------|--------------------|-----------------------------|-------------------------|------------|----------------|
| 1,1-dichloroethene | 100.0              | 0.00                        | 102                     | 102        | 61-145         |
| Trichloroethene    | 100.0              | 0.00                        | 100                     | 100        | 71-120         |
| Benzene            | 100.0              | 4.70                        | 88.5                    | 84         | 76-127         |
| Toluene            | 100.0              | 0.00                        | 109                     | 109        | 76-125         |
| Chlorobenzene      | 100.0              | 0.00                        | 103                     | 103        | 75-130         |

| COMPOUND           | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC # | MSD % RPD # | QC LIMITS RPD REC. |
|--------------------|--------------------|--------------------------|-------------|-------------|--------------------|
| 1,1-dichloroethene | 100.0              | 109                      | 109         | 7           | 14 61-145          |
| Trichloroethene    | 100.0              | 93.7                     | 94          | 6           | 14 71-120          |
| Benzene            | 100.0              | 89.5                     | 85          | 1           | 11 76-127          |
| Toluene            | 100.0              | 104                      | 104         | 5           | 15 76-125          |
| Chlorobenzene      | 100.0              | 96.7                     | 97          | 6           | 13 75-130          |

Column to be used to flag recovery and RPD values with an asterisk

\* values outside of qc limits.

RPD: 0 out of 5 outside limits  
 Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

30  
 WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: 1234-56

Lab Code: HPO01

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/15/92

Matrix Spike - EPA Sample No.: D92-3639-01

| COMPOUND           | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC # | QC LIMITS REC. |
|--------------------|--------------------|-----------------------------|-------------------------|------------|----------------|
| 1,1-Dichloroethene | 100.0              | 0.00                        | 85.3                    | 85         | 61-145         |
| Trichloroethene    | 100.0              | 0.00                        | 95.7                    | 96         | 71-120         |
| Benzene            | 100.0              | 0.00                        | 99.4                    | 99         | 76-127         |
| Toluene            | 100.0              | 0.00                        | 99.4                    | 99         | 76-125         |
| Chlorobenzene      | 100.0              | 0.00                        | 101                     | 101        | 75-130         |

| COMPOUND           | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC # | % RPD # | QC LIMITS RPD REC. |
|--------------------|--------------------|--------------------------|-------------|---------|--------------------|
| 1,1-Dichloroethene | 100.0              | 79.5                     | 80          | 6       | 14   61-145        |
| Trichloroethene    | 100.0              | 92.1                     | 92          | 4       | 14   71-120        |
| Benzene            | 100.0              | 95.6                     | 96          | 3       | 11   76-127        |
| Toluene            | 100.0              | 96.7                     | 97          | 2       | 13   76-125        |
| Chlorobenzene      | 100.0              | 97.1                     | 97          | 4       | 13   75-130        |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240



Lab Name: New CLP Forms Contract: NDRC-DALLAS  
 Lab Code: HP002 Case No.: AD-76 SAS No.: SHEN SDG No.: 04/15/92  
 Matrix Spike - EPA Sample No.: D92-3464-07 Level: (low/med) low

| COMPOUND           | SPIKE   | SAMPLE        | MS            | MS    | QC     |
|--------------------|---------|---------------|---------------|-------|--------|
|                    | ADDED   | CONCENTRATION | CONCENTRATION | %     | LIMITS |
|                    | (ug/Kg) | (ug/Kg)       | (ug/Kg)       | REC # | REC.   |
| 1,1-Dichloroethene | 100.0   | 0.00          | 89.5          | 90    | 59-172 |
| Trichloroethene    | 100.0   | 0.00          | 96.6          | 97    | 62-137 |
| Benzene            | 100.0   | 0.00          | 100           | 100   | 66-142 |
| Toluene            | 100.0   | 0.00          | 95.8          | 96    | 59-139 |
| Chlorobenzene      | 100.0   | 0.00          | 94.7          | 95    | 60-133 |

| COMPOUND           | SPIKE   | MSD           | MSD   | %     | QC LIMITS |        |
|--------------------|---------|---------------|-------|-------|-----------|--------|
|                    | ADDED   | CONCENTRATION | %     | RPD # | RPD       | REC.   |
|                    | (ug/Kg) | (ug/Kg)       | REC # | RPD # |           |        |
| 1,1-Dichloroethene | 100.0   | 91.4          | 91    | 1     | 22        | 59-172 |
| Trichloroethene    | 100.0   | 90.0          | 90    | 7     | 24        | 62-137 |
| Benzene            | 100.0   | 95.9          | 96    | 4     | 21        | 66-142 |
| Toluene            | 100.0   | 96.4          | 96    | 0     | 21        | 59-139 |
| Chlorobenzene      | 100.0   | 99.5          | 100   | 5     | 21        | 60-133 |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits  
 Spike Recovery: 0 out of 10 outside limits

COMMENTS: SQ-846 EPA METHOD 8240

Lab Name: New CLP Forms

Contract: NDRC-DALLAS

Lab Code: HF002

Case No.: AD-76

SAS No.: SHEN

SOG No.: 04/15/92

Matrix Spike - EPA Sample No.: D92-3227-06

Level: (low/med) low

| COMPOUND           | SPIKE ADDED (ug/Kg) | SAMPLE CONCENTRATION (ug/Kg) | MS CONCENTRATION (ug/Kg) | MS % REC # | QC LIMITS REC. |
|--------------------|---------------------|------------------------------|--------------------------|------------|----------------|
| 1,1-Dichloroethene | 100.0               | 0.00                         | 87.5                     | 88         | 59-172         |
| Trichloroethene    | 100.0               | 0.00                         | 110                      | 110        | 62-137         |
| Benzene            | 100.0               | 0.00                         | 103                      | 103        | 66-142         |
| Toluene            | 100.0               | 0.00                         | 108                      | 108        | 59-139         |
| Chlorobenzene      | 100.0               | 0.00                         | 114                      | 114        | 60-133         |

| COMPOUND           | SPIKE ADDED (ug/Kg) | MSD CONCENTRATION (ug/Kg) | MSD % REC # | % RPD # | QC LIMITS RPD REC. |
|--------------------|---------------------|---------------------------|-------------|---------|--------------------|
| 1,1-Dichloroethene | 100.0               | 95.1                      | 95          | 8       | 22 59-172          |
| Trichloroethene    | 100.0               | 114                       | 114         | 4       | 24 62-137          |
| Benzene            | 100.0               | 109                       | 109         | 3       | 21 66-142          |
| Toluene            | 100.0               | 114                       | 114         | 5       | 21 59-139          |
| Chlorobenzene      | 100.0               | 117                       | 117         | 3       | 21 60-133          |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

## WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: 04/08/92

Lab Code: HP005

Case No.: AD-76

SAS No.: 04/06/9

SDG No.: 04/15/9

Matrix Spike - EPA Sample No.: 92-3268-3

| COMPOUND                | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>CONCENTRATION<br>(ug/L) | MS<br>CONCENTRATION<br>(ug/L) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|-------------------------|--------------------------|-----------------------------------|-------------------------------|------------------|----------------------|
| Phenol                  | 200.00                   | 0.00                              | 110.00                        | 56               | 112- 89              |
| 2-Chlorophenol          | 200.00                   | 0.00                              | 140.00                        | 70               | 127-123              |
| 1,4-Dichlorobenzene     | 100.00                   | 0.00                              | 66.00                         | 66               | 136- 97              |
| N-Nitroso-di-n-prop.(1) | 100.00                   | 0.00                              | 61.00                         | 61               | 141-116              |
| 1,2,4-Trichlorobenzene  | 100.00                   | 0.00                              | 67.00                         | 67               | 139- 98              |
| 4-Chloro-3-methylphenol | 200.00                   | 0.00                              | 130.00                        | 65               | 123- 97              |
| Acenaphthene            | 100.00                   | 0.00                              | 65.00                         | 65               | 146-118              |
| 4-Nitrophenol           | 200.00                   | 0.00                              | 56.00                         | 28               | 110- 80              |
| 2,4-Dinitrotoluene      | 100.00                   | 0.00                              | 50.00                         | 50               | 124- 96              |
| Pentachlorophenol       | 200.00                   | 0.00                              | 140.00                        | 69               | 9-103                |
| Pyrene                  | 100.00                   | 0.00                              | 72.00                         | 72               | 126-127              |

| COMPOUND                | SPIKE<br>ADDED<br>(ug/L) | MSD<br>CONCENTRATION<br>(ug/L) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD REC. |
|-------------------------|--------------------------|--------------------------------|-------------------|------------|-----------------------|
| Phenol                  | 200.00                   | 130.00                         | 67                | 17         | 42 112- 89            |
| 2-Chlorophenol          | 200.00                   | 150.00                         | 77                | 9          | 40 127-123            |
| 1,4-Dichlorobenzene     | 100.00                   | 80.00                          | 80                | 19         | 28 136- 97            |
| N-Nitroso-di-n-prop.(1) | 100.00                   | 67.00                          | 67                | 9          | 38 141-116            |
| 1,2,4-Trichlorobenzene  | 100.00                   | 77.00                          | 77                | 13         | 28 139- 98            |
| 4-Chloro-3-methylphenol | 200.00                   | 150.00                         | 73                | 11         | 42 123- 97            |
| Acenaphthene            | 100.00                   | 72.00                          | 72                | 10         | 31 146-118            |
| 4-Nitrophenol           | 200.00                   | 69.00                          | 35                | 22         | 50 110- 80            |
| 2,4-Dinitrotoluene      | 100.00                   | 64.00                          | 64                | 24         | 38 124- 96            |
| Pentachlorophenol       | 200.00                   | 170.00                         | 84                | 19         | 50 9-103              |
| Pyrene                  | 100.00                   | 78.00                          | 78                | 8          | 31 126-127            |

(1) N-Nitroso-di-n-propylamine

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

COMMENTS: SW-846 EPA METHOD 8270

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: NDRC-DALLAS

Lab Code: RP002

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/10/92

Matrix Spike - EPA Sample No.: D92-5281-02

Level: (low/med) low

| COMPOUND           | SPIKE   | SAMPLE        | MS            | MS    | QC     |
|--------------------|---------|---------------|---------------|-------|--------|
|                    | ADDED   | CONCENTRATION | CONCENTRATION | %     | LIMITS |
|                    | (ug/Kg) | (ug/Kg)       | (ug/Kg)       | REC # | REC.   |
| 1,1-Dichloroethene | 100.0   | 0.00          | 84.3          | 84    | 59-172 |
| Trichloroethene    | 100.0   | 0.00          | 97.4          | 97    | 62-137 |
| Benzene            | 100.0   | 0.00          | 102           | 102   | 66-142 |
| Toluene            | 100.0   | 0.00          | 107           | 107   | 59-139 |
| Chlorobenzene      | 100.0   | 0.00          | 104           | 104   | 60-133 |

| COMPOUND           | SPIKE   | MSD           | MSD           | %     | QC LIMITS   |
|--------------------|---------|---------------|---------------|-------|-------------|
|                    | ADDED   | CONCENTRATION | CONCENTRATION | %     | RPD   REC.  |
|                    | (ug/Kg) | (ug/Kg)       | REC #         | RPD # | RPD   REC.  |
| 1,1-Dichloroethene | 100.0   | 87.4          | 87            | 4     | 22   59-172 |
| Trichloroethene    | 100.0   | 100           | 100           | 5     | 24   62-137 |
| Benzene            | 100.0   | 103           | 103           | 1     | 21   66-142 |
| Toluene            | 100.0   | 105           | 105           | 2     | 21   59-139 |
| Chlorobenzene      | 100.0   | 101           | 101           | 3     | 21   60-133 |

# Column to be used to flag recovery and RPD values with an asterisk

\* values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

US EPA ARCHIVE DOCUMENT

CASE NARRATIVE REQUIRED

ORIGINAL

PU-WCI-00

QC REPORT

Request For Chemical Analysis And Chain Of Custody Record

EMPLOYEE-OWNED Burns & McDonnell ENGINEERS - ARCHITECTS - CONSULTANTS 4800 East 63rd Street Kansas City, MO 64130 (816) 333-4375

Client: DWE 4-15-92 Address: City, State, Zip: Telephone: Attention: BILL WEIS

Laboratory: NDRC Laboratories Address: 1101 Commerce Drive City, State, Zip: Richardson, TX 75081 Telephone: 214-238-5591 Laboratory Reference Number:

VOLATILES

Document Control No.: 40292B (NA If Not Applicable) SHT. 1 OF 3

Project Number 91-319-1-003 Project Name EGGKTA

Sampler(s) (Signature) Shawn Stettery

Table with columns: Station Number, Station Location, Date, Time, Sample Type (Liquid, Solid, Gas, Comp., Grab), Number of Containers, Analysis (VOLATILES, SEMI-VOLATILES, MERCURY, METALS, TOC, CYANIDE, PESTICIDES/PCPBs), Remarks, Sample Number. Rows include SB-4 CME-1 to CME-5, CME-40, GMW-1 GW-1, GMW-3 GW-1, GMW-4 GW-1.

Report QC ON 3281-12-16

Relinquished By: (Signature) 1. Shawn Stettery Date/Time 4/2/92 8:00 PM Received By: (Signature) 2. B. Wilson Date/Time 4-3-92 11:00

Remarks Sheet 1 of 3

# QC REPORT

Request For Chemical Analysis And Chain Of Custody Record

GASE NARRATIVE  
REQUIRED

EMPLOYEE - OWNED  
**Barns & McDonnell**  
ENGINEERS - ARCHITECTS - CONSULTANTS  
4800 East 63rd Street  
Kansas City, MO 64130  
(816) 333-4375

## ORIGINAL

Client : \_\_\_\_\_

Address : \_\_\_\_\_

City, State, Zip : \_\_\_\_\_

Telephone : \_\_\_\_\_

Attention : BILL WEIS

Laboratory : NDRC Laboratories, Inc

Address : 1101 COMMERCE DRIVE

City, State, Zip : Richardson, TX 75081

Telephone : 214-238-5591

Laboratory Reference Number : \_\_\_\_\_

Document Control No. : 40292B  
(NA If Not Applicable) SHT. 2 OF 23

# VOLATILES

| Station Number                      | Station Location             | Date  | Time  | Sample Type |       |     |       |      | Number of Containers | Analysis | Remarks | Lab Sample Number |   |  |                          |                  |    |
|-------------------------------------|------------------------------|---|-------|-------------|-------|-----|-------|------|----------------------|----------|---------|-------------------|---|--|--------------------------|------------------|----|
|                                     |                              |   |       | Liquid      | Solid | Gas | Comp. | Grab |                      |          |         |                   |   |  |                          |                  |    |
| Project Number: <u>91-319-1-003</u> | Project Name: <u>EGG KTA</u> | Sampler(s) (Signatures): <u>Shawn Slattery, Bill Wilson, Paul Meyer</u> |       |             |       |     |       |      |                      |          |         |                   |   |  |                          |                  |    |
| GMW-5                               | GW-1                         | 4/2/92  | 6:50P | X           |       |     |       | X    | 2                    | X        |         |                   |   |  |                          | 2-40ml           | 10 |
| GMW-6                               | GW-1                         | "   | 5:55P | X           |       |     |       | X    | 2                    | X        |         |                   |   |  |                          | 2-40ml           | 11 |
| GMW-7                               | GW-1                         | "   | 5:05P | X           |       |     |       | X    | 2                    | X        |         |                   | X |  | <del>2-40ml</del> 2-40ml | 12               |    |
| GMW-8                               | GW-1                         | "   | 3:55P | X           |       |     |       | X    | 2                    | X        |         |                   |   |  |                          | 2-40ml           | 13 |
| GMW-9                               | GW-1                         | "   | 5:12P | X           |       |     |       | X    | 2                    | X        |         |                   |   |  |                          | 2-40ml           | 14 |
| GMW-10                              | GW-1                         | "   | 6:30P | X           |       |     |       | X    | 2                    | X        |         |                   |   |  |                          | 2-40ml           | 15 |
| GMW-11                              | GW-1                         | "   | 6:10P | X           |       |     |       | X    | 6                    | X        |         |                   | X |  |                          | 6-40ml           | 16 |
| GMW-14                              | GW-2                         | "   | 4:05P | X           |       |     |       | X    | 5                    | X        | X       | X                 | X |  |                          | 2-40ml; 3-1000ml | 17 |
| GMW-15                              | GW-1                         | "   | 5:43P | X           |       |     |       | X    | 2                    | X        |         |                   |   |  |                          | 2-40ml           | 18 |
| —                                   | TB-402                       | "   | 2:00P | X           |       |     |       | X    | 2                    | X        |         |                   |   |  |                          | 2-40ml           | 19 |

|  |   |  |  |                                 |                                    |
|--|---|--|--|---------------------------------|------------------------------------|
| Relinquished By : (Signature)<br><u>Shawn Slattery</u> | Date/Time<br><u>4/2/92</u><br><u>8:00PM</u> | Received By : (Signature)<br>_____                       | Relinquished By : (Signature)<br>2. _____  | Date/Time<br>_____              | Received By : (Signature)<br>_____ |
| Relinquished By : (Signature)<br>3. _____              | Date/Time<br>_____                          | Received By Laboratory : (Signature)<br><u>B. Wilson</u> | Date/Time<br><u>4-3-92</u><br><u>11:00</u> | Remarks<br><u>Sheet 2 of 23</u> |                                    |

# Request For Chemical Analysis And Chain Of Custody Record

**EMPLOYEE - OWNED**  
**Burns & McDonnell**  
 ENGINEERS - ARCHITECTS - CONSULTANTS  
 4800 East 63rd Street  
 Kansas City, MO 64130  
 (816) 333-4375

Client : \_\_\_\_\_  
 Address : \_\_\_\_\_  
 City, State, Zip : \_\_\_\_\_  
 Telephone : \_\_\_\_\_  
 Attention : BILL WEIS

Laboratory : NDRC LABORATORIES INC  
 Address : 1101 COMMERCE DRIVE  
 City, State, Zip : RICHARDSON, TX 75081  
 Telephone : 214-238-5591  
 Laboratory Reference Number :

Document Control No. : 40292B  
 (NA If Not Applicable) SHT. 3 OF 3

| Project Number      |                  | Project Name  |      |             |       |     |       |          |          |          | Number of Containers | Analysis       | Remarks     | Lab Sample Number |
|---------------------|------------------|---------------|------|-------------|-------|-----|-------|----------|----------|----------|----------------------|----------------|-------------|-------------------|
| <u>91-319-1-003</u> |                  | <u>EGGKTA</u> |      |             |       |     |       |          |          |          |                      |                |             |                   |
| Station Number      | Station Location | Date          | Time | Sample Type |       |     |       |          |          |          |                      |                |             |                   |
|                     |                  |               |      | Liquid      | Solid | Gas | Comp. | Grab     |          |          |                      |                |             |                   |
| <u>X</u>            | <u>GW-1</u>      | <u>4/2/92</u> |      | <u>X</u>    |       |     |       | <u>X</u> | <u>2</u> | <u>X</u> | <u>6CCMS</u>         | <u>2-40 ml</u> | <u>3281</u> | <u>20</u>         |
|                     |                  |               |      |             |       |     |       |          |          |          |                      |                |             |                   |
|                     |                  |               |      |             |       |     |       |          |          |          |                      |                |             |                   |
|                     |                  |               |      |             |       |     |       |          |          |          |                      |                |             |                   |
|                     |                  |               |      |             |       |     |       |          |          |          |                      |                |             |                   |
|                     |                  |               |      |             |       |     |       |          |          |          |                      |                |             |                   |
|                     |                  |               |      |             |       |     |       |          |          |          |                      |                |             |                   |
|                     |                  |               |      |             |       |     |       |          |          |          |                      |                |             |                   |
|                     |                  |               |      |             |       |     |       |          |          |          |                      |                |             |                   |

|   |  |   |  |  |           |                           |
|---|--|---|--|--|-----------|---------------------------|
| Relinquished By : (Signature)<br><u>Shawn Stotter</u> | Date/Time<br><u>4/2/92</u><br><u>8:00 PM</u> | Received By : (Signature)<br><u>B. Wilson</u> | Date/Time<br><u>4-3-92</u><br><u>11:00</u> | Relinquished By : (Signature)<br><u>2.</u> | Date/Time | Received By : (Signature) |
| Relinquished By : (Signature)<br><u>3.</u>            | Date/Time                                    | Received By Laboratory : (Signature)          | Remarks                                    |  |           |                           |

**LABORATORY  
REPORT  
NUMBER**

**D92-3424**





# NDRC LABORATORIES, INC.

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1089 East Collins Blvd., Richardson, Texas 75081 • (214) 238-5591 • FAX (214) 238-5592

BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED: 8-APR-1992

REPORT NUMBER: D92-3424-1-9  
REPORT DATE: 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

PROJECT : 91-319-1-003 EGGKTA

DATE SAMPLED : 6-APR-1992

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## CASE NARRATIVE COMMENTS:

The initial analysis for Volatile Organics, EPA 8240 on sample D92-3424-4 (GMW-16 CME-1) was completed on April 12, 1992 using a dilution of 1/50. Due to the concentrations of trichloroethene and tetrachloroethene, the sample was re-analyzed on April 14, 1992 using a dilution of 1/10,000 to obtain the compounds within calibration range.

The initial analysis for Volatile Organics, EPA 8240 on sample D92-3424-5 (GMW-17 CME-5) was completed on April 12, 1992 using 5 grams of sample. Due to the concentrations of tetrachloroethene, the sample was re-analyzed on April 20, 1992 using a dilution of 1/50 to obtain the compound within calibration range.

No unusual problems were encountered during the sample analysis for this project.

Please refer to the attached Case Narrative Summary for a comparison of sample identifications and analytical requests.

NDRC Laboratories, Inc.

Belinda Feuerbacher  
Project Manager

CUSTOMER : Burns & McDonnell  
PROJECT : 91-319-1 EEGKTA

=====

SAMPLE ID : D92-3424-1            DATE SAMPLED : 6-APR-1992  
ID MARKS : GMW-16 CME-1

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS    12-APR-1992   |
| SOLID TPER |                  | KOB    10-APR-1992   |
| VOA TIC    |                  | ZJS    12-APR-1992   |

=====

SAMPLE ID : D92-3424-2            DATE SAMPLED : 6-APR-1992  
ID MARKS : GMW-16 CME-2

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS    12-APR-1992   |
| SOLID TPER |                  | KOB    10-APR-1992   |
| VOA TIC    |                  | ZJS    12-APR-1992   |

=====

SAMPLE ID : D92-3424-3            DATE SAMPLED : 6-APR-1992  
ID MARKS : GMW-16 CME-3

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS    12-APR-1992   |
| SOLID TPER |                  | KOB    10-APR-1992   |
| VOA TIC    |                  | ZJS    12-APR-1992   |

=====

SAMPLE ID : D92-3424-4            DATE SAMPLED : 7-APR-1992  
ID MARKS : GMW-17 CME-1

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS    12-APR-1992   |
| SOLID TPER |                  | KOB    10-APR-1992   |
| VOA TIC    |                  | ZJS    12-APR-1992   |

=====

SAMPLE ID : D92-3424-5            DATE SAMPLED : 7-APR-1992  
ID MARKS : GMW-17 CME-5

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS    12-APR-1992   |
| SOLID TPER |                  | KOB    10-APR-1992   |
| VOA TIC    |                  | ZJS    12-APR-1992   |

=====

SAMPLE ID : D92-3424-6            DATE SAMPLED : 7-APR-1992  
ID MARKS : GMW-17 CME-7

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240 FL S  |                  | ZJS    13-APR-1992   |
| SOLID TPER |                  | KOB    10-APR-1992   |
| VOA TIC    |                  | ZJS    13-APR-1992   |

CUSTOMER : Burns & McDonnell  
 PROJECT : 91-319-1 EEGKTA

=====

SAMPLE ID : D92-3424-7            DATE SAMPLED : 7-APR-1992  
 ID MARKS : GMW-17 CME-8

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240_FL_S  |                  | ZJS 14-APR-1992      |
| SOLID_TPER |                  | KOB 10-APR-1992      |
| VOA_TIC    |                  | ZJS 14-APR-1992      |

=====

SAMPLE ID : D92-3424-8            DATE SAMPLED : 7-APR-1992  
 ID MARKS : GMW-17 CME-9

| ANALYSIS   | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|------------|------------------|----------------------|
| 8240_FL_S  |                  | ZJS 12-APR-1992      |
| SOLID_TPER |                  | KOB 10-APR-1992      |
| VOA_TIC    |                  | ZJS 12-APR-1992      |

=====

SAMPLE ID : D92-3424-9            DATE SAMPLED : 7-APR-1992  
 ID MARKS : TB-407

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS 11-APR-1992      |
| VOA_TIC   |                  | ZJS 11-APR-1992      |

=====

| ANALYSIS ID | DESCRIPTION                                 |
|-------------|---|
| 8240_FL_S   | Volatile Organics, Full List, Solid Matrix  |
| SOLID_TPER  | Total Solids by OVEN                        |
| VOA_TIC     | Tentatively Identified Compounds - VOA      |
| 8240_FL_L   | Volatile Organics, Full List, Liquid Matrix |



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HOUSTON

DATE RECEIVED : 8-APR-1992

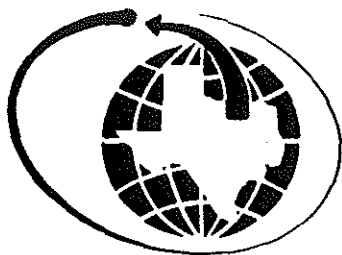
REPORT NUMBER : D92-3424-1

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-16 CME-1  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 6-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | 37.3 µg/Kg   |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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HOUSTON

REPORT NUMBER : D92-3424-1  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                       |                         |
|---------------------------|-----------------------|-------------------------|
| TEST REQUESTED            | DETECTION LIMIT       | RESULTS                 |
| 1,2-Dichloropropane       | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| cis-1,3-Dichloropropene   | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Trichloroethene           | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Chlorodibromomethane      | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| 1,1,2-Trichloroethane     | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Benzene                   | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| trans-1,3-Dichloropropene | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Bromoform                 | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| 2-Chloroethylvinyl ether  | 10.0 $\mu\text{g/Kg}$ | < 10.0 $\mu\text{g/Kg}$ |
| 4-Methyl-2-pentanone      | 50.0 $\mu\text{g/Kg}$ | < 50.0 $\mu\text{g/Kg}$ |
| 2-Hexanone                | 50.0 $\mu\text{g/Kg}$ | < 50.0 $\mu\text{g/Kg}$ |
| Tetrachloroethene         | 5.0 $\mu\text{g/Kg}$  | 32.5 $\mu\text{g/Kg}$   |
| Toluene                   | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| 1,1,2,2-Tetrachloroethane | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Chlorobenzene             | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Ethylbenzene              | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Styrene                   | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |
| Xylenes                   | 5.0 $\mu\text{g/Kg}$  | < 5.0 $\mu\text{g/Kg}$  |

| QUALITY CONTROL DATA       |                       |                 |
|----------------------------|-----------------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL           | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 $\mu\text{g/Kg}$ | 105 %           |
| Toluene-d8 (SS)            | 50.0 $\mu\text{g/Kg}$ | 99.4 %          |
| Bromofluorobenzene (S§)    | 50.0 $\mu\text{g/Kg}$ | 106 %           |

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2  
David R. Godwin, Ph.D.  
Chief Executive Officer

US EPA ARCHIVE DOCUMENT



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-1

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-16 CME-1  
PROJECT : 91-319-1 EEGKA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 6-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

NDRC Laboratories, Inc.

*David R. Godwin* / 2  
David R. Godwin, Ph.D.  
Chief Executive Officer



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REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
          : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-16 CME-1  
PROJECT : 91-319-1 BEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 6-APR-1992

| MISCELLANEOUS ANALYSES                         |                 |         |
|--|-----------------|---------|
| TEST REQUESTED                                 | DETECTION LIMIT | RESULTS |
| Total Solids                                   | 0.01 %          | 82.6 %  |
| Analyzed using EPA 160.3 on 10-APR-1992 by KOB |                 |         |

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David R. Godwin, Ph.D.  
Chief Executive Officer



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-2

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-16 CME-2  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 6-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | 73.4 µg/Kg   |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |





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REPORT NUMBER : D92-3424-2  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | 15.6 µg/Kg   |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 106 %           |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 97.1 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 97.7 %          |

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Chief Executive Officer

US EPA ARCHIVE DOCUMENT



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DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-2

REPORT DATE : 21-APR-1992

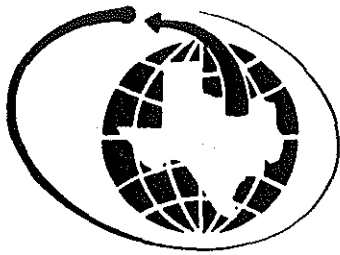
SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
          : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-16 CME-2  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 6-APR-1992

| MISCELLANEOUS ANALYSES                         |                 |         |
|--|-----------------|---------|
| TEST REQUESTED                                 | DETECTION LIMIT | RESULTS |
| Total Solids                                   | 0.01 %          | 85.6 %  |
| Analyzed using EPA 160.3 on 10-APR-1992 by KOB |                 |         |

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Chief Executive Officer



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REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
                  : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-16 CME-2  
PROJECT : 91-319-1 EEGKA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 6-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-3

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-16 CME-3  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 6-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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REPORT NUMBER : D92-3424-3  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 106 %           |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 102 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 107 %           |

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DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-3

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-16 CME-3  
PROJECT : 91-319-1 EEGKA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 6-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |                            |
|----------------------------------|----------------|----------|----------------------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT                     |
| No compounds detected            |                | VOA      | 10 $\mu\text{g}/\text{Kg}$ |

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ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-16 CME-3  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 6-APR-1992

| MISCELLANEOUS ANALYSES                         |                 |         |
|--|-----------------|---------|
| TEST REQUESTED                                 | DETECTION LIMIT | RESULTS |
| Total Solids                                   | 0.01 %          | 82.5 %  |
| Analyzed using EPA 160.3 on 10-APR-1992 by KOB |                 |         |

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DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-4

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-1  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 50

| VOLATILE ORGANICS     |                       |                         |
|-----------------------|-----------------------|-------------------------|
| TEST REQUESTED        | DETECTION LIMIT       | RESULTS                 |
| Chloromethane         | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| Bromomethane          | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| Vinyl chloride        | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| Chloroethane          | 500 $\mu\text{g/Kg}$  | < 500 $\mu\text{g/Kg}$  |
| Methylene chloride    | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| Acetone               | 5000 $\mu\text{g/Kg}$ | < 5000 $\mu\text{g/Kg}$ |
| Carbon disulfide      | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| 1,1-Dichloroethene    | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| 1,1-Dichloroethane    | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| 1,2-Dichloroethene    | 250 $\mu\text{g/Kg}$  | 490 $\mu\text{g/Kg}$    |
| Chloroform            | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| 1,2-Dichloroethane    | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| 2-Butanone            | 2500 $\mu\text{g/Kg}$ | < 2500 $\mu\text{g/Kg}$ |
| 1,1,1-Trichloroethane | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| Carbon tetrachloride  | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |
| Vinyl acetate         | 2500 $\mu\text{g/Kg}$ | < 2500 $\mu\text{g/Kg}$ |
| Bromodichloromethane  | 250 $\mu\text{g/Kg}$  | < 250 $\mu\text{g/Kg}$  |





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REPORT NUMBER : D92-3424-4  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                              |                                 |
|---------------------------|------------------------------|---------------------------------|
| TEST REQUESTED            | DETECTION LIMIT              | RESULTS                         |
| 1,2-Dichloropropane       | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$   |
| cis-1,3-Dichloropropene   | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$   |
| Trichloroethene           | 250 $\mu\text{g}/\text{Kg}$  | 304000 $\mu\text{g}/\text{Kg}$  |
| Chlorodibromomethane      | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$   |
| 1,1,2-Trichloroethane     | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$   |
| Benzene                   | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$   |
| trans-1,3-Dichloropropene | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$   |
| Bromoform                 | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$   |
| 2-Chloroethylvinyl ether  | 500 $\mu\text{g}/\text{Kg}$  | < 500 $\mu\text{g}/\text{Kg}$   |
| 4-Methyl-2-pentanone      | 2500 $\mu\text{g}/\text{Kg}$ | < 2500 $\mu\text{g}/\text{Kg}$  |
| 2-Hexanone                | 2500 $\mu\text{g}/\text{Kg}$ | < 2500 $\mu\text{g}/\text{Kg}$  |
| Tetrachloroethene         | 250 $\mu\text{g}/\text{Kg}$  | 1900000 $\mu\text{g}/\text{Kg}$ |
| Toluene                   | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$   |
| 1,1,2,2-Tetrachloroethane | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$   |
| Chlorobenzene             | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$   |
| Ethylbenzene              | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$   |
| Styrene                   | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$   |
| Xylenes                   | 250 $\mu\text{g}/\text{Kg}$  | < 250 $\mu\text{g}/\text{Kg}$   |

| QUALITY CONTROL DATA                   |                              |                 |
|--|------------------------------|-----------------|
| SURROGATE COMPOUND                     | SPIKE LEVEL                  | SPIKE RECOVERED |
| 1,2-Dichloroethane-d <sub>4</sub> (SS) | 50.0 $\mu\text{g}/\text{Kg}$ | 108 %           |
| Toluene-d <sub>8</sub> (SS)            | 50.0 $\mu\text{g}/\text{Kg}$ | 96.0 %          |
| Bromofluorobenzene (SS)                | 50.0 $\mu\text{g}/\text{Kg}$ | 87.0 %          |

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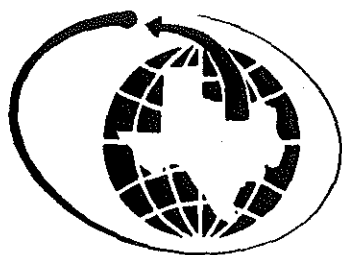
SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-1  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |                        |
|----------------------------------|----------------|----------|------------------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT                 |
| Nonane                           | 18.45          | VOA      | 12000 $\mu\text{g/Kg}$ |
| Dimethyloctane                   | 19.29          | VOA      | 9300 $\mu\text{g/Kg}$  |
| Propylcyclohexane                | 19.49          | VOA      | 13000 $\mu\text{g/Kg}$ |
| Decane                           | 20.70          | VOA      | 43000 $\mu\text{g/Kg}$ |
| Trimethylbenzene                 | 21.31          | VOA      | 8800 $\mu\text{g/Kg}$  |
| Undecane                         | 22.70          | VOA      | 5400 $\mu\text{g/Kg}$  |
| Ethyl-dimethylbenzene            | 22.99          | VOA      | 1600 $\mu\text{g/Kg}$  |
| Methylpropylcyclohexane          | 21.72          | VOA      | 9000 $\mu\text{g/Kg}$  |
| Dimethyl-octene                  | 20.23          | VOA      | 6200 $\mu\text{g/Kg}$  |
| Dimethyl-methylethylcyclopentane | 21.04          | VOA      | 3000 $\mu\text{g/Kg}$  |

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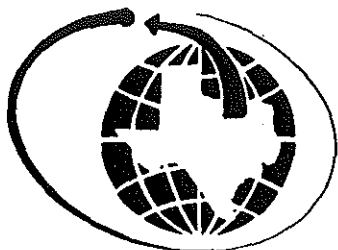
SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-1  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992

| MISCELLANEOUS ANALYSES                         |                 |         |
|--|-----------------|---------|
| TEST REQUESTED                                 | DETECTION LIMIT | RESULTS |
| Total solids                                   | 0.01 %          | 90.2 %  |
| Analyzed using EPA 160.3 on 10-APR-1992 by KOB |                 |         |

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Chief Executive Officer



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DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-5

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-5  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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REPORT NUMBER : D92-3424-5  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | 25.5 µg/Kg   |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | 4080 µg/Kg   |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | 7.2 µg/Kg    |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 107 %           |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 96.0 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 109 %           |

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Chief Executive Officer



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-5

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-5  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |                            |
|----------------------------------|----------------|----------|----------------------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT                     |
| Methylethylbenzene               | 20.54          | VOA      | 17 $\mu\text{g}/\text{Kg}$ |
| Trimethylbenzene                 | 21.30          | VOA      | 45 $\mu\text{g}/\text{Kg}$ |
| Unidentified substituted benzene | 22.00          | VOA      | 17 $\mu\text{g}/\text{Kg}$ |
| Diethylbenzene                   | 22.47          | VOA      | 11 $\mu\text{g}/\text{Kg}$ |
| Undecane                         | 22.70          | VOA      | 50 $\mu\text{g}/\text{Kg}$ |
| Unidentified alkane              | 23.02          | VOA      | 13 $\mu\text{g}/\text{Kg}$ |
| Decane                           | 20.76          | VOA      | 60 $\mu\text{g}/\text{Kg}$ |

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HOUSTON

DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-5

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

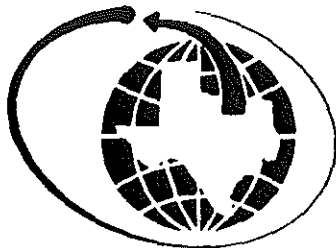
SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-5  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992

| MISCELLANEOUS ANALYSES                         |                 |         |
|--|-----------------|---------|
| TEST REQUESTED                                 | DETECTION LIMIT | RESULTS |
| Total Solids                                   | 0.01 %          | 83.3 %  |
| Analyzed using EPA 160.3 on 10-APR-1992 by KOB |                 |         |

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DALLAS

HOUSTON

DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-6

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-7  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 13-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |





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REPORT NUMBER : D92-3424-6  
ANALYSIS METHOD : EPA 8240

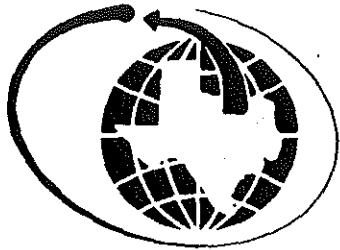
PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 93.2 %          |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 104 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 99.3 %          |

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Chief Executive Officer



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HOUSTON

DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-6  
REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
                  : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-7  
PROJECT : 91-319-1 EEGKA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 13-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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REPORT NUMBER : D92-3424-6

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-7  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992

| MISCELLANEOUS ANALYSES                         |                 |         |
|--|-----------------|---------|
| TEST REQUESTED                                 | DETECTION LIMIT | RESULTS |
| Total Solids                                   | 0.01 %          | 86.4 %  |
| Analyzed using EPA 160.3 on 10-APR-1992 by KOB |                 |         |

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DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-7

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-8  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 14-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |



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REPORT NUMBER : D92-3424-7  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 108 %           |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 102 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 99.6 %          |

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Chief Executive Officer

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DALLAS

HOUSTON

DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-7

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-8  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 14-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-8  
PROJECT : 91-319-1 EEGKA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992

| MISCELLANEOUS ANALYSES                         |                 |         |
|--|-----------------|---------|
| TEST REQUESTED                                 | DETECTION LIMIT | RESULTS |
| Total Solids                                   | 0.01 %          | 90.9 %  |
| Analyzed using EPA 160.3 on 10-APR-1992 by KOB |                 |         |

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HOUSTON

DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-8

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-9  
PROJECT : 91-319-1 BEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |              |
|-----------------------|-----------------|--------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS      |
| Chloromethane         | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Bromomethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Vinyl chloride        | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Chloroethane          | 10.0 µg/Kg      | < 10.0 µg/Kg |
| Methylene chloride    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Acetone               | 100 µg/Kg       | < 100 µg/Kg  |
| Carbon disulfide      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethene    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chloroform            | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,2-Dichloroethane    | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Butanone            | 50 µg/Kg        | < 50 µg/Kg   |
| 1,1,1-Trichloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Carbon tetrachloride  | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Vinyl acetate         | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Bromodichloromethane  | 5.0 µg/Kg       | < 5.0 µg/Kg  |





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REPORT NUMBER : D92-3424-8  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |              |
|---------------------------|-----------------|--------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS      |
| 1,2-Dichloropropane       | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| cis-1,3-Dichloropropene   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Trichloroethene           | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorodibromomethane      | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2-Trichloroethane     | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Benzene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| trans-1,3-Dichloropropene | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Bromoform                 | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 2-Chloroethylvinyl ether  | 10.0 µg/Kg      | < 10.0 µg/Kg |
| 4-Methyl-2-pentanone      | 50.0 µg/Kg      | < 50.0 µg/Kg |
| 2-Hexanone                | 50.0 µg/Kg      | < 50.0 µg/Kg |
| Tetrachloroethene         | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Toluene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Chlorobenzene             | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Ethylbenzene              | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Styrene                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |
| Xylenes                   | 5.0 µg/Kg       | < 5.0 µg/Kg  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/Kg  | 115 % *         |
| Toluene-d8 (SS)            | 50.0 µg/Kg  | 101 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/Kg  | 107 %           |

\* Interference matrix effect

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*David R. Godwin* ✓ 2  
David R. Godwin, Ph.D.  
Chief Executive Officer



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-8

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-9  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 12-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |          |
|----------------------------------|----------------|----------|----------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT   |
| No compounds detected            |                | VOA      | 10 µg/Kg |

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David R. Godwin, Ph.D.  
Chief Executive Officer



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-8

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Soil  
ID MARKS : GMW-17 CME-9  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992

| MISCELLANEOUS ANALYSES                         |                 |         |
|--|-----------------|---------|
| TEST REQUESTED                                 | DETECTION LIMIT | RESULTS |
| Total Solids                                   | 0.01 %          | 88.1 %  |
| Analyzed using EPA 160.3 on 10-APR-1992 by KOB |                 |         |

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Chief Executive Officer



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DALLAS

HOUSTON

DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-9

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-407  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 11-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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DALLAS

HOUSTON

REPORT NUMBER : D92-3424-9  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | < 5.0 µg/L  |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 98.9 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 102 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 96.0 %          |

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David R. Godwin, Ph.D.  
Chief Executive Officer



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DALLAS

HOUSTON

DATE RECEIVED : 8-APR-1992

REPORT NUMBER : D92-3424-9

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-407  
PROJECT : 91-319-1 EEGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 7-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 11-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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DALLAS

HOUSTON

DATE RECEIVED: 8-APR-1992

REPORT NUMBER: D92-3424

REPORT DATE: 21-APR-1992

SUBMITTED BY: Burns & McDonnell

## LABORATORY ANALYSIS QUALITY CONTROL REPORT

ANALYSIS: Total Solids  
Technician: KOB  
Extraction Date: ----  
Date Analyzed: 4/10/92  
QC Date: 4/10/92  
QC Sample Number: D92-3428-10

Analysis Method: EPA 160.3  
Extraction Method: ----  
MS/MSD RPD: ----  
Average Spike Recovery: ----  
Duplicate RPD: 0.2 %  
Method Blank: ----  
Blank Spike Recovery: ----

US EPA ARCHIVE DOCUMENT

## SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: NDRC-DALLAS

Lab Code: HP001

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/13/92

Matrix Spike - EPA Sample No.: D92-3047-05 Level: (low/med) low

| COMPOUND           | SPIKE<br>ADDED<br>(ug/Kg) | SAMPLE<br>CONCENTRATION<br>(ug/Kg) | MS<br>CONCENTRATION<br>(ug/Kg) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|--------------------|---------------------------|------------------------------------|--------------------------------|------------------|----------------------|
| 1,1-Dichloroethene | 100.0                     | 0.00                               | 88.0                           | 88               | 159-172              |
| Trichloroethene    | 100.0                     | 0.00                               | 78.2                           | 78               | 162-137              |
| Benzene            | 100.0                     | 0.00                               | 98.1                           | 98               | 166-142              |
| Toluene            | 100.0                     | 0.00                               | 98.5                           | 99               | 159-139              |
| Chlorobenzene      | 100.0                     | 0.00                               | 98.2                           | 98               | 160-133              |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/Kg) | MSD<br>CONCENTRATION<br>(ug/Kg) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD   REC. |
|--------------------|---------------------------|---------------------------------|-------------------|------------|-------------------------|
| 1,1-Dichloroethene | 100.0                     | 86.6                            | 87                | 1          | 22   159-172            |
| Trichloroethene    | 100.0                     | 78.8                            | 79                | 1          | 24   162-137            |
| Benzene            | 100.0                     | 98.6                            | 99                | 1          | 21   166-142            |
| Toluene            | 100.0                     | 98.4                            | 98                | 1          | 21   159-139            |
| Chlorobenzene      | 100.0                     | 97.3                            | 97                | 1          | 21   160-133            |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240



## SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: NDRC-DALLAS

Lab Code: HP001

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/13/92

Matrix Spike - EPA Sample No.: D92-3424-06

Level: (low/med) low

| COMPOUND           | SPIKE<br>ADDED<br>(ug/Kg) | SAMPLE<br>CONCENTRATION<br>(ug/Kg) | MS<br>CONCENTRATION<br>(ug/Kg) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|--------------------|---------------------------|------------------------------------|--------------------------------|------------------|----------------------|
| 1,1-Dichloroethene | 100.0                     | 0.00                               | 69.5                           | 70               | 159-172              |
| Trichloroethene    | 100.0                     | 0.00                               | 84.1                           | 84               | 162-137              |
| Benzene            | 100.0                     | 0.00                               | 93.9                           | 94               | 166-142              |
| Toluene            | 100.0                     | 0.00                               | 93.4                           | 93               | 159-139              |
| Chlorobenzene      | 100.0                     | 0.00                               | 93.3                           | 93               | 160-133              |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/Kg) | MSD<br>CONCENTRATION<br>(ug/Kg) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD   REC. |
|--------------------|---------------------------|---------------------------------|-------------------|------------|-------------------------|
| 1,1-Dichloroethene | 100.0                     | 68.3                            | 68                | 3          | 22   159-172            |
| Trichloroethene    | 100.0                     | 83.9                            | 84                | 0          | 24   162-137            |
| Benzene            | 100.0                     | 93.9                            | 94                | 0          | 21   166-142            |
| Toluene            | 100.0                     | 93.2                            | 93                | 0          | 21   159-139            |
| Chlorobenzene      | 100.0                     | 93.1                            | 93                | 0          | 21   160-133            |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

## SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: NDRC-DALLAS

Lab Code: HP002

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/12/92

Matrix Spike - EPA Sample No.: D92-3363-02

Level: (low/med) low

| COMPOUND           | SPIKE<br>ADDED<br>(ug/Kg) | SAMPLE<br>CONCENTRATION<br>(ug/Kg) | MS<br>CONCENTRATION<br>(ug/Kg) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|--------------------|---------------------------|------------------------------------|--------------------------------|------------------|----------------------|
| 1,1-Dichloroethene | 100.01                    | 0.001                              | 99.5                           | 100              | 159-172              |
| Trichloroethene    | 100.01                    | 0.001                              | 98.6                           | 99               | 162-137              |
| Benzene            | 100.01                    | 0.001                              | 114                            | 114              | 166-142              |
| Toluene            | 100.01                    | 0.001                              | 107                            | 107              | 159-139              |
| Chlorobenzene      | 100.01                    | 0.001                              | 103                            | 103              | 160-133              |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/Kg) | MSD<br>CONCENTRATION<br>(ug/Kg) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD REC. |
|--------------------|---------------------------|---------------------------------|-------------------|------------|-----------------------|
| 1,1-Dichloroethene | 100.01                    | 91.7                            | 92                | 8          | 22 159-172            |
| Trichloroethene    | 100.01                    | 88.9                            | 89                | 11         | 24 162-137            |
| Benzene            | 100.01                    | 106                             | 106               | 7          | 21 166-142            |
| Toluene            | 100.01                    | 102                             | 102               | 5          | 21 159-139            |
| Chlorobenzene      | 100.01                    | 102                             | 102               | 1          | 21 160-133            |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240

# QC REPORT

ORIGINALS REQUIRED

## Request For Chemical Analysis And Chain Of Custody Record

EMPLOYEE - OWNED  
**Burns & McDonnell**  
 ENGINEERS - ARCHITECTS - CONSULTANTS  
 4800 East 63rd Street  
 Kansas City, MO 64130  
 (816) 333-4375

Client: PO # WCI-001  
 Address: \_\_\_\_\_  
 City, State, Zip: **VOLATILES**  
 Telephone: \_\_\_\_\_  
 Attention: BILL WIES

Laboratory: NDRC LABS, INC  
 Address: 1089 E. COLLINS  
 City, State, Zip: RICHARDSON, TX 75081  
 Telephone: 214-238-5591  
 Laboratory Reference Number: \_\_\_\_\_

Document Control No: 4792  
 (NA If Not Applicable)

| Project Number              |               | Project Name     |        | Number of Containers | Analysis | Remarks | Lab Sample Number |       |             |   |   |                        |        |
|-----------------------------|---------------|------------------|--------|----------------------|----------|---------|-------------------|-------|-------------|---|---|------------------------|--------|
| Sampler(s): (Signature)     |               |                  |        |                      |          |         |                   |       |             |   |   |                        |        |
| Station Number              | Sample Number | Station Location | Date   |                      |          |         |                   | Time  | Sample Type |   |   |                        |        |
|                             |               |                  |        |                      | Liquid   | Solid   | Gas               | Comp. | Grab        |   |   |                        |        |
| 91-319-1                    |               | EGGKTA           |        |                      |          |         |                   |       |             |   |   |                        |        |
| Paul R. Olson Paul J. Notup |               |                  |        |                      |          |         |                   |       |             |   |   |                        |        |
| GMW-16                      | CME-1         |                  | 4/6/92 | 1:02P                | X        |         |                   |       | X           | 1 | X |                        | 3424-1 |
| GMW-16                      | CME-2         |                  | 4/6/92 | 1:15P                | X        |         |                   |       | X           | 1 | X |                        | 2      |
| GMW-16                      | CME-3         |                  | 4/6/92 | 1:52P                | X        |         |                   |       | X           | 1 | X |                        | 3      |
| GMW-17                      | CME-1         |                  | 4/7/92 | 8:55A                | X        |         |                   |       | X           | 1 | X | Due 4-20-92            | 4      |
| GMW-17                      | CME-5         |                  | 4/7/92 | 9:44A                | X        |         |                   |       | X           | 1 | X | <del>GC MS FRIG.</del> | 5      |
| GMW-17                      | CME-7         |                  | 4/7/92 | 10:25A               | X        |         |                   |       | X           | 1 | X | GC MS FRIG.            | 6      |
| GMW-17                      | CME-8         |                  | 4/7/92 | 11:00A               | X        |         |                   |       | X           | 1 | X |                        | 7      |
| GMW-18                      | CME-9         |                  | 4/7/92 | 11:30A               | X        |         |                   |       | X           | 1 | X |                        | 8      |
| TB-101                      |               | TRIP BLANK       | 4/7/92 | -                    | X        |         |                   |       | X           | 2 | X | liquid 200A            | 9      |

|  |  |  |                              |           |                          |
|--|--|--|------------------------------|-----------|--------------------------|
| Relinquished By: (Signature)<br><u>Paul R. Olson</u> | Date/Time<br><u>4-7-92</u><br><u>7:00 PM</u> | Received By: (Signature)                                   | Relinquished By: (Signature) | Date/Time | Received By: (Signature) |
| Relinquished By: (Signature)                         | Date/Time                                    | Received By Laboratory: (Signature)<br><u>Collen Baker</u> | Date/Time<br><u>4-8-92</u>   | Remarks:  |                          |

**LABORATORY  
REPORT  
NUMBER**

**D92-3538**



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HOUSTON

DATE RECEIVED: 10-APR-1992

REPORT NUMBER: D92-3538-1-3

REPORT DATE: 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

PROJECT : 91-319-1-003 EGGKTA

DATE SAMPLED : 8-APR-1992

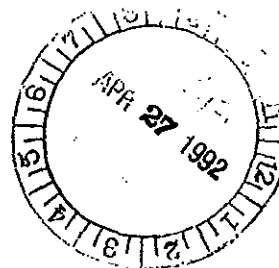
## CASE NARRATIVE COMMENTS:

The initial analysis for Volatile Organics, EPA 8240 on sample D92-3538-1 (GMW-16/GW-1) was completed on April 15, 1992 using 5 mL of sample. Due to the concentrations of 1,2-dichloroethene and trichloroethene the sample was re-analyzed on April 16, 1992 using a dilution of 1/10.

The initial analysis for Volatile Organics, EPA 8240 on sample D92-3538-2 (GMW-16/GW-2) was completed on April 15, 1992 using 5 mL of sample. Due to the concentration of trichloroethene the sample was re-analyzed on April 16, 1992 using a dilution of 1/10.

No unusual problems were encountered during the sample analysis for this project.

Please refer to the attached Case Narrative Summary for a comparison of sample identifications and analytical requests.



NDRC Laboratories, Inc.

*Belinda Feuerbacher*

Belinda Feuerbacher  
Project Manager

CUSTOMER : Burns & McDonnell  
 PROJECT : 91-319-1-003 EGGKTA

=====

SAMPLE ID : D92-3538-1            DATE SAMPLED : 8-APR-1992  
 ID MARKS : GMW-16/GW-1

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS    15-APR-1992   |
| VOA_TIC   |                  | ZJS    10-APR-1992   |

=====

SAMPLE ID : D92-3538-2            DATE SAMPLED : 9-APR-1992  
 ID MARKS : GMW-16/GW-2

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS    15-APR-1992   |
| VOA_TIC   |                  | ZJS    15-APR-1992   |

=====

SAMPLE ID : D92-3538-3            DATE SAMPLED : 9-APR-1992  
 ID MARKS : TB-409

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS    15-APR-1992   |
| VOA_TIC   |                  | ZJS    15-APR-1992   |

=====

| ANALYSIS ID | DESCRIPTION                                 |
|-------------|---|
| 8240_FL_L   | Volatile Organics, Full List, Liquid Matrix |
| VOA_TIC     | Tentatively Identified Compounds - VOA      |



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 10-APR-1992

REPORT NUMBER : D92-3538-1

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-16/GW-1  
PROJECT : 91-319-1-003 EGGKTA  
DATE SAMPLED : 8-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 15-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 282 µg/L    |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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DALLAS

HOUSTON

REPORT NUMBER : D92-3538-1  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 1170 µg/L   |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | < 5.0 µg/L  |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA                   |             |                 |
|--|-------------|-----------------|
| SURROGATE COMPOUND                     | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d <sub>4</sub> (SS) | 50.0 µg/L   | 94.6 %          |
| Toluene-d <sub>8</sub> (SS)            | 50.0 µg/L   | 101 %           |
| Bromofluorobenzene (SS)                | 50.0 µg/L   | 98.9 %          |

NDRC Laboratories, Inc.

*David R. Godwin v 2*  
David R. Godwin, Ph.D.  
Chief Executive Officer





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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 10-APR-1992

REPORT NUMBER : D92-3538-1

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-16/GW-1  
PROJECT : 91-319-1-003 EGGKTA  
DATE SAMPLED : 8-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 10-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |                    |
|----------------------------------|----------------|----------|--------------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT             |
| No compounds detected            |                | VOA      | 10 $\mu\text{g/L}$ |

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Chief Executive Officer



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 10-APR-1992

REPORT NUMBER : D92-3538-2

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-16/GW-2  
PROJECT : 91-319-1-003 EGGKTA  
DATE SAMPLED : 9-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 15-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 286 µg/L    |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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DALLAS

HOUSTON

REPORT NUMBER : D92-3538-2  
ANALYSIS METHOD : EPA 8240

PAGE 2

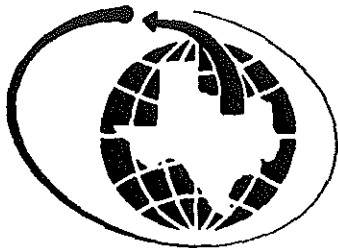
| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 1300 µg/L   |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 25.3 µg/L   |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 94.4 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 99.1 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 99.7 %          |

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*David R. Godwin*  
David R. Godwin, Ph.D.  
Chief Executive Officer

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DALLAS

HOUSTON

DATE RECEIVED : 10-APR-1992

REPORT NUMBER : D92-3538-2

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
                  : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-16/GW-2  
PROJECT : 91-319-1-003 EGGKTA  
DATE SAMPLED : 9-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 15-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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Chief Executive Officer

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DALLAS

HOUSTON

DATE RECEIVED : 10-APR-1992

REPORT NUMBER : D92-3538-3

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-409  
PROJECT : 91-319-1-003 EGGKTA  
DATE SAMPLED : 9-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 15-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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DALLAS

HOUSTON

REPORT NUMBER : D92-3538-3  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | < 5.0 µg/L  |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 97.0 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 99.4 %          |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 99.0 %          |

NDRCLaboratories, Inc.

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David R. Godwin, Ph.D.  
Chief Executive Officer



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DALLAS

HOUSTON

DATE RECEIVED : 10-APR-1992

REPORT NUMBER : D92-3538-3

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : TB-409  
PROJECT : 91-319-1-003 EGGKTA  
DATE SAMPLED : 9-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 15-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |              |
|----------------------------------|----------------|----------|--------------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT       |
| No compounds detected            |                | VOA      | 10 $\mu$ g/L |

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2  
\_\_\_\_\_  
David R. Godwin, Ph.D.  
Chief Executive Officer

*Diane ✓* 30  
 WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: 1234-56

Code: HP001

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/15/92

Matrix Spike - EPA Sample No.: D92-3639-01

D92-3538

| COMPOUND           | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC # | QC LIMITS REC. |
|--------------------|--------------------|-----------------------------|-------------------------|------------|----------------|
| 1,1-Dichloroethene | 100.0              | 0.00                        | 85.3                    | 85         | 61-145         |
| Trichloroethene    | 100.0              | 0.00                        | 95.7                    | 96         | 71-120         |
| Benzene            | 100.0              | 0.00                        | 99.4                    | 99         | 76-127         |
| Toluene            | 100.0              | 0.00                        | 99.4                    | 99         | 76-125         |
| Chlorobenzene      | 100.0              | 0.00                        | 101                     | 101        | 75-130         |

| COMPOUND           | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC # | % RPD # | QC LIMITS RPD REC. |
|--------------------|--------------------|--------------------------|-------------|---------|--------------------|
| 1,1-Dichloroethene | 100.0              | 79.5                     | 80          | 6       | 14   61-145        |
| Trichloroethene    | 100.0              | 92.1                     | 92          | 4       | 14   71-120        |
| Benzene            | 100.0              | 95.6                     | 96          | 3       | 11   76-127        |
| Toluene            | 100.0              | 96.7                     | 97          | 2       | 13   76-125        |
| Chlorobenzene      | 100.0              | 97.1                     | 97          | 4       | 13   75-130        |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 EPA METHOD 8240



ORIGINAL

Request For Chemical Analysis And Chain-Of Custody Record



Client: **QC REPORT**

Laboratory: NDRC Labs Inc.

Address: \_\_\_\_\_

Address: 1101 Commerce Drive

City, State, Zip: \_\_\_\_\_

City, State, Zip: Richardson, TX 75081

Telephone: \_\_\_\_\_

Telephone: (214) 238-5591

Attention: Bill Weis

Laboratory Reference Number:

Document Control No: 40992  
(NA If Not Applicable)

Project Number: 91-319-1-003 Project Name: EGGKTA

Sampler(s): (Signature) Paul J. Metzger

| Station Number | Sample Number | Station Location | Date   | Time                | Sample Type |       |     |       |      | Number of Containers | Analysis | Remarks | Lab Sample Number |
|----------------|---------------|------------------|--------|---------------------|-------------|-------|-----|-------|------|----------------------|----------|---------|-------------------|
|                |               |                  |        |                     | Liquid      | Solid | Gas | Comp. | Grab |                      |          |         |                   |
|                |               | GMW-16/GW-1      | 4-8-92 | 12:15 <sub>pm</sub> | X           |       |     |       | X    | 2                    | X        | 3538    | -1                |
|                |               | GMW-16/GW-2      | 4-9-92 | 4:15 <sub>pm</sub>  | X           |       |     |       | X    | 2                    | X        |         | 2                 |
|                |               | TB-409           | 4-9-92 | 3:57 <sub>pm</sub>  | X           |       |     |       | X    | 1                    | X        |         | 3                 |
|                |               | TB-409           | 4-9-92 | 3:57 <sub>pm</sub>  | X           |       |     |       | X    | 1                    | X        |         | 4                 |
|                |               |                  |        |                     |             |       |     |       |      |                      |          |         |                   |
|                |               |                  |        |                     |             |       |     |       |      |                      |          |         |                   |
|                |               |                  |        |                     |             |       |     |       |      |                      |          |         |                   |
|                |               |                  |        |                     |             |       |     |       |      |                      |          |         |                   |
|                |               |                  |        |                     |             |       |     |       |      |                      |          |         |                   |
|                |               |                  |        |                     |             |       |     |       |      |                      |          |         |                   |
|                |               |                  |        |                     |             |       |     |       |      |                      |          |         |                   |

CASE NARRATIVE REQUIRED

One 4-22-92 liquid 2-NOA PIX GLIMS

Relinquished By: (Signature) Paul J. Metzger

Date/Time: 4-9-92 6:30<sub>pm</sub>

Received By: (Signature) \_\_\_\_\_

Relinquished By: (Signature) \_\_\_\_\_

Date/Time: \_\_\_\_\_

Received By: (Signature) \_\_\_\_\_

Relinquished By: (Signature) \_\_\_\_\_

Date/Time: \_\_\_\_\_

Received By Laboratory: (Signature) Colleen Baker

Date/Time: 4-10-92

Remarks: \_\_\_\_\_

**LABORATORY  
REPORT  
NUMBER**

**D92-3703**



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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED: 15-APR-1992

REPORT NUMBER: D92-3703-1-4

REPORT DATE: 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

PROJECT : 91-319-1-003 EGGKTA

DATE SAMPLED : 14-APR-1992

---

## CASE NARRATIVE COMMENTS:

The initial analysis for Volatile Organics, EPA 8240 on sample D92-3703-2 (GMW-17/GW-2) was completed on April 16, 1992 using 5 mL of sample. Due to the concentration of trichloroethene, the sample was re-analyzed on April 17, 1992 using a dilution of 1/5.

The initial analysis for Volatile Organics, EPA 8240 on sample D92-3703-3 (GMW-17/GW-3) was completed on April 17, 1992 using 5 mL of sample. Due to the concentration of trichloroethene, the sample was re-analyzed on April 17, 1992 using a dilution of 1/10.

The initial analysis for Volatile Organics, EPA 8240 on sample D92-3703-4 (GMW-17/GW-1) was completed on April 17, 1992 using 5 mL of sample. Due to the concentration of 1,2-dichloroethene, trichloroethene, and tetrachloroethene, the sample was re-analyzed on April 17, 1992 using a dilution of 1/50.

No further problems were encountered during the sample analysis for this project.

Please refer to the attached Case Narrative Summary for a comparison of sample identifications and analytical requests.

NDRCLaboratories, Inc.

Belinda Feuerbacher  
Project Manager

CUSTOMER : Burns & McDonnell  
 PROJECT : 91-319-1-003 EGGKTA

=====

SAMPLE ID : D92-3703-1            DATE SAMPLED : 14-APR-1992  
 ID MARKS : GMW-17/GW-1

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS    16-APR-1992   |
| VOA_TIC   |                  | ZJS    16-APR-1992   |

=====

SAMPLE ID : D92-3703-2            DATE SAMPLED : 14-APR-1992  
 ID MARKS : GMW-17/GW-2

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS    16-APR-1992   |
| VOA_TIC   |                  | ZJS    16-APR-1992   |

=====

SAMPLE ID : D92-3703-3            DATE SAMPLED : 14-APR-1992  
 ID MARKS : GMW-17/GW-3

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS    17-APR-1992   |
| VOA_TIC   |                  | ZJS    17-APR-1992   |

=====

SAMPLE ID : D92-3703-4            DATE SAMPLED : 14-APR-1992  
 ID MARKS : GMW-18/GW-1

| ANALYSIS  | PRP BY PREP DATE | ANL BY ANALYSIS DATE |
|-----------|------------------|----------------------|
| 8240_FL_L |                  | ZJS    17-APR-1992   |
| VOA_TIC   |                  | ZJS    17-APR-1992   |

=====

| ANALYSIS ID | DESCRIPTION                                 |
|-------------|---|
| 8240_FL_L   | Volatile Organics, Full List, Liquid Matrix |
| VOA_TIC     | Tentatively Identified Compounds - VOA      |

=====

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DALLAS

HOUSTON

DATE RECEIVED : 15-APR-1992

REPORT NUMBER : D92-3703-1

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-17/GW-1  
PROJECT : 91-319-1-003 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 14-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 16-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 12.4 µg/L   |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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HOUSTON

REPORT NUMBER : D92-3703-1  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 292 µg/L    |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 84.2 µg/L   |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 89.2 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 100 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 97.8 %          |

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HOUSTON

DATE RECEIVED : 15-APR-1992

REPORT NUMBER : D92-3703-1

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-17/GW-1  
PROJECT : 91-319-1-003 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 14-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 16-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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DATE RECEIVED : 15-APR-1992

REPORT NUMBER : D92-3703-2

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
          : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-17/GW-2  
PROJECT : 91-319-1-003 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 14-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 16-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 26.4 µg/L   |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |





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REPORT NUMBER : D92-3703-2  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 756 µg/L    |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 162 µg/L    |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA                   |             |                 |
|--|-------------|-----------------|
| SURROGATE COMPOUND                     | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d <sub>4</sub> (SS) | 50.0 µg/L   | 88.5 %          |
| Toluene-d <sub>8</sub> (SS)            | 50.0 µg/L   | 102 %           |
| Bromofluorobenzene (SS)                | 50.0 µg/L   | 96.0 %          |

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Chief Executive Officer



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DATE RECEIVED : 15-APR-1992

REPORT NUMBER : D92-3703-2

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
                  : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-17/GW-2  
PROJECT : 91-319-1-003 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 14-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 16-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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DATE RECEIVED : 15-APR-1992

REPORT NUMBER : D92-3703-3

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-17/GW-3  
PROJECT : 91-319-1-003 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 14-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 17-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | < 10.0 µg/L |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 34.9 µg/L   |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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REPORT NUMBER : D92-3703-3  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 648 µg/L    |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 149 µg/L    |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 93.2 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 100 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 96.3 %          |

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DATE RECEIVED : 15-APR-1992

REPORT NUMBER : D92-3703-3

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-17/GW-3  
PROJECT : 91-319-1-003 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 14-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 17-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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DALLAS

HOUSTON

DATE RECEIVED : 15-APR-1992

REPORT NUMBER : D92-3703-4

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-18/GW-1  
PROJECT : 91-319-1-003 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 14-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 17-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | 90.2 µg/L   |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 940 µg/L    |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |



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REPORT NUMBER : D92-3703-4  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 1510 µg/L   |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 4840 µg/L   |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA       |             |                 |
|----------------------------|-------------|-----------------|
| SURROGATE COMPOUND         | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d4 (SS) | 50.0 µg/L   | 88.0 %          |
| Toluene-d8 (SS)            | 50.0 µg/L   | 101 %           |
| Bromofluorobenzene (SS)    | 50.0 µg/L   | 95.7 %          |

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Chief Executive Officer

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HOUSTON

DATE RECEIVED : 15-APR-1992

REPORT NUMBER : D92-3703-4

REPORT DATE : 21-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
                  : Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-18/GW-1  
PROJECT : 91-319-1-003 EGGKTA  
PURCHASE ORDER NO : WC1-001  
DATE SAMPLED : 14-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 17-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

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Chief Executive Officer



*Diene* ✓

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: New CLP Forms

Contract: 1234-56

Lab Code: HP001

Case No.: AD-76

SAS No.: SHEN

SDG No.: 04/17/92

Matrix Spike - EPA Sample No.: D92-3799-01

*D92-3703*

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | SAMPLE<br>CONCENTRATION<br>(ug/L) | MS<br>CONCENTRATION<br>(ug/L) | MS<br>%<br>REC # | QC<br>LIMITS<br>REC. |
|--------------------|--------------------------|-----------------------------------|-------------------------------|------------------|----------------------|
| 1,1-Dichloroethene | 100.0                    | 0.00                              | 67.8                          | 68               | 161-145              |
| Trichloroethene    | 100.0                    | 0.00                              | 82.2                          | 82               | 171-120              |
| Benzene            | 100.0                    | 0.00                              | 85.3                          | 85               | 176-127              |
| Toluene            | 100.0                    | 0.00                              | 85.7                          | 86               | 176-125              |
| Chlorobenzene      | 100.0                    | 0.00                              | 87.1                          | 87               | 175-130              |

| COMPOUND           | SPIKE<br>ADDED<br>(ug/L) | MSD<br>CONCENTRATION<br>(ug/L) | MSD<br>%<br>REC # | %<br>RPD # | QC LIMITS<br>RPD   REC. |
|--------------------|--------------------------|--------------------------------|-------------------|------------|-------------------------|
| 1,1-Dichloroethene | 100.0                    | 74.1                           | 74                | 8          | 14   161-145            |
| Trichloroethene    | 100.0                    | 87.1                           | 87                | 6          | 14   171-120            |
| Benzene            | 100.0                    | 91.5                           | 92                | 8          | 11   176-127            |
| Toluene            | 100.0                    | 92.1                           | 92                | 7          | 13   176-125            |
| Chlorobenzene      | 100.0                    | 94.5                           | 95                | 9          | 13   175-130            |

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of qc limits

RPD: 0 out of 5 outside limits  
Spieue Recovery: 0 out of 10 outside limits

COMMENTS: SW-846 METHOD 8240

US EPA ARCHIVE DOCUMENT

CASE NARRATIVE  
REQUIRED

Request For Chemical Analysis And Chain Of Custody Record

EMPLOYEE - OWNED  
**Burns & McDonnell**  
ENGINEERS-ARCHITECTS-CONSULTANTS  
4800 East 63rd Street  
Kansas City, MO 64120  
(816) 333-4375

Client: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Zip: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Attention: Bill Weis

**QC REPORT**

Laboratory: NDRC Labs Inc  
Address: 1101 Commerce Drive  
City, State, Zip: Richardson, TX 75081  
Telephone: (214) 238-5591  
Laboratory Reference Number: \_\_\_\_\_

Document Control No: 41492  
(NA if Not Applicable)

Project Number: 91-319-1-003 Project Name: E66KTA

Sampler(s): (Signature) Paul J. [Signature]

| Station Number  | Sample Number | Station Location | Date    | Time   | Sample Type |       |     |       |      | Number of Containers | Analysis | Remarks | Lab Sample Number |
|---|---------------|------------------|---------|--------|-------------|-------|-----|-------|------|----------------------|----------|---------|-------------------|
|   |               |                  |         |        | Liquid      | Solid | Gas | Comp. | Grab |                      |          |         |                   |
|   |               | GMW-17/GW-1      | 4-14-92 | 9:00am | X           |       |     |       | X    | 2                    | X        | 3703-1  |                   |
|   |               | GMW-17/GW-2      | 4-14-92 | 3:30pm | X           |       |     |       | X    | 2                    | X        | 2       |                   |
|   |               | GMW-17/GW-3      | 4-14-92 | 3:45pm | X           |       |     |       | X    | 2                    | X        | 3       |                   |
|   |               | GMW-18/GW-1      | 4-14-92 | 4:30pm | X           |       |     |       | X    | 2                    | X        | 4       |                   |
| 2-110-<br>2-110-AS-60VMS<br>NO DISPOSAL FEE!<br>Due 4-27-92 |               |                  |         |        |             |       |     |       |      |                      |          |         |                   |

Relinquished By: (Signature) Paul J. [Signature] Date/Time 4-14-92 5:00pm Received By: (Signature) \_\_\_\_\_ Date/Time \_\_\_\_\_ Relinquished By: (Signature) \_\_\_\_\_ Date/Time \_\_\_\_\_ Received By: (Signature) \_\_\_\_\_

Relinquished By: (Signature) \_\_\_\_\_ Date/Time \_\_\_\_\_ Received By Laboratory: (Signature) B. Wilson Date/Time 4/15/92 10:00 Remarks: \_\_\_\_\_

**LABORATORY  
REPORT  
NUMBER**

**D92-3818**



# NDRC LABORATORIES, INC.

A member of Incheape Environmental

1089 East Collins Blvd., Richardson, Texas 75081 • (214) 238-5591 • FAX (214) 238-5592

BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED: 17-APR-1992

REPORT NUMBER: D92-3818

REPORT DATE: 30-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis  
  
PROJECT : 91-319-4 EGGKTA  
  
DATE SAMPLED : 16-APR-1992

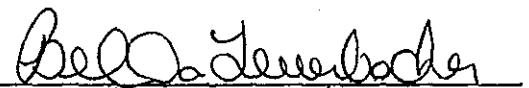
## CASE NARRATIVE COMMENTS:

The initial analysis for Volatile Organics, EPA 8240 on sample D92-3818-1 (GMW-18/GW-2) was completed on April 29, 1992 using 5 mL of sample. Due to the concentration of 1,2-dichloroethene, trichloroethene, and tetrachloroethene, the sample was re-analyzed on April 29, 1992 using a dilution of 1/25.

No further problems were encountered during the sample analysis for this project.

Please refer to the attached Case Narrative Summary for a comparison of sample identifications and analytical requests.

NDRC Laboratories, Inc.

  
Belinda Feuerbacher  
Project Manager

CUSTOMER : Burns & McDonnell  
 PROJECT : 91-319-4 EGGKTA

=====

|                        |                            |
|------------------------|----------------------------|
| SAMPLE ID : D92-3818-1 | DATE SAMPLED : 16-APR-1992 |
| ID MARKS : GMW-18/GW-2 |                            |

| ANALYSIS  | PRP BY | PREP DATE | ANL BY | ANALYSIS DATE |
|-----------|--------|-----------|--------|---------------|
| 8240_FL_L | ZJS    |           | ZJS    | 29-APR-1992   |
| VOA_TIC   | ZJS    |           | ZJS    | 29-APR-1992   |

=====

| ANALYSIS ID | DESCRIPTION                                 |
|-------------|---|
| 8240_FL_L   | Volatile Organics, Full List, Liquid Matrix |
| VOA_TIC     | Tentatively Identified Compounds - VOA      |

US EPA ARCHIVE DOCUMENT



# NDRC LABORATORIES, INC.

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BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 17-APR-1992

REPORT NUMBER : D92-3818-1

REPORT DATE : 30-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-18/GW-2  
PROJECT : 91-319-4 EGGKTA  
DATE SAMPLED : 16-APR-1992  
ANALYSIS METHOD : EPA 8240  
ANALYZED BY : ZJS  
ANALYZED ON : 29-APR-1992  
DILUTION FACTOR : 1

| VOLATILE ORGANICS     |                 |             |
|-----------------------|-----------------|-------------|
| TEST REQUESTED        | DETECTION LIMIT | RESULTS     |
| Chloromethane         | 10.0 µg/L       | < 10.0 µg/L |
| Bromomethane          | 10.0 µg/L       | < 10.0 µg/L |
| Vinyl chloride        | 10.0 µg/L       | 141 µg/L    |
| Chloroethane          | 10.0 µg/L       | < 10.0 µg/L |
| Methylene chloride    | 5.0 µg/L        | < 5.0 µg/L  |
| Acetone               | 100 µg/L        | < 100 µg/L  |
| Carbon disulfide      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethene    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethene    | 5.0 µg/L        | 1480 µg/L   |
| Chloroform            | 5.0 µg/L        | < 5.0 µg/L  |
| 1,2-Dichloroethane    | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Butanone            | 50 µg/L         | < 50 µg/L   |
| 1,1,1-Trichloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Carbon tetrachloride  | 5.0 µg/L        | < 5.0 µg/L  |
| Vinyl acetate         | 50.0 µg/L       | < 50.0 µg/L |
| Bromodichloromethane  | 5.0 µg/L        | < 5.0 µg/L  |

US EPA ARCHIVAL DOCUMENT



# NDRC LABORATORIES, INC.

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1089 East Collins Blvd., Richardson, Texas 75081 • (214) 238-5591 • FAX (214) 238-5592

BEAUMONT

DALLAS

HOUSTON

REPORT NUMBER : D92-3818-1  
ANALYSIS METHOD : EPA 8240

PAGE 2

| VOLATILE ORGANICS         |                 |             |
|---------------------------|-----------------|-------------|
| TEST REQUESTED            | DETECTION LIMIT | RESULTS     |
| 1,2-Dichloropropane       | 5.0 µg/L        | < 5.0 µg/L  |
| cis-1,3-Dichloropropene   | 5.0 µg/L        | < 5.0 µg/L  |
| Trichloroethene           | 5.0 µg/L        | 1640 µg/L   |
| Chlorodibromomethane      | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,2-Trichloroethane     | 5.0 µg/L        | < 5.0 µg/L  |
| Benzene                   | 5.0 µg/L        | < 5.0 µg/L  |
| trans-1,3-Dichloropropene | 5.0 µg/L        | < 5.0 µg/L  |
| Bromoform                 | 5.0 µg/L        | < 5.0 µg/L  |
| 2-Chloroethylvinyl ether  | 10.0 µg/L       | < 10.0 µg/L |
| 4-Methyl-2-pentanone      | 50.0 µg/L       | < 50.0 µg/L |
| 2-Hexanone                | 50.0 µg/L       | < 50.0 µg/L |
| Tetrachloroethene         | 5.0 µg/L        | 4310 µg/L   |
| Toluene                   | 5.0 µg/L        | < 5.0 µg/L  |
| 1,1,1,2-Tetrachloroethane | 5.0 µg/L        | < 5.0 µg/L  |
| Chlorobenzene             | 5.0 µg/L        | < 5.0 µg/L  |
| Ethylbenzene              | 5.0 µg/L        | < 5.0 µg/L  |
| Styrene                   | 5.0 µg/L        | < 5.0 µg/L  |
| Xylenes                   | 5.0 µg/L        | < 5.0 µg/L  |

| QUALITY CONTROL DATA                   |             |                 |
|--|-------------|-----------------|
| SURROGATE COMPOUND                     | SPIKE LEVEL | SPIKE RECOVERED |
| 1,2-Dichloroethane-d <sub>4</sub> (SS) | 50.0 µg/L   | 97.1 %          |
| Toluene-d <sub>8</sub> (SS)            | 50.0 µg/L   | 102 %           |
| Bromofluorobenzene (SS)                | 50.0 µg/L   | 98.7 %          |

NDRC Laboratories, Inc.

*David R. Godwin*  
David R. Godwin, Ph.D.  
Chief Executive Officer



# NDRC LABORATORIES, INC.

A member of Inchoape Environmental

1089 East Collins Blvd., Richardson, Texas 75081 • (214) 238-5591 • FAX (214) 238-5592

BEAUMONT

DALLAS

HOUSTON

DATE RECEIVED : 17-APR-1992

REPORT NUMBER : D92-3818-1  
REPORT DATE : 30-APR-1992

SAMPLE SUBMITTED BY : Burns & McDonnell  
ADDRESS : 4800 East 63rd Street  
: Kansas City, MO 64130  
ATTENTION : Mr. Bill Weis

SAMPLE MATRIX : Liquid  
ID MARKS : GMW-18/GW-2  
PROJECT : 91-319-4 EGGKTA  
DATE SAMPLED : 16-APR-1992  
ANALYZED BY : ZJS  
ANALYZED ON : 29-APR-1992

| TENTATIVELY IDENTIFIED COMPOUNDS |                |          |         |
|----------------------------------|----------------|----------|---------|
| COMPOUND                         | RETENTION TIME | FRACTION | RESULT  |
| No compounds detected            |                | VOA      | 10 µg/L |

NDRC Laboratories, Inc.

*David R. Godwin* ✓ 2  
David R. Godwin, Ph.D.  
Chief Executive Officer





**LABORATORY  
REPORT  
NUMBER**

**3995**

# AMERICAN TECHNICAL & ANALYTICAL SERVICES, INC.

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 • FAX (314) 434-0080

April 17, 1992

Bill Weis  
Burns & McDonnell  
4800 East 63rd Street  
Kansas City, MO 64130

RE: ATAS #3995.01  
#91-319-1-003 EGGKTA

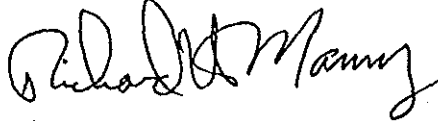
Dear Mr. Weis:

Enclosed are the analytical reports for the samples received in our laboratory on April 1, 1992.

If, in your review, you should have any questions or require additional information, please call.

Thank you for choosing ATAS for your analytical needs.

Sincerely,



Richard H. Mannz  
Vice President

Enclosures



**ATAS**

**LABORATORY  
REPORT  
NUMBER**

**4003**

# AMERICAN TECHNICAL & ANALYTICAL SERVICES, INC.

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 • FAX (314) 434-0080

April 15, 1992

Bill Weis  
Burns & McDonnell  
4800 East 63rd Street  
Kansas City, MO 64130

RE: ATAS #4003.01-#4003.02  
#91-319-1-003 ECCKTA

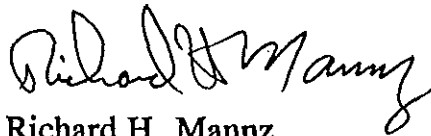
Dear Mr. Weis:

Enclosed are the analytical reports for the samples received in our laboratory on April 2, 1992.

If, in your review, you should have any questions or require additional information, please call.

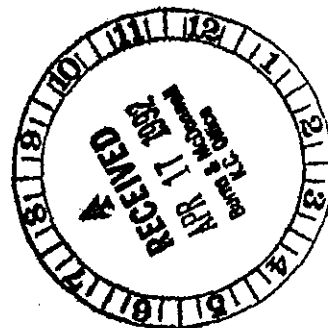
Thank you for choosing ATAS for your analytical needs.

Sincerely,



Richard H. Mannz  
Vice President

Enclosures



ATAS

CLIENT: BURNS & McDONNELL  
 4800 EAST 63RD STREET  
 KANSAS CITY, MO 64130  
 ATTN: BILL WEIS

REPORT: 400301V(100)  
 DATE : 04-15-92

SAMPLE MATRIX : WATER  
 ATAS # : 4003.01  
 DATE SUBMITTED: 04-02-92  
 DATE ANALYZED : 04-13-92  
 METHOD REF. : SW846-8240, EPA METHODOLOGY  
 PROJECT : #91-319-1-003 ECCKTA  
 SAMPLE ID : GMW-7

RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

| <u>VOLATILES</u>         | <u>D.L.</u> | <u>RESULTS</u> | <u>VOLATILES</u>          | <u>D.L.</u> | <u>RESULTS</u>    |
|--------------------------|-------------|----------------|---------------------------|-------------|-------------------|
| CHLOROMETHANE            | 200         | ND             | 1,1,2,2-TETRACHLOROETHANE | 100         | ND                |
| BROMOMETHANE             | 200         | ND             | 1,2-DICHLOROPROPANE       | 100         | ND                |
| VINYL CHLORIDE           | 200         | 41 J           | TRANS-1,3-DICHLOROPROPENE | 100         | ND                |
| CHLOROETHANE             | 200         | ND             | TRICHLOROETHENE           | 100         | 3100              |
| METHYLENE CHLORIDE       | 100         | 26 JB          | DIBROMOCHLOROMETHANE      | 100         | ND                |
| ACETONE                  | 200         | 160 J          | 1,1,2-TRICHLOROETHANE     | 100         | ND                |
| CARBON DISULFIDE         | 100         | ND             | BENZENE                   | 100         | 21 J <sup>B</sup> |
| 1,1-DICHLOROETHENE       | 100         | ND             | CIS-1,3-DICHLOROPROPENE   | 100         | ND                |
| 1,1-DICHLOROETHANE       | 100         | ND             | BROMOFORM                 | 100         | ND                |
| TOTAL-1,2-DICHLOROETHENE | 100         | 520            | 2-HEXANONE                | 200         | ND                |
| CHLOROFORM               | 100         | ND             | 4-METHYL-2-PENTANONE      | 200         | ND                |
| 1,2-DICHLOROETHANE       | 100         | ND             | TETRACHLOROETHENE         | 100         | ND                |
| 2-BUTANONE               | 200         | ND             | TOLUENE                   | 100         | ND                |
| 1,1,1-TRICHLOROETHANE    | 100         | ND             | CHLOROBENZENE             | 100         | ND                |
| CARBON TETRACHLORIDE     | 100         | ND             | ETHYLBENZENE              | 100         | ND                |
| VINYL ACETATE            | 200         | ND             | STYRENE                   | 100         | ND                |
| BROMODICHLOROMETHANE     | 100         | ND             | TOTAL XYLENES             | 100         | ND                |

QA/QC SURROGATE RECOVERIES

TOLUENE-d8 (88-110) 101% BROMOFLUOROBENZENE (86-115) 108%  
 1,2-DICHLOROETHANE-D4 (76-114) 97%

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE  
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION  
 DL = DETECTION LIMIT  
 ND = NOT DETECTED ABOVE QUANTITATION LIMIT

US EPA ARCHIVE DOCUMENT

# ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: BURNS & McDONNELL  
4800 EAST 63RD STREET  
KANSAS CITY, MO 64130  
ATTN: BILL WEIS

REPORT: BK0413V(100)

DATE : 04-15-92

SAMPLE MATRIX : WATER  
ATAS # : METHOD BLANK  
DATE SUBMITTED: 04-02-92  
DATE ANALYZED : 04-13-92  
METHOD REF. : SW846-8240, EPA METHODOLOGY  
PROJECT : #91-319-1-003 ECCKTA  
SAMPLE ID : METHOD BLANK

RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

| <u>VOLATILES</u>         | <u>D.L.</u> | <u>RESULTS</u> | <u>VOLATILES</u>          | <u>D.L.</u> | <u>RESULTS</u> |
|--------------------------|-------------|----------------|---------------------------|-------------|----------------|
| CHLOROMETHANE            | 10          | ND             | 1,1,2,2-TETRACHLOROETHANE | 5           | ND             |
| BROMOMETHANE             | 10          | ND             | 1,2-DICHLOROPROPANE       | 5           | ND             |
| VINYL CHLORIDE           | 10          | ND             | TRANS-1,3-DICHLOROPROPENE | 5           | ND             |
| CHLOROETHANE             | 10          | ND             | TRICHLOROETHENE           | 5           | ND             |
| METHYLENE CHLORIDE       | 5           | 1 J            | DIBROMOCHLOROMETHANE      | 5           | ND             |
| ACETONE                  | 10          | ND             | 1,1,2-TRICHLOROETHANE     | 5           | ND             |
| CARBON DISULFIDE         | 5           | ND             | BENZENE                   | 5           | 1 J            |
| 1,1-DICHLOROETHENE       | 5           | ND             | CIS-1,3-DICHLOROPROPENE   | 5           | ND             |
| 1,1-DICHLOROETHANE       | 5           | ND             | BROMOFORM                 | 5           | ND             |
| TOTAL-1,2-DICHLOROETHENE | 5           | ND             | 2-HEXANONE                | 10          | ND             |
| CHLOROFORM               | 5           | ND             | 4-METHYL-2-PENTANONE      | 10          | 1 J            |
| 1,2-DICHLOROETHANE       | 5           | ND             | TETRACHLOROETHENE         | 5           | ND             |
| 2-BUTANONE               | 10          | ND             | TOLUENE                   | 5           | ND             |
| 1,1,1-TRICHLOROETHANE    | 5           | ND             | CHLOROBENZENE             | 5           | ND             |
| CARBON TETRACHLORIDE     | 5           | ND             | ETHYLBENZENE              | 5           | ND             |
| VINYL ACETATE            | 10          | ND             | STYRENE                   | 5           | ND             |
| BROMODICHLOROMETHANE     | 5           | ND             | TOTAL XYLENES             | 5           | ND             |

### QA/QC SURROGATE RECOVERIES

TOLUENE-d8 (88-110) 100% BROMOFLUOROBENZENE (86-115) 106%  
1,2-DICHLOROETHANE-D4 (76-114) 98%

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE  
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION  
DL = DETECTION LIMIT  
ND = NOT DETECTED ABOVE QUANTITATION LIMIT

CLIENT: BURNS & McDONNELL  
 4800 EAST 63RD STREET  
 KANSAS CITY, MO 64130  
 ATTN: BILL WEIS

REPORT: QC0413V(100)  
 DATE : 04-15-92

SAMPLE MATRIX : WATER  
 DATE ANALYZED : 04-13-92  
 METHOD REF. : SW846-8240, EPA METHODOLOGY

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

**SPIKE BLANK/SPIKE BLANK DUPLICATE RECOVERY**

| COMPOUND           | SPIKE ADDED | BLANK CONC. | SPK A CONC. | SPK A % REC. | QC REC. LIMITS |
|--------------------|-------------|-------------|-------------|--------------|----------------|
| 1,1-DICHLOROETHENE | 50          | ND          | 43.6        | 87           | 61-145         |
| TRICHLOROETHENE    | 50          | ND          | 40          | 80           | 71-120         |
| BENZENE            | 50          | 1.3         | 44.2        | 86           | 76-127         |
| TOLUENE            | 50          | ND          | 43.4        | 87           | 76-125         |
| CHLOROBENZENE      | 50          | ND          | 43.2        | 86           | 75-130         |

| COMPOUND           | SPIKE ADDED | SPK B CONC. | SPK B % REC. | % RPD | QC LIMITS RPD REC. |
|--------------------|-------------|-------------|--------------|-------|--------------------|
| 1,1-DICHLOROETHENE | 50          | 56          | 112          | 25*   | 14 61-145          |
| TRICHLOROETHENE    | 50          | 54          | 108          | 30*   | 14 71-120          |
| BENZENE            | 50          | 54          | 105          | 20*   | 11 76-127          |
| TOLUENE            | 50          | 56.6        | 113          | 26*   | 13 76-125          |
| CHLOROBENZENE      | 50          | 56.6        | 113          | 27*   | 13 75-130          |

\* = VALUES OUTSIDE OF QC LIMITS  
 NOT DETECTED ABOVE QUANTITATION LIMIT

US EPA ARCHIVE DOCUMENT



CLIENT: BURNS & McDONNELL  
 4800 EAST 63RD STREET  
 KANSAS CITY, MO 64130  
 ATTN: BILL WEIS

REPORT: BK0413V(100)

DATE : 04-15-92

SAMPLE MATRIX : WATER  
 ATAS # : METHOD BLANK  
 DATE SUBMITTED: 04-02-92  
 DATE ANALYZED : 04-13-92  
 METHOD REF. : SW846-8240, EPA METHODOLOGY  
 PROJECT : #91-319-1-003 ECCKTA  
 SAMPLE ID : METHOD BLANK

RESULTS REPORTED IN ug/L OR Parts Per Billion (PPB)

| <u>VOLATILES</u>         | <u>D.L.</u> | <u>RESULTS</u> | <u>VOLATILES</u>          | <u>D.L.</u> | <u>RESULTS</u> |
|--------------------------|-------------|----------------|---------------------------|-------------|----------------|
| CHLOROMETHANE            | 10          | ND             | 1,1,2,2-TETRACHLOROETHANE | 5           | ND             |
| BROMOMETHANE             | 10          | ND             | 1,2-DICHLOROPROPANE       | 5           | ND             |
| VINYL CHLORIDE           | 10          | ND             | TRANS-1,3-DICHLOROPROPENE | 5           | ND             |
| CHLOROETHANE             | 10          | ND             | TRICHLOROETHENE           | 5           | ND             |
| METHYLENE CHLORIDE       | 5           | 1 J            | DIBROMOCHLOROMETHANE      | 5           | ND             |
| ACETONE                  | 10          | ND             | 1,1,2-TRICHLOROETHANE     | 5           | ND             |
| CARBON DISULFIDE         | 5           | ND             | BENZENE                   | 5           | 1 J            |
| 1,1-DICHLOROETHENE       | 5           | ND             | CIS-1,3-DICHLOROPROPENE   | 5           | ND             |
| 1,1-DICHLOROETHANE       | 5           | ND             | BROMOFORM                 | 5           | ND             |
| TOTAL-1,2-DICHLOROETHENE | 5           | ND             | 2-HEXANONE                | 10          | ND             |
| CHLOROFORM               | 5           | ND             | 4-METHYL-2-PENTANONE      | 10          | 1 J            |
| 1,2-DICHLOROETHANE       | 5           | ND             | TETRACHLOROETHENE         | 5           | ND             |
| 2-BUTANONE               | 10          | ND             | TOLUENE                   | 5           | ND             |
| 1,1,1-TRICHLOROETHANE    | 5           | ND             | CHLOROBENZENE             | 5           | ND             |
| CARBON TETRACHLORIDE     | 5           | ND             | ETHYLBENZENE              | 5           | ND             |
| VINYL ACETATE            | 10          | ND             | STYRENE                   | 5           | ND             |
| BROMODICHLOROMETHANE     | 5           | ND             | TOTAL XYLENES             | 5           | ND             |

QA/QC SURROGATE RECOVERIES

TOLUENE-d8 (88-110) 100% BROMOFLUOROBENZENE (86-115) 106%  
 1,2-DICHLOROETHANE-D4 (76-114) 98%

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE  
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION  
 DL = DETECTION LIMIT  
 ND = NOT DETECTED ABOVE QUANTITATION LIMIT

CLIENT: BURNS & McDONNELL  
4800 EAST 63RD STREET  
KANSAS CITY, MO 64130  
ATTN: BILL WEIS

REPORT: QC0413V(100)

DATE : 04-15-92

SAMPLE MATRIX : WATER  
DATE ANALYZED : 04-13-92  
METHOD REF. : SW846-8240, EPA METHODOLOGY

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

## SPIKE BLANK/SPIKE BLANK DUPLICATE RECOVERY

| <u>COMPOUND</u>    | <u>SPIKE<br/>ADDED</u> | <u>BLANK<br/>CONC.</u> | <u>SPK A<br/>CONC.</u> | <u>SPK A<br/>% REC.</u> | <u>QC REC.<br/>LIMITS</u> |
|--------------------|------------------------|------------------------|------------------------|-------------------------|---------------------------|
| 1,1-DICHLOROETHENE | 50                     | ND                     | 43.6                   | 87                      | 61-145                    |
| TRICHLOROETHENE    | 50                     | ND                     | 40                     | 80                      | 71-120                    |
| BENZENE            | 50                     | 1.3                    | 44.2                   | 86                      | 76-127                    |
| TOLUENE            | 50                     | ND                     | 43.4                   | 87                      | 76-125                    |
| CHLOROBENZENE      | 50                     | ND                     | 43.2                   | 86                      | 75-130                    |

| <u>COMPOUND</u>    | <u>SPIKE<br/>ADDED</u> | <u>SPK B<br/>CONC.</u> | <u>SPK B<br/>% REC.</u> | <u>% RPD</u> | <u>QC LIMITS<br/>RPD REC.</u> |
|--------------------|------------------------|------------------------|-------------------------|--------------|-------------------------------|
| 1,1-DICHLOROETHENE | 50                     | 56                     | 112                     | 25*          | 14 61-145                     |
| TRICHLOROETHENE    | 50                     | 54                     | 108                     | 30*          | 14 71-120                     |
| BENZENE            | 50                     | 54                     | 105                     | 20*          | 11 76-127                     |
| TOLUENE            | 50                     | 56.6                   | 113                     | 26*          | 13 76-125                     |
| CHLOROBENZENE      | 50                     | 56.6                   | 113                     | 27*          | 13 75-130                     |

\* = VALUES OUTSIDE OF QC LIMITS  
NOT REPORTED ABOVE QUANTIFICATION LIMIT

# ATAS

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: BURNS & McDONNELL  
4800 EAST 63RD STREET  
KANSAS CITY, MO 64130  
ATTN: BILL WEIS

REPORT: 400302V(100)

DATE : 04-15-92

SAMPLE MATRIX : SOIL  
ATAS # : 4003.02  
DATE SUBMITTED: 04-02-92  
DATE ANALYZED : 04-14-92  
METHOD REF. : SW846-8240, EPA METHODOLOGY  
PROJECT : #91-319-1-003 ECCKTA  
SAMPLE ID : SB-4

RESULTS REPORTED IN ug/Kg OR Parts Per Billion (PPB)

| <u>VOLATILES</u>         | <u>D.L. RESULTS</u> |      | <u>VOLATILES</u>          | <u>D.L. RESULTS</u> |     |
|--------------------------|---------------------|------|---------------------------|---------------------|-----|
| CHLOROMETHANE            | 10                  | ND   | 1,1,2,2-TETRACHLOROETHANE | 5                   | ND  |
| BROMOMETHANE             | 10                  | ND   | 1,2-DICHLOROPROPANE       | 5                   | ND  |
| VINYL CHLORIDE           | 10                  | 5 J  | TRANS-1,3-DICHLOROPROPENE | 5                   | ND  |
| CHLOROETHANE             | 10                  | ND   | TRICHLOROETHENE           | 5                   | 4 J |
| METHYLENE CHLORIDE       | 5                   | 31 B | DIBROMOCHLOROMETHANE      | 5                   | ND  |
| ACETONE                  | 10                  | 220  | 1,1,2-TRICHLOROETHANE     | 5                   | ND  |
| CARBON DISULFIDE         | 5                   | 3 J  | BENZENE                   | 5                   | 1 J |
| 1,1-DICHLOROETHENE       | 5                   | ND   | CIS-1,3-DICHLOROPROPENE   | 5                   | ND  |
| 1,1-DICHLOROETHANE       | 5                   | ND   | BROMOFORM                 | 5                   | ND  |
| TOTAL-1,2-DICHLOROETHENE | 5                   | 140  | 2-HEXANONE                | 10                  | 2 J |
| CHLOROFORM               | 5                   | ND   | 4-METHYL-2-PENTANONE      | 10                  | ND  |
| 1,2-DICHLOROETHANE       | 5                   | ND   | TETRACHLOROETHENE         | 5                   | 2 J |
| 2-BUTANONE               | 10                  | 47   | TOLUENE                   | 5                   | 2 J |
| 1,1,1-TRICHLOROETHANE    | 5                   | ND   | CHLOROBENZENE             | 5                   | ND  |
| CARBON TETRACHLORIDE     | 5                   | ND   | ETHYLBENZENE              | 5                   | ND  |
| VINYL ACETATE            | 10                  | ND   | STYRENE                   | 5                   | ND  |
| BROMODICHLOROMETHANE     | 5                   | ND   | TOTAL XYLENES             | 5                   | 5   |

### OA/OC SURROGATE RECOVERIES

TOLUENE-d8(81-117) 99% BROMOFLUOROBENZENE(74-121) 90%  
1,2-DICHLOROETHANE-D4(70-121) 88%

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE  
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION  
DL = DETECTION LIMIT  
ND = NOT DETECTED ABOVE QUANTITATION LIMIT

CLIENT: BURNS & McDONNELL  
 4800 EAST 63RD STREET  
 KANSAS CITY, MO 64130  
 ATTN: BILL WEIS

REPORT: BK0413V(100)  
 DATE : 04-15-92

SAMPLE MATRIX : SOIL  
 ATAS # : METHOD BLANK  
 DATE SUBMITTED: 04-02-92  
 DATE ANALYZED : 04-13-92  
 METHOD REF. : SW846-8240, EPA METHODOLOGY  
 PROJECT : #91-319-1-003 ECCKTA  
 SAMPLE ID : METHOD BLANK

RESULTS REPORTED IN ug/Kg OR Parts Per Billion (PPB)

| <u>VOLATILES</u>         | <u>D.L.</u> | <u>RESULTS</u> | <u>VOLATILES</u>          | <u>D.L.</u> | <u>RESULTS</u> |
|--------------------------|-------------|----------------|---------------------------|-------------|----------------|
| CHLOROMETHANE            | 10          | ND             | 1,1,2,2-TETRACHLOROETHANE | 5           | ND             |
| BROMOMETHANE             | 10          | ND             | 1,2-DICHLOROPROPANE       | 5           | ND             |
| VINYL CHLORIDE           | 10          | ND             | TRANS-1,3-DICHLOROPROPENE | 5           | ND             |
| CHLOROETHANE             | 10          | ND             | TRICHLOROETHENE           | 5           | ND             |
| METHYLENE CHLORIDE       | 5           | 2 J            | DIBROMOCHLOROMETHANE      | 5           | ND             |
| ACETONE                  | 10          | ND             | 1,1,2-TRICHLOROETHANE     | 5           | ND             |
| CARBON DISULFIDE         | 5           | ND             | BENZENE                   | 5           | ND             |
| 1,1-DICHLOROETHENE       | 5           | ND             | CIS-1,3-DICHLOROPROPENE   | 5           | ND             |
| 1,1-DICHLOROETHANE       | 5           | ND             | BROMOFORM                 | 5           | ND             |
| TOTAL-1,2-DICHLOROETHENE | 5           | ND             | 2-HEXANONE                | 10          | ND             |
| CHLOROFORM               | 5           | ND             | 4-METHYL-2-PENTANONE      | 10          | ND             |
| 1,2-DICHLOROETHANE       | 5           | ND             | TETRACHLOROETHENE         | 5           | ND             |
| 2-BUTANONE               | 10          | ND             | TOLUENE                   | 5           | ND             |
| 1,1,1-TRICHLOROETHANE    | 5           | ND             | CHLOROBENZENE             | 5           | ND             |
| CARBON TETRACHLORIDE     | 5           | ND             | ETHYLBENZENE              | 5           | ND             |
| VINYL ACETATE            | 10          | ND             | STYRENE                   | 5           | ND             |
| BROMODICHLOROMETHANE     | 5           | ND             | TOTAL XYLENES             | 5           | ND             |

OA/OC SURROGATE RECOVERIES

TOLUENE-d8 (81-117) 91% BROMOFLUOROBENZENE (74-121) 90%  
 1,2-DICHLOROETHANE-D4 (70-121) 90%

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE  
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION  
 DL = DETECTION LIMIT  
 ND = NOT DETECTED ABOVE QUANTITATION LIMIT

US EPA ARCHIVE DOCUMENT



875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: BURNS & McDONNELL  
 4800 EAST 63RD STREET  
 KANSAS CITY, MO 64130  
 ATTN: BILL WEIS

REPORT: QC0413V(100)

DATE : 04-15-92

SAMPLE MATRIX : WATER  
 DATE ANALYZED : 04-13-92  
 METHOD REF. : SW846-8240, EPA METHODOLOGY

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

SPIKE BLANK/SPIKE BLANK DUPLICATE RECOVERY

| COMPOUND           | SPIKE ADDED | BLANK CONC. | SPK A CONC. | SPK A % REC. | QC REC. LIMITS |
|--------------------|-------------|-------------|-------------|--------------|----------------|
| 1,1-DICHLOROETHENE | 50          | ND          | 54          | 108          | 61-145         |
| TRICHLOROETHENE    | 50          | ND          | 46          | 92           | 71-120         |
| BENZENE            | 50          | ND          | 52.2        | 104          | 76-127         |
| TOLUENE            | 50          | ND          | 53.1        | 106          | 76-125         |
| CHLOROBENZENE      | 50          | ND          | 53          | 106          | 75-130         |

| COMPOUND           | SPIKE ADDED | SPK B CONC. | SPK B % REC. | % RPD | QC LIMITS REC. |
|--------------------|-------------|-------------|--------------|-------|----------------|
| 1,1-DICHLOROETHENE | 50          | 51.7        | 103          | 4     | 14 61-145      |
| TRICHLOROETHENE    | 50          | 44.6        | 89           | 3     | 14 71-120      |
| BENZENE            | 50          | 51.1        | 102          | 2     | 11 76-127      |
| TOLUENE            | 50          | 51.3        | 103          | 3     | 13 76-125      |
| CHLOROBENZENE      | 50          | 50.9        | 102          | 4     | 13 75-130      |

**LABORATORY  
REPORT  
NUMBER**

**4745**

# AMERICAN TECHNICAL & ANALYTICAL SERVICES, INC.

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 • FAX (314) 434-0080

July 27, 1992

Bill Weis  
Burns & McDonnell  
4800 East 63rd Street  
Kansas City, MO 64130

RE: ATAS #4745.01-#4745.04  
#91-319-4-003 ECCKTA

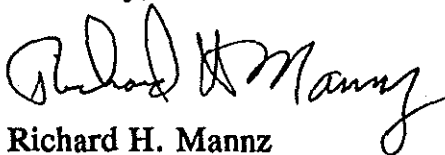
Dear Mr. Weis:

Enclosed are the analytical reports for the samples received in our laboratory on July 16, 1992. Per your request, sample AS-S/S2 was placed on analytical hold. If no further instructions are received within one week concerning this sample, ATAS will ship the sample back to Burns & McDonnell.

If, in your review, you should have any questions or require additional information, please call.

Thank you for choosing ATAS for your analytical needs.

Sincerely,



Richard H. Mannz  
Vice President

Enclosures



ATAS

US EPA ARCHIVE DOCUMENT

CLIENT: BURNS & McDONNELL  
 4800 EAST 63RD STREET  
 KANSAS CITY, MO 64130  
 ATTN: BILL WEIS

REPORT: 474501V(119)

DATE : 07-27-92

SAMPLE MATRIX : SOIL  
 ATAS # : 4745.01  
 DATE SUBMITTED: 07-16-92  
 DATE ANALYZED : 07-22-92  
 METHOD REF. : SW846-8240, EPA METHODOLOGY  
 PROJECT : #91-319-4-003  
 SAMPLE ID : AS-3, S-2

RESULTS REPORTED IN ug/Kg OR Parts Per Billion (PPB)

| <u>VOLATILES</u>         | <u>D.L.</u> | <u>RESULTS</u> | <u>VOLATILES</u>          | <u>D.L.</u> | <u>RESULTS</u> |
|--------------------------|-------------|----------------|---------------------------|-------------|----------------|
| CHLOROMETHANE            | 10          | ND             | 1,1,2,2-TETRACHLOROETHANE | 5           | ND             |
| BROMOMETHANE             | 10          | ND             | 1,2-DICHLOROPROPANE       | 5           | ND             |
| VINYL CHLORIDE           | 10          | ND             | TRANS-1,3-DICHLOROPROPENE | 5           | ND             |
| CHLOROETHANE             | 10          | ND             | TRICHLOROETHENE           | 5           | ND             |
| METHYLENE CHLORIDE       | 5           | 13 B           | DIBROMOCHLOROMETHANE      | 5           | ND             |
| ACETONE                  | 10          | 38             | 1,1,2-TRICHLOROETHANE     | 5           | ND             |
| CARBON DISULFIDE         | 5           | ND             | BENZENE                   | 5           | ND             |
| 1,1-DICHLOROETHENE       | 5           | ND             | CIS-1,3-DICHLOROPROPENE   | 5           | ND             |
| 1,1-DICHLOROETHANE       | 5           | ND             | BROMOFORM                 | 5           | ND             |
| TOTAL-1,2-DICHLOROETHENE | 5           | 1 J            | 2-HEXANONE                | 10          | ND             |
| CHLOROFORM               | 5           | ND             | 4-METHYL-2-PENTANONE      | 10          | ND             |
| 1,2-DICHLOROETHANE       | 5           | ND             | TETRACHLOROETHENE         | 5           | ND             |
| 2-BUTANONE               | 10          | 10             | TOLUENE                   | 5           | 3 J            |
| 1,1,1-TRICHLOROETHANE    | 5           | ND             | CHLOROBENZENE             | 5           | ND             |
| CARBON TETRACHLORIDE     | 5           | ND             | ETHYLBENZENE              | 5           | ND             |
| VINYL ACETATE            | 10          | ND             | STYRENE                   | 5           | ND             |
| ROMODICHLOROMETHANE      | 5           | ND             | TOTAL XYLENES             | 5           | ND             |

QA/QC SURROGATE RECOVERIES

TOLUENE-d8 (81-117) 107% BROMOFLUOROBENZENE (74-121) 97%  
 1,2-DICHLOROETHANE-D4 (70-121) 105%

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE  
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION  
 DL = DETECTION LIMIT  
 ND = NOT DETECTED ABOVE QUANTITATION LIMIT

US EPA ARCHIVE DOCUMENT



CLIENT: BURNS & McDONNELL  
 4800 EAST 63RD STREET  
 KANSAS CITY, MO 64130  
 ATTN: BILL WEIS

REPORT: 474504V(119)

DATE : 07-27-92

SAMPLE MATRIX : SOIL  
 ATAS # : 4745.04  
 DATE SUBMITTED: 07-16-92  
 DATE ANALYZED : 07-22-92 & 07-23-92  
 METHOD REF. : SW846-8240, EPA METHODOLOGY  
 PROJECT : #91-319-4-003  
 SAMPLE ID : AS-7, S-1

RESULTS REPORTED IN ug/Kg OR Parts Per Billion (PPB)

| <u>VOLATILES</u>         | <u>D.L.</u> | <u>RESULTS</u> | <u>VOLATILES</u>          | <u>D.L.</u> | <u>RESULTS</u> |
|--------------------------|-------------|----------------|---------------------------|-------------|----------------|
| CHLOROMETHANE            | 10          | ND             | 1,1,2,2-TETRACHLOROETHANE | 5           | ND             |
| BROMOMETHANE             | 10          | ND             | 1,2-DICHLOROPROPANE       | 5           | ND             |
| VINYL CHLORIDE           | 10          | 7 J            | TRANS-1,3-DICHLOROPROPENE | 5           | ND             |
| CHLOROETHANE             | 10          | ND             | TRICHLOROETHENE           | 630         | 320 J          |
| METHYLENE CHLORIDE       | 5           | 11 B           | DIBROMOCHLOROMETHANE      | 5           | ND             |
| ACETONE                  | 10          | 15             | 1,1,2-TRICHLOROETHANE     | 5           | 5              |
| CARBON DISULFIDE         | 5           | ND             | BENZENE                   | 5           | ND             |
| 1,1-DICHLOROETHENE       | 5           | 1 J            | CIS-1,3-DICHLOROPROPENE   | 5           | ND             |
| 1,1-DICHLOROETHANE       | 5           | ND             | BROMOFORM                 | 5           | ND             |
| TOTAL-1,2-DICHLOROETHENE | 630         | 2800           | 2-HEXANONE                | 10          | ND             |
| CHLOROFORM               | 5           | ND             | 4-METHYL-2-PENTANONE      | 10          | ND             |
| 1,2-DICHLOROETHANE       | 5           | ND             | TETRACHLOROETHENE         | 630         | 200 J          |
| 2-BUTANONE               | 1300        | 1200 J         | TOLUENE                   | 5           | 3 J            |
| 1,1,1-TRICHLOROETHANE    | 5           | ND             | CHLOROBENZENE             | 5           | ND             |
| CARBON TETRACHLORIDE     | 5           | ND             | ETHYLBENZENE              | 5           | 1 J            |
| VINYL ACETATE            | 10          | ND             | STYRENE                   | 5           | ND             |
| BROMODICHLOROMETHANE     | 5           | ND             | TOTAL XYLENES             | 5           | 3 J            |

QA/QC SURROGATE RECOVERIES

TOLUENE-d8(81-117) 103% BROMOFLUOROBENZENE(74-121) 88%  
 1,2-DICHLOROETHANE-D4(70-121) 94%

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE  
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION  
 DL = DETECTION LIMIT  
 ND = NOT DETECTED ABOVE QUANTITATION LIMIT

US EPA ARCHIVE DOCUMENT

CLIENT: BURNS & McDONNELL  
 4800 EAST 63RD STREET  
 KANSAS CITY, MO 64130  
 ATTN: BILL WEIS

REPORT: BK0722V(119)

DATE : 07-27-92

SAMPLE MATRIX : SOIL  
 ATAS # : METHOD BLANK  
 DATE SUBMITTED: 07-16-92  
 DATE ANALYZED : 07-22-92  
 METHOD REF. : SW846-8240, EPA METHODOLOGY  
 PROJECT : #91-319-4-003  
 SAMPLE ID : METHOD BLANK

RESULTS REPORTED IN ug/Kg OR Parts Per Billion (PPB)

| <u>VOLATILES</u>         | <u>D.L.</u> | <u>RESULTS</u> | <u>VOLATILES</u>          | <u>D.L.</u> | <u>RESULTS</u> |
|--------------------------|-------------|----------------|---------------------------|-------------|----------------|
| CHLOROMETHANE            | 10          | ND             | 1,1,2,2-TETRACHLOROETHANE | 5           | ND             |
| BROMOMETHANE             | 10          | ND             | 1,2-DICHLOROPROPANE       | 5           | ND             |
| VINYL CHLORIDE           | 10          | ND             | TRANS-1,3-DICHLOROPROPENE | 5           | ND             |
| CHLOROETHANE             | 10          | ND             | TRICHLOROETHENE           | 5           | ND             |
| METHYLENE CHLORIDE       | 5           | 4 J            | DIBROMOCHLOROMETHANE      | 5           | ND             |
| ACETONE                  | 10          | ND             | 1,1,2-TRICHLOROETHANE     | 5           | ND             |
| CARBON DISULFIDE         | 5           | ND             | BENZENE                   | 5           | ND             |
| 1,1-DICHLOROETHENE       | 5           | ND             | CIS-1,3-DICHLOROPROPENE   | 5           | ND             |
| 1,1-DICHLOROETHANE       | 5           | ND             | BROMOFORM                 | 5           | ND             |
| TOTAL-1,2-DICHLOROETHENE | 5           | ND             | 2-HEXANONE                | 10          | ND             |
| CHLOROFORM               | 5           | ND             | 4-METHYL-2-PENTANONE      | 10          | ND             |
| 1,2-DICHLOROETHANE       | 5           | ND             | TETRACHLOROETHENE         | 5           | ND             |
| 2-BUTANONE               | 10          | ND             | TOLUENE                   | 5           | ND             |
| 1,1,1-TRICHLOROETHANE    | 5           | ND             | CHLOROBENZENE             | 5           | ND             |
| CARBON TETRACHLORIDE     | 5           | ND             | ETHYLBENZENE              | 5           | ND             |
| VINYL ACETATE            | 10          | ND             | STYRENE                   | 5           | ND             |
| BROMODICHLOROMETHANE     | 5           | ND             | TOTAL XYLENES             | 5           | ND             |

QA/QC SURROGATE RECOVERIES

TOLUENE-d8 (81-117) 96% BROMOFLUOROBENZENE (74-121) 100%  
 1,2-DICHLOROETHANE-D4 (70-121) 95%

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE  
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION  
 DL = DETECTION LIMIT  
 ND = NOT DETECTED ABOVE QUANTITATION LIMIT

US EPA ARCHIVE DOCUMENT

**ATAS**

875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: BURNS & McDONNELL  
 4800 EAST 63RD STREET  
 KANSAS CITY, MO 64130  
 ATTN: BILL WEIS

REPORT: 474502V(119)

DATE : 07-27-92

SAMPLE MATRIX : SOIL  
 ATAS # : 4745.02  
 DATE SUBMITTED: 07-16-92  
 DATE ANALYZED : 07-22-92  
 METHOD REF. : SW846-8240, EPA METHODOLOGY  
 PROJECT : #91-319-4-003  
 SAMPLE ID : AS-9, S-2

RESULTS REPORTED IN ug/Kg OR Parts Per Billion (PPB)

| <u>VOLATILES</u>         | <u>D.L.</u> | <u>RESULTS</u> | <u>VOLATILES</u>          | <u>D.L.</u> | <u>RESULTS</u> |
|--------------------------|-------------|----------------|---------------------------|-------------|----------------|
| CHLOROMETHANE            | 10          | ND             | 1,1,2,2-TETRACHLOROETHANE | 5           | ND             |
| BROMOMETHANE             | 10          | ND             | 1,2-DICHLOROPROPANE       | 5           | ND             |
| VINYL CHLORIDE           | 10          | 7 J            | TRANS-1,3-DICHLOROPROPENE | 5           | ND             |
| CHLOROETHANE             | 10          | ND             | TRICHLOROETHENE           | 5           | 12             |
| METHYLENE CHLORIDE       | 5           | 14 B           | DIBROMOCHLOROMETHANE      | 5           | ND             |
| ACETONE                  | 10          | 93             | 1,1,2-TRICHLOROETHANE     | 5           | ND             |
| CARBON DISULFIDE         | 5           | 2 J            | BENZENE                   | 5           | ND             |
| 1,1-DICHLOROETHENE       | 5           | ND             | CIS-1,3-DICHLOROPROPENE   | 5           | ND             |
| 1,1-DICHLOROETHANE       | 5           | ND             | BROMOFORM                 | 5           | ND             |
| TOTAL-1,2-DICHLOROETHENE | 5           | 140            | 2-HEXANONE                | 10          | ND             |
| CHLOROFORM               | 5           | ND             | 4-METHYL-2-PENTANONE      | 10          | ND             |
| 1,2-DICHLOROETHANE       | 5           | ND             | TETRACHLOROETHENE         | 5           | 19             |
| 2-BUTANONE               | 10          | ND             | TOLUENE                   | 5           | 2 J            |
| 1,1,1-TRICHLOROETHANE    | 5           | ND             | CHLOROBENZENE             | 5           | ND             |
| CARBON TETRACHLORIDE     | 5           | ND             | ETHYLBENZENE              | 5           | ND             |
| VINYL ACETATE            | 10          | ND             | STYRENE                   | 5           | ND             |
| BROMODICHLOROMETHANE     | 5           | ND             | TOTAL XYLENES             | 5           | 3 J            |

QA/QC SURROGATE RECOVERIES

TOLUENE-d8 (81-117) 108% BROMOFLUOROBENZENE (74-121) 97%  
 1,2-DICHLOROETHANE-D4 (70-121) 103%

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE  
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION  
 DL = DETECTION LIMIT  
 ND = NOT DETECTED ABOVE QUANTITATION LIMIT

US EPA ARCHIVE DOCUMENT

CLIENT: BURNS & McDONNELL  
 4800 EAST 63RD STREET  
 KANSAS CITY, MO 64130  
 ATTN: BILL WEIS

REPORT: 474503V(119)

DATE : 07-27-92

SAMPLE MATRIX : SOIL  
 ATAS # : 4745.03  
 DATE SUBMITTED: 07-16-92  
 DATE ANALYZED : 07-22-92  
 METHOD REF. : SW846-8240, EPA METHODOLOGY  
 PROJECT : #91-319-4-003  
 SAMPLE ID : AS-8, S-2

RESULTS REPORTED IN ug/Kg OR Parts Per Billion (PPB)

| <u>VOLATILES</u>         | <u>D.L.</u> | <u>RESULTS</u> | <u>VOLATILES</u>          | <u>D.L.</u> | <u>RESULTS</u> |
|--------------------------|-------------|----------------|---------------------------|-------------|----------------|
| CHLOROMETHANE            | 10          | ND             | 1,1,2,2-TETRACHLOROETHANE | 5           | ND             |
| BROMOMETHANE             | 10          | ND             | 1,2-DICHLOROPROPANE       | 5           | ND             |
| VINYL CHLORIDE           | 10          | 4 J            | TRANS-1,3-DICHLOROPROPENE | 5           | ND             |
| CHLOROETHANE             | 10          | ND             | TRICHLOROETHENE           | 5           | ND             |
| METHYLENE CHLORIDE       | 5           | 16 B           | DIBROMOCHLOROMETHANE      | 5           | ND             |
| ACETONE                  | 10          | 30             | 1,1,2-TRICHLOROETHANE     | 5           | ND             |
| CARBON DISULFIDE         | 5           | ND             | BENZENE                   | 5           | ND             |
| 1,1-DICHLOROETHENE       | 5           | ND             | CIS-1,3-DICHLOROPROPENE   | 5           | ND             |
| 1,1-DICHLOROETHANE       | 5           | ND             | BROMOFORM                 | 5           | ND             |
| TOTAL-1,2-DICHLOROETHENE | 5           | 60             | 2-HEXANONE                | 10          | ND             |
| CHLOROFORM               | 5           | ND             | 4-METHYL-2-PENTANONE      | 10          | ND             |
| 1,2-DICHLOROETHANE       | 5           | ND             | TETRACHLOROETHENE         | 5           | ND             |
| 2-BUTANONE               | 10          | ND             | TOLUENE                   | 5           | 4 J            |
| 1,1,1-TRICHLOROETHANE    | 5           | ND             | CHLOROBENZENE             | 5           | ND             |
| CARBON TETRACHLORIDE     | 5           | ND             | ETHYLBENZENE              | 5           | 1 J            |
| VINYL ACETATE            | 10          | ND             | STYRENE                   | 5           | ND             |
| BROMODICHLOROMETHANE     | 5           | ND             | TOTAL XYLENES             | 5           | 3 J            |

QA/QC SURROGATE RECOVERIES

TOLUENE-d8 (81-117) 107% BROMOFLUOROBENZENE (74-121) 88%  
 1,2-DICHLOROETHANE-D4 (70-121) 100%

- B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
- J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION
- DL = DETECTION LIMIT
- ND = NOT DETECTED ABOVE QUANTITATION LIMIT

US EPA ARCHIVE DOCUMENT



CLIENT: BURNS & McDONNELL  
 4800 EAST 63RD STREET  
 KANSAS CITY, MO 64130  
 ATTN: BILL WEIS

REPORT: 474504V(119)  
 DATE : 07-27-92

SAMPLE MATRIX : SOIL  
 ATAS # : 4745.04  
 DATE SUBMITTED: 07-16-92  
 DATE ANALYZED : 07-22-92 & 07-23-92  
 METHOD REF. : SW846-8240, EPA METHODOLOGY  
 PROJECT : #91-319-4-003  
 SAMPLE ID : AS-7, S-1

RESULTS REPORTED IN ug/Kg OR Parts Per Billion (PPB)

| <u>VOLATILES</u>         | <u>D.L.</u> | <u>RESULTS</u> | <u>VOLATILES</u>          | <u>D.L.</u> | <u>RESULTS</u> |
|--------------------------|-------------|----------------|---------------------------|-------------|----------------|
| CHLOROMETHANE            | 10          | ND             | 1,1,2,2-TETRACHLOROETHANE | 5           | ND             |
| BROMOMETHANE             | 10          | ND             | 1,2-DICHLOROPROPANE       | 5           | ND             |
| VINYL CHLORIDE           | 10          | 7 J            | TRANS-1,3-DICHLOROPROPENE | 5           | ND             |
| CHLOROETHANE             | 10          | ND             | TRICHLOROETHENE           | 630         | 320 J          |
| METHYLENE CHLORIDE       | 5           | 11 B           | DIBROMOCHLOROMETHANE      | 5           | ND             |
| ACETONE                  | 10          | 15             | 1,1,2-TRICHLOROETHANE     | 5           | 5              |
| CARBON DISULFIDE         | 5           | ND             | BENZENE                   | 5           | ND             |
| 1,1-DICHLOROETHENE       | 5           | 1 J            | CIS-1,3-DICHLOROPROPENE   | 5           | ND             |
| 1,1-DICHLOROETHANE       | 5           | ND             | BROMOFORM                 | 5           | ND             |
| TOTAL-1,2-DICHLOROETHENE | 630         | 2800           | 2-HEXANONE                | 10          | ND             |
| CHLOROFORM               | 5           | ND             | 4-METHYL-2-PENTANONE      | 10          | ND             |
| 1,2-DICHLOROETHANE       | 5           | ND             | TETRACHLOROETHENE         | 630         | 200 J          |
| 2-BUTANONE               | 1300        | 1200 J         | TOLUENE                   | 5           | 3 J            |
| 1,1,1-TRICHLOROETHANE    | 5           | ND             | CHLOROBENZENE             | 5           | ND             |
| CARBON TETRACHLORIDE     | 5           | ND             | ETHYLBENZENE              | 5           | 1 J            |
| VINYL ACETATE            | 10          | ND             | STYRENE                   | 5           | ND             |
| BROMODICHLOROMETHANE     | 5           | ND             | TOTAL XYLENES             | 5           | 3 J            |

QA/QC SURROGATE RECOVERIES

TOLUENE-d8 (81-117) 103% BROMOFLUOROBENZENE(74-121) 88%  
 1,2-DICHLOROETHANE-D4 (70-121) 94%

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE  
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION  
 DL = DETECTION LIMIT  
 ND = NOT DETECTED ABOVE QUANTITATION LIMIT

CLIENT: BURNS & McDONNELL  
 4800 EAST 63RD STREET  
 KANSAS CITY, MO 64130  
 ATTN: BILL WEIS

REPORT: BK0722V(119)

DATE : 07-27-92

SAMPLE MATRIX : SOIL  
 ATAS # : METHOD BLANK  
 DATE SUBMITTED: 07-16-92  
 DATE ANALYZED : 07-22-92  
 METHOD REF. : SW846-8240, EPA METHODOLOGY  
 PROJECT : #91-319-4-003  
 SAMPLE ID : METHOD BLANK

RESULTS REPORTED IN ug/Kg OR Parts Per Billion (PPB)

| <u>VOLATILES</u>         | <u>D.L.</u> | <u>RESULTS</u> | <u>VOLATILES</u>          | <u>D.L.</u> | <u>RESULTS</u> |
|--------------------------|-------------|----------------|---------------------------|-------------|----------------|
| CHLOROMETHANE            | 10          | ND             | 1,1,2,2-TETRACHLOROETHANE | 5           | ND             |
| BROMOMETHANE             | 10          | ND             | 1,2-DICHLOROPROPANE       | 5           | ND             |
| VINYL CHLORIDE           | 10          | ND             | TRANS-1,3-DICHLOROPROPENE | 5           | ND             |
| CHLOROETHANE             | 10          | ND             | TRICHLOROETHENE           | 5           | ND             |
| METHYLENE CHLORIDE       | 5           | 4 J            | DIBROMOCHLOROMETHANE      | 5           | ND             |
| ACETONE                  | 10          | ND             | 1,1,2-TRICHLOROETHANE     | 5           | ND             |
| CARBON DISULFIDE         | 5           | ND             | BENZENE                   | 5           | ND             |
| 1,1-DICHLOROETHENE       | 5           | ND             | CIS-1,3-DICHLOROPROPENE   | 5           | ND             |
| 1,1-DICHLOROETHANE       | 5           | ND             | BROMOFORM                 | 5           | ND             |
| TOTAL-1,2-DICHLOROETHENE | 5           | ND             | 2-HEXANONE                | 10          | ND             |
| CHLOROFORM               | 5           | ND             | 4-METHYL-2-PENTANONE      | 10          | ND             |
| 1,2-DICHLOROETHANE       | 5           | ND             | TETRACHLOROETHENE         | 5           | ND             |
| 2-BUTANONE               | 10          | ND             | TOLUENE                   | 5           | ND             |
| 1,1,1-TRICHLOROETHANE    | 5           | ND             | CHLOROBENZENE             | 5           | ND             |
| CARBON TETRACHLORIDE     | 5           | ND             | ETHYLBENZENE              | 5           | ND             |
| VINYL ACETATE            | 10          | ND             | STYRENE                   | 5           | ND             |
| BROMODICHLOROMETHANE     | 5           | ND             | TOTAL XYLENES             | 5           | ND             |

QA/OC SURROGATE RECOVERIES

TOLUENE-d8 (81-117) 96% BROMOFLUOROBENZENE (74-121) 100%  
 1,2-DICHLOROETHANE-D4 (70-121) 95%

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE  
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION  
 DL = DETECTION LIMIT  
 ND = NOT DETECTED ABOVE QUANTITATION LIMIT

US EPA ARCHIVE DOCUMENT

CLIENT: BURNS & McDONNELL  
4800 EAST 63RD STREET  
KANSAS CITY, MO 64130  
ATTN: BILL WEIS

REPORT: QC0722V(119)

DATE : 07-27-92

SAMPLE MATRIX : WATER  
DATE ANALYZED : 07-22-92  
METHOD REF. : SW846-8240, EPA METHODOLOGY

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

**SPIKE BLANK/SPIKE BLANK DUPLICATE RECOVERY**

| <u>COMPOUND</u>    | <u>SPIKE<br/>ADDED</u> | <u>BLANK<br/>CONC.</u> | <u>SPK A<br/>CONC.</u> | <u>SPK A<br/>% REC.</u> | <u>QC REC.<br/>LIMITS</u> |
|--------------------|------------------------|------------------------|------------------------|-------------------------|---------------------------|
| 1,1-DICHLOROETHENE | 50                     | ND                     | 49.2                   | 98                      | 61-145                    |
| TRICHLOROETHENE    | 50                     | ND                     | 44.5                   | 89                      | 71-120                    |
| BENZENE            | 50                     | ND                     | 50.8                   | 102                     | 76-127                    |
| TOLUENE            | 50                     | ND                     | 52.9                   | 106                     | 76-125                    |
| CHLOROBENZENE      | 50                     | ND                     | 52.2                   | 104                     | 75-130                    |

| <u>COMPOUND</u>    | <u>SPIKE<br/>ADDED</u> | <u>SPK B<br/>CONC.</u> | <u>SPK B<br/>% REC.</u> | <u>% RPD</u> | <u>QC LIMITS<br/>RPD REC.</u> |
|--------------------|------------------------|------------------------|-------------------------|--------------|-------------------------------|
| 1,1-DICHLOROETHENE | 50                     | 50.6                   | 101                     | 3            | 14 61-145                     |
| TRICHLOROETHENE    | 50                     | 44.5                   | 89                      | 0            | 14 71-120                     |
| BENZENE            | 50                     | 51.2                   | 102                     | 1            | 11 76-127                     |
| TOLUENE            | 50                     | 51                     | 102                     | 4            | 13 76-125                     |
| CHLOROBENZENE      | 50                     | 51                     | 102                     | 2            | 13 75-130                     |

\* = VALUES OUTSIDE OF QC LIMITS  
ND = NOT DETECTED ABOVE QUANTITATION LIMIT

US EPA ARCHIVAL DOCUMENT



CLIENT: BURNS & McDONNELL  
 4800 EAST 63RD STREET  
 KANSAS CITY, MO 64130  
 ATTN: BILL WEIS

REPORT: BK0723V(119)

DATE : 07-27-92

SAMPLE MATRIX : SOIL  
 ATAS # : METHOD BLANK  
 DATE SUBMITTED: 07-16-92  
 DATE ANALYZED : 07-23-92  
 METHOD REF. : SW846-8240, EPA METHODOLOGY  
 PROJECT : #91-319-4-003  
 SAMPLE ID : METHOD BLANK

RESULTS REPORTED IN ug/Kg OR Parts Per Billion (PPB)

| <u>VOLATILES</u>         | <u>D.L.</u> | <u>RESULTS</u> | <u>VOLATILES</u>          | <u>D.L.</u> | <u>RESULTS</u> |
|--------------------------|-------------|----------------|---------------------------|-------------|----------------|
| CHLOROMETHANE            | 10          | ND             | 1,1,2,2-TETRACHLOROETHANE | 5           | ND             |
| BROMOMETHANE             | 10          | ND             | 1,2-DICHLOROPROPANE       | 5           | ND             |
| VINYL CHLORIDE           | 10          | ND             | TRANS-1,3-DICHLOROPROPENE | 5           | ND             |
| CHLOROETHANE             | 10          | ND             | TRICHLOROETHENE           | 5           | ND             |
| METHYLENE CHLORIDE       | 5           | 3 J            | DIBROMOCHLOROMETHANE      | 5           | ND             |
| ACETONE                  | 10          | ND             | 1,1,2-TRICHLOROETHANE     | 5           | ND             |
| CARBON DISULFIDE         | 5           | ND             | BENZENE                   | 5           | ND             |
| 1,1-DICHLOROETHENE       | 5           | ND             | CIS-1,3-DICHLOROPROPENE   | 5           | ND             |
| 1,1-DICHLOROETHANE       | 5           | ND             | BROMOFORM                 | 5           | ND             |
| TOTAL-1,2-DICHLOROETHENE | 5           | ND             | 2-HEXANONE                | 10          | ND             |
| CHLOROFORM               | 5           | ND             | 4-METHYL-2-PENTANONE      | 10          | ND             |
| 1,2-DICHLOROETHANE       | 5           | ND             | TETRACHLOROETHENE         | 5           | ND             |
| 2-BUTANONE               | 10          | ND             | TOLUENE                   | 5           | ND             |
| 1,1,1-TRICHLOROETHANE    | 5           | ND             | CHLOROBENZENE             | 5           | ND             |
| CARBON TETRACHLORIDE     | 5           | ND             | ETHYLBENZENE              | 5           | ND             |
| VINYL ACETATE            | 10          | ND             | STYRENE                   | 5           | ND             |
| BROMODICHLOROMETHANE     | 5           | ND             | TOTAL XYLENES             | 5           | ND             |

OA/OC SURROGATE RECOVERIES

TOLUENE-d8 (81-117) 108% BROMOFLUOROBENZENE (74-121) 110%  
 1,2-DICHLOROETHANE-D4 (70-121) 99%

B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE  
 J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION  
 DL = DETECTION LIMIT  
 ND = NOT DETECTED ABOVE QUANTITATION LIMIT

US EPA ARCHIVE DOCUMENT





875 Fee Fee Road • Maryland Heights, MO 63043 • (314) 434-4570 - FAX (314) 434-0080

CLIENT: BURNS & McDONNELL  
 4800 EAST 63RD STREET  
 KANSAS CITY, MO 64130  
 ATTN: BILL WEIS

REPORT: QC0723V(119)

DATE : 07-27-92

SAMPLE MATRIX : WATER  
 DATE ANALYZED : 07-23-92  
 METHOD REF. : SW846-8240, EPA METHODOLOGY

RESULTS REPORTED IN ug/L OR PARTS PER BILLION (PPB)

**SPIKE BLANK/SPIKE BLANK DUPLICATE RECOVERY**

| COMPOUND           | SPIKE ADDED | BLANK CONC. | SPK A CONC. | SPK A % REC. | QC REC. LIMITS |
|--------------------|-------------|-------------|-------------|--------------|----------------|
| 1,1-DICHLOROETHENE | 50          | ND          | 58.4        | 117          | 61-145         |
| TRICHLOROETHENE    | 50          | ND          | 58.6        | 117          | 71-120         |
| BENZENE            | 50          | ND          | 62.4        | 125          | 76-127         |
| TOLUENE            | 50          | ND          | 62.5        | 125          | 76-125         |
| CHLOROBENZENE      | 50          | ND          | 63.4        | 127          | 75-130         |

| COMPOUND           | SPIKE ADDED | SPK B CONC. | SPK B % REC. | % RPD | QC LIMITS RPD REC. |
|--------------------|-------------|-------------|--------------|-------|--------------------|
| 1,1-DICHLOROETHENE | 50          | 52          | 104          | 12    | 14 61-145          |
| TRICHLOROETHENE    | 50          | 52.2        | 104          | 12    | 14 71-120          |
| BENZENE            | 50          | 57.7        | 115          | 8     | 11 76-127          |
| TOLUENE            | 50          | 58.2        | 116          | 7     | 13 76-125          |
| CHLOROBENZENE      | 50          | 58.3        | 117          | 8     | 13 75-130          |

US EPA ARCHIVE DOCUMENT

## Request For Chemical Analysis And Chain Of Custody Record

**EMPLOYEE - OWNED**  
**Burns & McDonnell**  
 ENGINEERS - ARCHITECTS - CONSULTANTS  
 4300 East 63rd Street  
 Kansas City, MO 64130  
 (816) 333-4375

Client : BURNS & McDONNELL WCI  
 Address : 10881 LOWELL  
 City, State, Zip : OVERLAND PARK, KS  
 Telephone : 816-333-8787  
 Attention : BILL WEIS

Laboratory : ATAS  
 Address : 875 Fee Fee Rd.  
 City, State, Zip : MARYLAND HEIGHTS MO 63043  
 Telephone : 314-434-4570  
 Laboratory Reference Number :

Document Control No. : 71592  
 (NA if Not Applicable)

| Project Number                                   |                  | Project Name   |              |             |       |     |       |      |                      |          |           |  |  |  |  |  |  |                |
|--|------------------|----------------|--------------|-------------|-------|-----|-------|------|----------------------|----------|-----------|--|--|--|--|--|--|----------------|
| <u>91-319-4-007</u>                              |                  | <u>ECCGKA</u>  |              |             |       |     |       |      |                      |          |           |  |  |  |  |  |  |                |
| Sampler(s) (Signature)                           |                  |                |              |             |       |     |       |      |                      |          |           |  |  |  |  |  |  |                |
| <u>Shawn Slattery</u>                            |                  |                |              |             |       |     |       |      |                      |          |           |  |  |  |  |  |  |                |
| Station Number                                   | Station Location | Date           | Time         | Sample Type |       |     |       |      | Number of Containers | Analysis | VOCATILES |  |  |  |  |  |  | Remarks        |
|  |                  |                |              | Liquid      | Solid | Gas | Comp. | Grab |                      |          |           |  |  |  |  |  |  |                |
| <u>AS-3</u>                                      | <u>S-2</u>       | <u>7/14/92</u> | <u>4:30p</u> | <u>X</u>    |       |     |       |      | <u>1</u>             | <u>X</u> |           |  |  |  |  |  |  | <u>4745.01</u> |
| <u>AS-9</u>                                      | <u>S-2</u>       | <u>7/15/92</u> | <u>4:30p</u> | <u>X</u>    |       |     |       |      | <u>1</u>             | <u>X</u> |           |  |  |  |  |  |  | <u>.02</u>     |
| <u>AS-8</u>                                      | <u>S-2</u>       | <u>7/15/92</u> | <u>3:50p</u> | <u>X</u>    |       |     |       |      | <u>1</u>             | <u>X</u> |           |  |  |  |  |  |  | <u>.03</u>     |
| <u>AS-7</u>                                      | <u>S-1</u>       | <u>7/15/92</u> | <u>1:50p</u> | <u>X</u>    |       |     |       |      | <u>1</u>             | <u>X</u> |           |  |  |  |  |  |  | <u>.04</u>     |
| <u>AS-5</u>                                      | <u>S-2</u>       | <u>7/15/92</u> | <u>9:00a</u> |             |       |     |       |      |                      |          |           |  |  |  |  |  |  | <u>.05</u>     |
| <u>PLEASE HOLD FOR ANALYSES AT A LATER TIME.</u> |                  |                |              |             |       |     |       |      |                      |          |           |  |  |  |  |  |  |                |

|  |                             |   |                                   |  |           |                           |
|--|-----------------------------|---|-----------------------------------|--|-----------|---------------------------|
| Relinquished By : (Signature)<br><u>Shawn Slattery</u> | Date/Time<br><u>7/15/92</u> | Received By : (Signature)<br><u>Jawton Hassenberg</u> | Date/Time<br><u>7/16/92 07:16</u> | Relinquished By : (Signature)<br><u>2.</u> | Date/Time | Received By : (Signature) |
| Relinquished By : (Signature)                          | Date/Time                   | Received By Laboratory : (Signature)                  | Date/Time                         | Remarks                                    |           |                           |

**APPENDIX J**  
**HISTORICAL ANALYTICAL RESULTS**

APPENDIX J  
INTRODUCTION

This appendix contains the analytical data reports from previous investigations at EG&G KT Aerofab. Each section is preceded by a blue page which gives the title of the report from which the data came, the report author, and the report date. Please refer to these reports for further details on sampling locations.

The third section contains laboratory results from the Preliminary Site Assessment Report by Groundwater Technology, Inc. Two different labs performed sample analyses. Both sets of results are presented and are separated by a white page.

\* \* \* \* \*

**Environmental Assessment Phase I  
Missouri Metals Shaping Company, St. Louis, Missouri  
O'Brien & Gere Engineers, Inc.  
March 1988**

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PH 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09823

DATE RECEIVED: 2/26/88

DATE SAMPLED: 2/26/88

SAMPLE MATRIX: WATER

SAMPLE IDENTITY: MISSOURI METAL, GROUNDWATER  
 MONITORING WELL #1

| PARAMETER            | DETECTION LIMIT | CONCENTRATION/VALUE | UNITS |
|----------------------|-----------------|---------------------|-------|
| Total Chromium       | 0.003           | 0.112               | mg/l  |
| Dissolved Chromium   | 0.003           | 0.015               | mg/l  |
| Total Organic Carbon | 1.0             | 17.90               | mg/l  |
| Oil & Grease         | 5.0             | < 5.0               | mg/l  |

| VOLATILE ORGANIC COMPOUNDS | DETECTION LIMIT UG/L | CONCENTRATION UG/L |
|----------------------------|----------------------|--------------------|
| Perchloroethylene          | 0.03                 | 0.60               |
| Bromoform                  | 0.20                 | ND                 |
| Carbon Tetrachloride       | 0.12                 | 3.30               |
| Chlorobenzene              | 0.52                 | ND                 |
| Chloroform                 | 0.05                 | ND                 |
| Dibromochloromethane       | 0.09                 | ND                 |
| 1,1-Dichloroethane         | 0.07                 | ND                 |
| 1,2-Dichloroethane         | 0.03                 | ND                 |
| 1,1-Dichloroethene         | 0.13                 | ND                 |
| Trans-1,2-Dichloroethene   | 0.10                 | ND                 |

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09823

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/L | CONCENTRATION<br>UG/L |
|-------------------------------|-------------------------|-----------------------|
|-------------------------------|-------------------------|-----------------------|

|                       |      |    |
|-----------------------|------|----|
| Trichloroethene       | 0.12 | ND |
| 1,2-Dichloropropane   | 0.04 | ND |
| Bromodichloromethane  | 0.10 | ND |
| 1,1,1-Trichloroethane | 0.03 | ND |
| 1,2-Dichlorobenzene   | 0.15 | ND |
| 1,3-Dichlorobenzene   | 0.32 | ND |
| 1,4-Dichlorobenzene   | 0.24 | ND |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09824

DATE RECEIVED: 2/26/88

DATE SAMPLED: 2/26/88

SAMPLE MATRIX: WATER

SAMPLE IDENTITY: MISSOURI METAL, GROUNDWATER  
 MONITORING WELL #2

| PARAMETER            | DETECTION LIMIT | CONCENTRATION/VALUE | UNITS |
|----------------------|-----------------|---------------------|-------|
| Total Chromium       | 0.003           | 0.026               | mg/l  |
| Dissolved Chromium   | 0.003           | 0.016               | mg/l  |
| Total Organic Carbon | 1.0             | 7.48                | mg/l  |
| Oil & Grease         | 5.0             | < 5.0               | mg/l  |

| VOLATILE ORGANIC COMPOUNDS | DETECTION LIMIT UG/L | CONCENTRATION UG/L |
|----------------------------|----------------------|--------------------|
| Perchloroethylene          | 0.03                 | 15.73              |
| Bromoform                  | 0.20                 | 2.59               |
| Carbon Tetrachloride       | 0.12                 | ND                 |
| Chlorobenzene              | 0.52                 | 2.74               |
| Chloroform                 | 0.05                 | ND                 |
| Dibromochloromethane       | 0.09                 | ND                 |
| 1,1-Dichloroethane         | 0.07                 | ND                 |
| 1,2-Dichloroethane         | 0.03                 | ND                 |
| 1,1-Dichloroethene         | 0.13                 | 53.90              |
| Trans-1,2-Dichloroethene   | 0.10                 | 127.02             |



CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09824

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/L | CONCENTRATION<br>UG/L |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 0.12                    | 320.13                |
| 1,2-Dichloropropane           | 0.04                    | ND                    |
| Bromodichloromethane          | 0.10                    | ND                    |
| 1,1,1-Trichloroethane         | 0.03                    | 54.75                 |
| 1,2-Dichlorobenzene           | 0.15                    | ND                    |
| 1,3-Dichlorobenzene           | 0.32                    | ND                    |
| 1,4-Dichlorobenzene           | 0.24                    | ND                    |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09825

DATE RECEIVED: 2/26/88

DATE SAMPLED: 2/26/88

SAMPLE MATRIX: WATER

SAMPLE IDENTITY: MISSOURI METAL, GROUNDWATER  
 MONITORING WELL #3

| PARAMETER            | DETECTION LIMIT | CONCENTRATION/ VALUE | UNITS |
|----------------------|-----------------|----------------------|-------|
| Total Chromium       | 0.003           | 0.062                | mg/l  |
| Dissolved Chromium   | 0.003           | 0.008                | mg/l  |
| Total Organic Carbon | 1.0             | 6.43                 | mg/l  |
| Oil & Grease         | 5.0             | 7.45                 | mg/l  |

| VOLATILE ORGANIC COMPOUNDS | DETECTION LIMIT UG/L | CONCENTRATION UG/L |
|----------------------------|----------------------|--------------------|
| Perchloroethylene          | 0.03                 | 115.22             |
| Bromoform                  | 0.20                 | 2.36               |
| Carbon Tetrachloride       | 0.12                 | ND                 |
| Chlorobenzene              | 0.52                 | ND                 |
| Chloroform                 | 0.05                 | ND                 |
| Dibromochloromethane       | 0.09                 | ND                 |
| 1,1-Dichloroethane         | 0.07                 | ND                 |
| 1,2-Dichloroethane         | 0.03                 | ND                 |
| 1,1-Dichloroethene         | 0.13                 | 43.84              |
| Trans-1,2-Dichloroethene   | 0.10                 | 131.62             |

US EPA ARCHIVAL DOCUMENT

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09825

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/L | CONCENTRATION<br>UG/L |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 0.12                    | 345.47                |
| 1,2-Dichloropropane           | 0.04                    | ND                    |
| Bromodichloromethane          | 0.10                    | 7.81                  |
| 1,1,1-Trichloroethane         | 0.03                    | 52.06                 |
| 1,2-Dichlorobenzene           | 0.15                    | ND                    |
| 1,3-Dichlorobenzene           | 0.32                    | ND                    |
| 1,4-Dichlorobenzene           | 0.24                    | ND                    |

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09826

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/L | CONCENTRATION<br>UG/L |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 0.12                    | 28.43                 |
| 1,2-Dichloropropane           | 0.04                    | ND                    |
| Bromodichloromethane          | 0.10                    | ND                    |
| 1,1,1-Trichloroethane         | 0.03                    | 10.85                 |
| 1,2-Dichlorobenzene           | 0.15                    | ND                    |
| 1,3-Dichlorobenzene           | 0.32                    | ND                    |
| 1,4-Dichlorobenzene           | 0.24                    | ND                    |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09826

DATE RECEIVED: 2/26/88

DATE SAMPLED: 2/26/88

SAMPLE MATRIX: WATER

SAMPLE IDENTITY: MISSOURI METAL, GROUNDWATER  
 MONITORING WELL #4

| PARAMETER            | DETECTION LIMIT | CONCENTRATION/ VALUE | UNITS |
|----------------------|-----------------|----------------------|-------|
| Total Chromium       | 0.003           | 0.068                | mg/l  |
| Dissolved Chromium   | 0.003           | 0.012                | mg/l  |
| Total Organic Carbon | 1.0             | 4.15                 | mg/l  |
| Oil & Grease         | 5.0             | < 5.0                | mg/l  |

| VOLATILE ORGANIC COMPOUNDS | DETECTION LIMIT UG/L | CONCENTRATION UG/L |
|----------------------------|----------------------|--------------------|
| Perchloroethylene          | 0.03                 | ND                 |
| Bromoform                  | 0.20                 | 2.33               |
| Carbon Tetrachloride       | 0.12                 | ND                 |
| Chlorobenzene              | 0.52                 | ND                 |
| Chloroform                 | 0.05                 | ND                 |
| Dibromochloromethane       | 0.09                 | ND                 |
| 1,1-Dichloroethane         | 0.07                 | ND                 |
| 1,2-Dichloroethane         | 0.03                 | ND                 |
| 1,1-Dichloroethene         | 0.13                 | ND                 |
| Trans-1,2-Dichloroethene   | 0.10                 | 39.11              |

## CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09826

DATE RECEIVED: 2/26/88

DATE SAMPLED: 2/26/88

SAMPLE MATRIX: WATER

SAMPLE IDENTITY: MISSOURI METAL, GROUNDWATER  
 MONITORING WELL #4

| PARAMETER            | DETECTION<br>LIMIT | CONCENTRATION/<br>VALUE | UNITS |
|----------------------|--------------------|-------------------------|-------|
| Total Chromium       | 0.003              | 0.068                   | mg/l  |
| Dissolved Chromium   | 0.003              | 0.012                   | mg/l  |
| Total Organic Carbon | 1.0                | 4.15                    | mg/l  |
| Oil & Grease         | 5.0                | < 5.0                   | mg/l  |

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/L | CONCENTRATION<br>UG/L |
|-------------------------------|-------------------------|-----------------------|
| Perchloroethylene             | 0.03                    | ND                    |
| Bromoform                     | 0.20                    | 2.33                  |
| Carbon Tetrachloride          | 0.12                    | ND                    |
| Chlorobenzene                 | 0.52                    | ND                    |
| Chloroform                    | 0.05                    | ND                    |
| Dibromochloromethane          | 0.09                    | ND                    |
| 1,1-Dichloroethane            | 0.07                    | ND                    |
| 1,2-Dichloroethane            | 0.03                    | ND                    |
| 1,1-Dichloroethene            | 0.13                    | ND                    |
| Trans-1,2-Dichloroethene      | 0.10                    | 39.11                 |

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09826

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/L | CONCENTRATION<br>UG/L |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 0.12                    | 28.43                 |
| 1,2-Dichloropropane           | 0.04                    | ND                    |
| Bromodichloromethane          | 0.10                    | ND                    |
| 1,1,1-Trichloroethane         | 0.03                    | 10.85                 |
| 1,2-Dichlorobenzene           | 0.15                    | ND                    |
| 1,3-Dichlorobenzene           | 0.32                    | ND                    |
| 1,4-Dichlorobenzene           | 0.24                    | ND                    |

## CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09616

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, SAMPLE 1  
 SURFACE SOIL

| PARAMETER            | DETECTION<br>LIMIT | CONCENTRATION/<br>VALUE | UNITS |
|----------------------|--------------------|-------------------------|-------|
| Total Chromium       | 0.3                | 732                     | mg/kg |
| EP Toxicity Chromium | 0.003              | 0.068                   | mg/l  |
| Total Organic Carbon | 1.0                | 99,700                  | ug/g  |
| pH                   |                    | 8.20                    | Std.  |
| Oil & Grease         |                    | 13.57                   | *     |

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Perchloroethylene             | 0.3                     | ND                    |
| Bromoform                     | 2.0                     | ND                    |
| Carbon Tetrachloride          | 1.2                     | ND                    |
| Chlorobenzene                 | 5.2                     | ND                    |
| Chloroform                    | 0.5                     | ND                    |
| Dibromochloromethane          | 0.9                     | ND                    |
| 1,1-Dichloroethane            | 0.7                     | ND                    |
| 1,2-Dichloroethane            | 0.3                     | ND                    |
| 1,1-Dichloroethene            | 1.3                     | ND                    |
| Trans-1,2-Dichloroethene      | 1.0                     | ND                    |



CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09616

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
|-------------------------------|-------------------------|-----------------------|

|                       |     |    |
|-----------------------|-----|----|
| Trichloroethene       | 1.2 | ND |
| 1,2-Dichloropropane   | 0.4 | ND |
| Bromodichloromethane  | 1.0 | ND |
| 1,1,1-Trichloroethane | 0.3 | ND |
| 1,2-Dichlorobenzene   | 1.5 | ND |
| 1,3-Dichlorobenzene   | 3.2 | ND |
| 1,4-Dichlorobenzene   | 2.4 | ND |

## CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09617

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, SAMPLE 2  
 SURFACE SOIL

| PARAMETER            | DETECTION<br>LIMIT | CONCENTRATION/<br>VALUE | UNITS |
|----------------------|--------------------|-------------------------|-------|
| Total Chromium       | 0.3                | 38.7                    | ng/kg |
| EP Toxicity Chromium | 0.003              | 0.027                   | ng/l  |
| Total Organic Carbon | 1.0                | 141,789                 | ug/g  |
| pH                   |                    | 8.15                    | Std.  |
| Oil & Grease         |                    | 1.66                    | *     |

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
|-------------------------------|-------------------------|-----------------------|

|                          |     |      |
|--------------------------|-----|------|
| Perchloroethylene        | 0.3 | ND   |
| Bromoform                | 2.0 | ND   |
| Carbon Tetrachloride     | 1.2 | ND   |
| Chlorobenzene            | 5.2 | 3.35 |
| Chloroform               | 0.5 | ND   |
| Dibromochloromethane     | 0.9 | ND   |
| 1,1-Dichloroethane       | 0.7 | ND   |
| 1,2-Dichloroethane       | 0.3 | 1.57 |
| 1,1-Dichloroethene       | 1.3 | ND   |
| Trans-1,2-Dichloroethene | 1.0 | ND   |

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09617

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | ND                    |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | ND                    |
| 1,1,1-Trichloroethane         | 0.3                     | ND                    |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

## CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09618

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, SAMPLE 3  
 SURFACE SOIL

| PARAMETER            | DETECTION<br>LIMIT | CONCENTRATION/<br>VALUE | UNITS |
|----------------------|--------------------|-------------------------|-------|
| Total Chromium       | 0.3                | 31.3                    | mg/kg |
| EP Toxicity Chromium | 0.003              | 0.046                   | mg/l  |
| Total Organic Carbon | 1.0                | 594,542                 | ug/g  |
| pH                   |                    | 7.38                    | Std.  |
| Oil & Grease         |                    | 20.48                   | %     |

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
|-------------------------------|-------------------------|-----------------------|

|                          |     |    |
|--------------------------|-----|----|
| Perchloroethylene        | 0.3 | ND |
| Bromoform                | 2.0 | ND |
| Carbon Tetrachloride     | 1.2 | ND |
| Chlorobenzene            | 5.2 | ND |
| Chloroform               | 0.5 | ND |
| Dibromochloromethane     | 0.9 | ND |
| 1,1-Dichloroethane       | 0.7 | ND |
| 1,2-Dichloroethane       | 0.3 | ND |
| 1,1-Dichloroethene       | 1.3 | ND |
| Trans-1,2-Dichloroethene | 1.0 | ND |

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09618

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | ND                    |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | ND                    |
| 1,1,1-Trichloroethane         | 0.3                     | 2.16                  |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09619

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, SAMPLE 4  
 SURFACE SOIL

| PARAMETER            | DETECTION LIMIT | CONCENTRATION/VALUE | UNITS |
|----------------------|-----------------|---------------------|-------|
| Total Chromium       | 0.3             | 25.8                | mg/kg |
| EP Toxicity Chromium | 0.003           | 0.037               | mg/l  |
| Total Organic Carbon | 1.0             | 40,228              | ug/g  |
| pH                   |                 | 8.38                | Std.  |
| Oil & Grease         |                 | 0.34                | *     |

| VOLATILE ORGANIC COMPOUNDS | DETECTION LIMIT UG/G | CONCENTRATION UG/G |
|----------------------------|----------------------|--------------------|
| Perchloroethylene          | 0.3                  | ND                 |
| Bromoform                  | 2.0                  | ND                 |
| Carbon Tetrachloride       | 1.2                  | ND                 |
| Chlorobenzene              | 5.2                  | ND                 |
| Chloroform                 | 0.5                  | ND                 |
| Dibromochloromethane       | 0.9                  | ND                 |
| 1,1-Dichloroethane         | 0.7                  | ND                 |
| 1,2-Dichloroethane         | 0.3                  | ND                 |
| 1,1-Dichloroethene         | 1.3                  | ND                 |
| Trans-1,2-Dichloroethene   | 1.0                  | ND                 |

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09619

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | ND                    |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | ND                    |
| 1,1,1-Trichloroethane         | 0.3                     | ND                    |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

## CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09620

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, SAMPLE 5  
 SURFACE SOIL

| PARAMETER            | DETECTION<br>LIMIT | CONCENTRATION/<br>VALUE | UNITS |
|----------------------|--------------------|-------------------------|-------|
| Total Chromium       | 0.3                | 28.4                    | ng/kg |
| EP Toxicity Chromium | 0.003              | 0.038                   | mg/l  |
| Total Organic Carbon | 1.0                | 148,208                 | ug/g  |
| pH                   |                    | 8.43                    | Std.  |
| Oil & Grease         |                    | 0.20                    | *     |

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
|-------------------------------|-------------------------|-----------------------|

|                          |     |    |
|--------------------------|-----|----|
| Perchloroethylene        | 0.3 | ND |
| Bromoform                | 2.0 | ND |
| Carbon Tetrachloride     | 1.2 | ND |
| Chlorobenzene            | 5.2 | ND |
| Chloroform               | 0.5 | ND |
| Dibromochloromethane     | 0.9 | ND |
| 1,1-Dichloroethane       | 0.7 | ND |
| 1,2-Dichloroethane       | 0.3 | ND |
| 1,1-Dichloroethene       | 1.3 | ND |
| Trans-1,2-Dichloroethene | 1.0 | ND |



CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09620

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | ND                    |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | ND                    |
| 1,1,1-Trichloroethane         | 0.3                     | ND                    |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09625

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/19/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, B-1,  
 3.5'-5.0'

| PARAMETER            | DETECTION LIMIT | CONCENTRATION/ VALUE | UNITS |
|----------------------|-----------------|----------------------|-------|
| Total Chromium       | 0.3             | 13.7                 | ng/kg |
| EP Toxicity Chromium | 0.003           | 0.012                | ng/l  |
| Total Organic Carbon | 1.0             | 30,033               | ug/g  |
| pH                   |                 | 6.72                 | Std.  |
| Oil & Grease         |                 | 0.048                | %     |

| VOLATILE ORGANIC COMPOUNDS | DETECTION LIMIT UG/G | CONCENTRATION UG/G |
|----------------------------|----------------------|--------------------|
| Perchloroethylene          | 0.3                  | 1.31               |
| Bromoform                  | 2.0                  | ND                 |
| Carbon Tetrachloride       | 1.2                  | ND                 |
| Chlorobenzene              | 5.2                  | ND                 |
| Chloroform                 | 0.5                  | ND                 |
| Dibromochloromethane       | 0.9                  | ND                 |
| 1,1-Dichloroethane         | 0.7                  | ND                 |
| 1,2-Dichloroethane         | 0.3                  | ND                 |
| 1,1-Dichloroethene         | 1.3                  | ND                 |
| Trans-1,2-Dichloroethene   | 1.0                  | ND                 |

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09625

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | ND                    |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | ND                    |
| 1,1,1-Trichloroethane         | 0.3                     | ND                    |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09626

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/19/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, B-2,  
 3.5'-5.0'

| PARAMETER            | DETECTION LIMIT | CONCENTRATION/ VALUE | UNITS |
|----------------------|-----------------|----------------------|-------|
| Total Chromium       | 0.3             | 11.8                 | mg/kg |
| EF Toxicity Chromium | 0.003           | < 0.003              | mg/l  |
| Total Organic Carbon | 1.0             | 10,114               | ug/g  |
| pH                   |                 | 7.68                 | Std.  |
| Oil & Grease         |                 | 0.005                | %     |

| VOLATILE ORGANIC COMPOUNDS | DETECTION LIMIT UG/G | CONCENTRATION UG/G |
|----------------------------|----------------------|--------------------|
| Perchloroethylene          | 0.3                  | 21.30              |
| Bromoform                  | 2.0                  | ND                 |
| Carbon Tetrachloride       | 1.2                  | ND                 |
| Chlorobenzene              | 5.2                  | ND                 |
| Chloroform                 | 0.5                  | ND                 |
| Dibromochloromethane       | 0.9                  | ND                 |
| 1,1-Dichloroethane         | 0.7                  | ND                 |
| 1,2-Dichloroethane         | 0.3                  | ND                 |
| 1,1-Dichloroethene         | 1.3                  | ND                 |
| Trans-1,2-Dichloroethene   | 1.0                  | ND                 |

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09626

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | 12.85                 |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | ND                    |
| 1,1,1-Trichloroethane         | 0.3                     | 0.34                  |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: A809627

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/19/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, B-3,  
 2.5'-4.0'

| PARAMETER            | DETECTION LIMIT | CONCENTRATION/ VALUE | UNITS |
|----------------------|-----------------|----------------------|-------|
| Total Chromium       | 0.3             | 26.6                 | ng/kg |
| EP Toxicity Chromium | 0.003           | < 0.003              | ng/l  |
| Total Organic Carbon | 1.0             | 9,049                | ug/g  |
| PH                   |                 | 5.80                 | Std.  |
| Oil & Grease         |                 | 0.104                | %     |

| VOLATILE ORGANIC COMPOUNDS | DETECTION LIMIT UG/G | CONCENTRATION UG/G |
|----------------------------|----------------------|--------------------|
| Perchloroethylene          | 0.3                  | 11.03              |
| Bromoform                  | 2.0                  | ND                 |
| Carbon Tetrachloride       | 1.2                  | ND                 |
| Chlorobenzene              | 5.2                  | ND                 |
| Chloroform                 | 0.5                  | ND                 |
| Dibromochloromethane       | 0.9                  | ND                 |
| 1,1-Dichloroethane         | 0.7                  | ND                 |
| 1,2-Dichloroethane         | 0.3                  | ND                 |
| 1,1-Dichloroethene         | 1.3                  | ND                 |
| Trans-1,2-Dichloroethene   | 1.0                  | 9.34               |

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09627

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | ND                    |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | ND                    |
| 1,1,1-Trichloroethane         | 0.3                     | ND                    |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09628

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/19/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, B-4,  
 3.0'-4.5'

| PARAMETER            | DETECTION LIMIT | CONCENTRATION/ VALUE | UNITS |
|----------------------|-----------------|----------------------|-------|
| Total Chromium       | 0.3             | 26.6                 | ng/kg |
| EP Toxicity Chromium | 0.003           | 0.016                | ng/l  |
| Total Organic Carbon | 1.0             | 11,458               | ug/g  |
| pH                   |                 | 7.77                 | Std.  |
| Oil & Grease         |                 | 0.070                | %     |

| VOLATILE ORGANIC COMPOUNDS | DETECTION LIMIT UG/G | CONCENTRATION UG/G |
|----------------------------|----------------------|--------------------|
| Perchloroethylene          | 0.3                  | ND                 |
| Bromoform                  | 2.0                  | ND                 |
| Carbon Tetrachloride       | 1.2                  | ND                 |
| Chlorobenzene              | 5.2                  | ND                 |
| Chloroform                 | 0.5                  | ND                 |
| Dibromochloromethane       | 0.9                  | ND                 |
| 1,1-Dichloroethane         | 0.7                  | ND                 |
| 1,2-Dichloroethane         | 0.3                  | ND                 |
| 1,1-Dichloroethene         | 1.3                  | ND                 |
| Trans-1,2-Dichloroethene   | 1.0                  | ND                 |

US EPA ARCHIVAL DOCUMENT



CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09628

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | ND                    |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | ND                    |
| 1,1,1-Trichloroethane         | 0.3                     | ND                    |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09629

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, B-6,  
 3.0'-4.5'

| PARAMETER            | DETECTION LIMIT | CONCENTRATION/ VALUE | UNITS |
|----------------------|-----------------|----------------------|-------|
| Total Chromium       | 0.3             | 18.4                 | mg/kg |
| EP Toxicity Chromium | 0.003           | 0.006                | mg/l  |
| Total Organic Carbon | 1.0             | 49,345               | ug/g  |
| pH                   |                 | 7.90                 | Std.  |
| Oil & Grease         |                 | 0.060                | *     |

| VOLATILE ORGANIC COMPOUNDS | DETECTION LIMIT UG/G | CONCENTRATION UG/G |
|----------------------------|----------------------|--------------------|
|----------------------------|----------------------|--------------------|

|                          |     |    |
|--------------------------|-----|----|
| Perchloroethylene        | 0.3 | ND |
| Bromoform                | 2.0 | ND |
| Carbon Tetrachloride     | 1.2 | ND |
| Chlorobenzene            | 5.2 | ND |
| Chloroform               | 0.5 | ND |
| Dibromochloromethane     | 0.9 | ND |
| 1,1-Dichloroethane       | 0.7 | ND |
| 1,2-Dichloroethane       | 0.3 | ND |
| 1,1-Dichloroethene       | 1.3 | ND |
| Trans-1,2-Dichloroethene | 1.0 | ND |

*What method?*

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09629

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | ND                    |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | ND                    |
| 1,1,1-Trichloroethane         | 0.3                     | ND                    |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09631

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, B-9,  
 2.5'-4.0'

| PARAMETER            | DETECTION LIMIT | CONCENTRATION/ VALUE | UNITS |
|----------------------|-----------------|----------------------|-------|
| Total Chromium       | 0.3             | 13.8                 | mg/kg |
| EP Toxicity Chromium | 0.003           | 0.010                | mg/l  |
| Total Organic Carbon | 1.0             | 6,006                | ug/g  |
| pH                   |                 | 7.14                 | Std.  |
| Oil & Grease         |                 | 0.061                | *     |

| VOLATILE ORGANIC COMPOUNDS | DETECTION LIMIT UG/G | CONCENTRATION UG/G |
|----------------------------|----------------------|--------------------|
| Perchloroethylene          | 0.3                  | ND                 |
| Bromoform                  | 2.0                  | ND                 |
| Carbon Tetrachloride       | 1.2                  | ND                 |
| Chlorobenzene              | 5.2                  | ND                 |
| Chloroform                 | 0.5                  | ND                 |
| Dibromochloromethane       | 0.9                  | ND                 |
| 1,1-Dichloroethane         | 0.7                  | ND                 |
| 1,2-Dichloroethane         | 0.3                  | ND                 |
| 1,1-Dichloroethene         | 1.3                  | ND                 |
| Trans-1,2-Dichloroethene   | 1.0                  | ND                 |

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09631

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | ND                    |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | ND                    |
| 1,1,1-Trichloroethane         | 0.3                     | ND                    |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

## CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09630

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, B-7,  
 2.5'-4.0'

| PARAMETER            | DETECTION<br>LIMIT | CONCENTRATION/<br>VALUE | UNITS |
|----------------------|--------------------|-------------------------|-------|
| Total Chromium       | 0.3                | 16.0                    | mg/kg |
| EP Toxicity Chromium | 0.003              | 0.010                   | mg/l  |
| Total Organic Carbon | 1.0                | 22,490                  | ug/g  |
| pH                   |                    | 7.47                    | Std.  |
| Oil & Grease         |                    | 0.042                   | %     |

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Perchloroethylene             | 0.3                     | 6.73                  |
| Bromoform                     | 2.0                     | ND                    |
| Carbon Tetrachloride          | 1.2                     | ND                    |
| Chlorobenzene                 | 5.2                     | ND                    |
| Chloroform                    | 0.5                     | ND                    |
| Dibromochloromethane          | 0.9                     | ND                    |
| 1,1-Dichloroethane            | 0.7                     | ND                    |
| 1,2-Dichloroethane            | 0.3                     | ND                    |
| 1,1-Dichloroethene            | 1.3                     | ND                    |
| Trans-1,2-Dichloroethene      | 1.0                     | ND                    |

metaTRACE, Inc.

13715 Rider Trail North

Earth City, MO 63045

(314) 298-8566

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09630

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | ND                    |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | ND                    |
| 1,1,1-Trichloroethane         | 0.3                     | ND                    |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

## CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09632

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, B-11  
 2.5'-4.0'

| PARAMETER            | DETECTION<br>LIMIT | CONCENTRATION/<br>VALUE | UNITS |
|----------------------|--------------------|-------------------------|-------|
| Total Chromium       | 0.3                | 35.9                    | ng/kg |
| EP Toxicity Chromium | 0.003              | 0.009                   | ng/l  |
| Total Organic Carbon | 1.0                | 8,652                   | ug/g  |
| pH                   |                    | 8.01                    | Std.  |
| Oil & Grease         |                    | 0.043                   | *     |

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
|-------------------------------|-------------------------|-----------------------|

|                          |     |    |
|--------------------------|-----|----|
| Perchloroethylene        | 0.3 | ND |
| Bromoform                | 2.0 | ND |
| Carbon Tetrachloride     | 1.2 | ND |
| Chlorobenzene            | 5.2 | ND |
| Chloroform               | 0.5 | ND |
| Dibromochloromethane     | 0.9 | ND |
| 1,1-Dichloroethane       | 0.7 | ND |
| 1,2-Dichloroethane       | 0.3 | ND |
| 1,1-Dichloroethene       | 1.3 | ND |
| Trans-1,2-Dichloroethene | 1.0 | ND |



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CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09632

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | ND                    |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | ND                    |
| 1,1,1-Trichloroethane         | 0.3                     | ND                    |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

PREPARED FOR: O'BRIEN & ASSOCIATES ENGINEERS PN 142-03  
5000 CEDAR PLAZA PARKWAY  
SUITE 211  
ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09631  
DATE RECEIVED: 2/22/88  
DATE SAMPLED: 2/22/88  
SAMPLE MATRIX: SOIL  
SAMPLE IDENTITY: MISSOURI METAL, B-9,  
2.5'-4.0'

| PARAMETER            | DETECTION LIMIT | CONCENTRATION/VALUE | UNITS |
|----------------------|-----------------|---------------------|-------|
| Total Chromium       | 0.3             | 13.8                | mg/kg |
| EP Toxicity Chromium | 0.003           | 0.010               | mg/l  |
| Total Organic Carbon | 1.0             | 6,006               | ug/g  |
| pH                   |                 | 7.14                | Std.  |
| Oil & Grease         |                 | 0.061               | *     |

| VOLATILE ORGANIC COMPOUNDS | DETECTION LIMIT UG/G | CONCENTRATION UG/G |
|----------------------------|----------------------|--------------------|
| Perchloroethylene          | 0.3                  | ND                 |
| Bromoform                  | 2.0                  | ND                 |
| Carbon Tetrachloride       | 1.2                  | ND                 |
| Chlorobenzene              | 5.2                  | ND                 |
| Chloroform                 | 0.5                  | ND                 |
| Dibromochloromethane       | 0.9                  | ND                 |
| 1,1-Dichloroethane         | 0.7                  | ND                 |
| 1,2-Dichloroethane         | 0.3                  | ND                 |
| 1,1-Dichloroethene         | 1.3                  | ND                 |
| Trans-1,2-Dichloroethene   | 1.0                  | ND                 |

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09631

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | ND                    |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | ND                    |
| 1,1,1-Trichloroethane         | 0.3                     | ND                    |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09633

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, B-13  
 3.0'-4.5'

| PARAMETER            | DETECTION LIMIT | CONCENTRATION/ VALUE | UNITS |
|----------------------|-----------------|----------------------|-------|
| Total Chromium       | 0.3             | 26.5                 | mg/kg |
| EP Toxicity Chromium | 0.003           | 0.018                | mg/l  |
| Total Organic Carbon | 1.0             | 8,261                | ug/g  |
| pH                   |                 | 8.22                 | Std.  |
| Oil & Grease         |                 | 0.483                | %     |

| VOLATILE ORGANIC COMPOUNDS | DETECTION LIMIT UG/G | CONCENTRATION UG/G |
|----------------------------|----------------------|--------------------|
| Perchloroethylene          | 0.3                  | 1.35               |
| Bromoform                  | 2.0                  | ND                 |
| Carbon Tetrachloride       | 1.2                  | ND                 |
| Chlorobenzene              | 5.2                  | ND                 |
| Chloroform                 | 0.5                  | ND                 |
| Dibromochloromethane       | 0.9                  | ND                 |
| 1,1-Dichloroethane         | 0.7                  | ND                 |
| 1,2-Dichloroethane         | 0.3                  | ND                 |
| 1,1-Dichloroethene         | 1.3                  | ND                 |
| Trans-1,2-Dichloroethene   | 1.0                  | ND                 |

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09633

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | ND                    |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | ND                    |
| 1,1,1-Trichloroethane         | 0.3                     | 3.89                  |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PH 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09634

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: SOIL

SAMPLE IDENTITY: MISSOURI METAL, B-15  
 3.5'-5.0'

| PARAMETER            | DETECTION LIMIT | CONCENTRATION/ VALUE | UNITS |
|----------------------|-----------------|----------------------|-------|
| Total Chromium       | 0.3             | 14.5                 | mg/kg |
| EP Toxicity Chromium | 0.003           | 0.011                | mg/l  |
| Total Organic Carbon | 1.0             | 16,964               | ug/g  |
| pH                   |                 | 7.90                 | Std.  |
| Oil & Grease         |                 | 0.069                | %     |

| VOLATILE ORGANIC COMPOUNDS | DETECTION LIMIT UG/G | CONCENTRATION UG/G |
|----------------------------|----------------------|--------------------|
| Perchloroethylene          | 0.3                  | 2.65               |
| Bromoform                  | 2.0                  | ND                 |
| Carbon Tetrachloride       | 1.2                  | ND                 |
| Chlorobenzene              | 5.2                  | ND                 |
| Chloroform                 | 0.5                  | 3.87               |
| Dibromochloromethane       | 0.9                  | ND                 |
| 1,1-Dichloroethane         | 0.7                  | ND                 |
| 1,2-Dichloroethane         | 0.3                  | ND                 |
| 1,1-Dichloroethene         | 1.3                  | ND                 |
| Trans-1,2-Dichloroethene   | 1.0                  | ND                 |

metaTRACE, Inc.

13715 Rider Trail North

Earth City, MO 63045

(314) 298-8566

CERTIFICATE OF ANALYSIS  
CONTINUED

metaTRACE SAMPLE NUMBER: AA09634

| VOLATILE<br>ORGANIC COMPOUNDS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|-------------------------------|-------------------------|-----------------------|
| Trichloroethene               | 1.2                     | ND                    |
| 1,2-Dichloropropane           | 0.4                     | ND                    |
| Bromodichloromethane          | 1.0                     | 1.09                  |
| 1,1,1-Trichloroethane         | 0.3                     | ND                    |
| 1,2-Dichlorobenzene           | 1.5                     | ND                    |
| 1,3-Dichlorobenzene           | 3.2                     | ND                    |
| 1,4-Dichlorobenzene           | 2.4                     | ND                    |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
5000 CEDAR PLAZA PARKWAY  
SUITE 211  
ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09621

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: WIPE

SAMPLE IDENTITY: MISSOURI METAL  
BLDG A-1

| POLYCHLORINATED<br>BIPHENYLS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|------------------------------|-------------------------|-----------------------|
|------------------------------|-------------------------|-----------------------|

|              |     |       |
|--------------|-----|-------|
| Aroclor 1016 | 0.5 | < 0.5 |
| Aroclor 1221 | 0.5 | < 0.5 |
| Aroclor 1232 | 0.5 | < 0.5 |
| Aroclor 1242 | 0.5 | < 0.5 |
| Aroclor 1248 | 0.5 | < 0.5 |
| Aroclor 1254 | 0.5 | < 0.5 |
| Aroclor 1260 | 0.5 | < 0.5 |



CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
5000 CEDAR PLAZA PARKWAY  
SUITE 211  
ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09622

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: WIPE

SAMPLE IDENTITY: MISSOURI METAL  
BLDG A-2

| POLYCHLORINATED<br>BIPHENYLS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|------------------------------|-------------------------|-----------------------|
| Aroclor 1016                 | 0.5                     | < 0.5                 |
| Aroclor 1221                 | 0.5                     | < 0.5                 |
| Aroclor 1232                 | 0.5                     | < 0.5                 |
| Aroclor 1242                 | 0.5                     | < 0.5                 |
| Aroclor 1248                 | 0.5                     | < 0.5                 |
| Aroclor 1254                 | 0.5                     | < 0.5                 |
| Aroclor 1260                 | 0.5                     | < 0.5                 |

**CERTIFICATE OF ANALYSIS**

PREPARED FOR: O'BRIEN & GERE ENGINEERS PH 142-03  
5000 CEDAR PLAZA PARKWAY  
SUITE 211  
ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09623

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: WIPE

SAMPLE IDENTITY: MISSOURI METAL  
BLDG B-1

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**POLYCHLORINATED  
BIPHENYLS****DETECTION  
LIMIT UG/G****CONCENTRATION  
UG/G**

---

|              |     |       |
|--------------|-----|-------|
| Aroclor 1016 | 2.1 | < 2.1 |
| Aroclor 1221 | 2.1 | < 2.1 |
| Aroclor 1232 | 2.1 | < 2.1 |
| Aroclor 1242 | 2.1 | < 2.1 |
| Aroclor 1248 | 2.1 | < 2.1 |
| Aroclor 1254 | 2.1 | < 2.1 |
| Aroclor 1260 | 2.1 | < 2.1 |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09624

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: WIPE

SAMPLE IDENTITY: MISSOURI METAL  
 BLDG B-2

| POLYCHLORINATED<br>BIPHENYLS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|------------------------------|-------------------------|-----------------------|
| Aroclor 1016                 | 0.5                     | < 0.5                 |
| Aroclor 1221                 | 0.5                     | < 0.5                 |
| Aroclor 1232                 | 0.5                     | < 0.5                 |
| Aroclor 1242                 | 0.5                     | < 0.5                 |
| Aroclor 1248                 | 0.5                     | < 0.5                 |
| Aroclor 1254                 | 0.5                     | < 0.5                 |
| Aroclor 1260                 | 0.5                     | < 0.5                 |

CERTIFICATE OF ANALYSIS

PREPARED FOR: O'BRIEN & GERE ENGINEERS PN 142-03  
 5000 CEDAR PLAZA PARKWAY  
 SUITE 211  
 ST. LOUIS, MISSOURI 63128

metaTRACE SAMPLE NUMBER: AA09624

DATE RECEIVED: 2/22/88

DATE SAMPLED: 2/22/88

SAMPLE MATRIX: WIPE

SAMPLE IDENTITY: MISSOURI METAL  
 BLDG B-2

| POLYCHLORINATED<br>BIPHENYLS | DETECTION<br>LIMIT UG/G | CONCENTRATION<br>UG/G |
|------------------------------|-------------------------|-----------------------|
| Aroclor 1016                 | 0.5                     | < 0.5                 |
| Aroclor 1221                 | 0.5                     | < 0.5                 |
| Aroclor 1232                 | 0.5                     | < 0.5                 |
| Aroclor 1242                 | 0.5                     | < 0.5                 |
| Aroclor 1248                 | 0.5                     | < 0.5                 |
| Aroclor 1254                 | 0.5                     | < 0.5                 |
| Aroclor 1260                 | 0.5                     | < 0.5                 |



O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY MISSOURI METAL / EG+6

SAMPLERS: (Signature)

*Alan H. ...*

| STATION NUMBER | STATION LOCATION               | DATE | TIME  | SAMPLE TYPE |      | SEC. NO. | NO. OF CONTAINERS | ANALYSIS REQUIRED                    |
|----------------|--------------------------------|------|-------|-------------|------|----------|-------------------|--------------------------------------|
|                |                                |      |       | Water       | Soil |          |                   |                                      |
| 1              | Groundwater Monitoring Well #1 | 2-26 | 14:15 | X           |      |          | 5                 | Volatiles, Metals, O:l + Grease, TOC |
| 2              | Groundwater Monitoring Well #2 | 2-26 | 15:00 | X           |      |          | 5                 | Volatiles, Metals, O:l + Grease, TOC |
| 3              | Groundwater Monitoring Well #3 | 2-26 | 15:30 | X           |      |          | 5                 | Volatiles, Metals, O:l + Grease, TOC |
| 4              | Groundwater Monitoring Well #4 | 2-26 | 16:15 | X           |      |          | 5                 | Volatiles, Metals, O:l + Grease, TOC |

|                              |   |           |
|------------------------------|---|-----------|
| Relinquished by: (Signature) | Received by: (Signature)                                      | Date/Time |
| Relinquished by: (Signature) | Received by: (Signature)                                      | Date/Time |
| Relinquished by: (Signature) | Received by: (Signature)                                      | Date/Time |
| Relinquished by: (Signature) | Received by Mobile Laboratory for field analysis: (Signature) | Date/Time |

|                            |              |                             |              |
|----------------------------|--------------|-----------------------------|--------------|
| Dispatched by: (Signature) | Date/Time    | Received for Laboratory by: | Date/Time    |
| <i>Alan H. ...</i>         | 2/26/11 6:15 | <i>Allen M. ...</i>         | 2/26/11 6:15 |
| Method of Shipment:        |              |                             |              |











O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY Missouri Metal Shaping Co.  
FOR EGIG

SAMPLERS: (Signature)  
Dave Cika / OBG

| STATION NUMBER | STATION LOCATION | DATE    | TIME | SAMPLE TYPE |       |     | SEQ. NO. | NO. OF CONTAINERS                                      | ANALYSIS REQUIRED |
|----------------|------------------|---------|------|-------------|-------|-----|----------|--|-------------------|
|                |                  |         |      | Water       |       | Air |          |  |                   |
|                |                  |         |      | Com.        | Grav. |     |          |  |                   |
| B-1            | 3.5' - 5.0'      | 2/17/88 |      | X           |       |     | 1 qt.    | Volatile Organics, Total Chl<br>pH, Oils and Grease, T |                   |
| B-2            | 3.5' - 5.0'      |         |      |             |       |     |          |  |                   |
| B-3            | 2.5' - 4.0'      |         |      |             |       |     |          |  |                   |
| B-4            | 3.0' - 4.5'      | ↓       |      |             |       |     |          |  |                   |
| B-6            | 3.0' - 4.5'      | 2/22/88 |      |             |       |     |          |  |                   |
| B-7            | 2.5' - 4.0'      |         |      |             |       |     |          |  |                   |
| B-9            | 2.5' - 4.0'      |         |      |             |       |     |          |  |                   |
| B-11           | 2.5' - 4.0'      |         |      |             |       |     |          |  |                   |
| B-13           | 3.0' - 4.5'      |         |      |             |       |     |          |  |                   |
| B-15           | 3.5' - 5.0'      | ↓       |      |             |       |     | ↓        |  |                   |

Relinquished by: (Signature) *David W. Cika* Received by: (Signature) Date/Time

Relinquished by: (Signature) Received by: (Signature) Date/Time

Relinquished by: (Signature) Received by: (Signature) Date/Time

Relinquished by: (Signature) Received by Mobile Laboratory for field analysis: (Signature) Date/Time

Dispatched by: (Signature) Date/Time Received for Laboratory by: *Colin...* Date/Time 2/22/88 15E

Method of Shipment:

Chain-of-Custody

Client: O'Brien + Gere Engineers (3545.004)  
 Project No: 142-03  
 Issue Date: 2-29-88 Report To: D. ASHER

Date Received: 2/22/88  
 Received By: Colin [Signature]  
 Sample Location: Collect # 1

\* VOA TO INCLUDE PCE

| SAMPLE NO. | SAMPLE ID/ DESCRIPTION | MATRIX | SAMPLE DATE | CONTAINER/ PRESERVATIVE | ANALYSIS |                |     |    |               |                      |      |          |   |   | COMMENTS | DISPOSAL |   |                    |      |  |
|------------|------------------------|--------|-------------|-------------------------|----------|----------------|-----|----|---------------|----------------------|------|----------|---|---|----------|----------|---|--------------------|------|--|
|            |                        |        |             |                         | Total CC | EP TOX CC ONLY | TOC | PH | O.I. + Grease | * VOA TO INCLUDE PCE | PCBF | % Mo. ST |   |   |          |          |   | NORM.              | HAZ. |  |
| AA09616    | 1-A                    | Soil   | 2-22-88     | 250cc A./Cold           | ✓        | ✓              | ✓   | ✓  | ✓             | ✓                    | ✓    | ✓        | ✓ | ✓ | ✓        | ✓        | ✓ | 5 - ATTACHED pages |      |  |
| ↓          | 1-B                    | ↓      | ↓           | ↓                       |          |                |     |    |               |                      |      |          |   |   |          |          |   |                    |      |  |
| ↓          | 1-C                    | ↓      | ↓           | 40ml vial               |          |                |     |    |               |                      |      |          |   |   |          |          |   |                    |      |  |
| AA09617    | 2-A                    | ↓      | ↓           | 250cc A.                | ✓        | ✓              | ✓   | ✓  | ✓             | ✓                    | ✓    | ✓        | ✓ | ✓ | ✓        | ✓        | ✓ |                    |      |  |
| ↓          | 2-B                    | ↓      | ↓           | ↓                       |          |                |     |    |               |                      |      |          |   |   |          |          |   |                    |      |  |
| ↓          | 2-C                    | ↓      | ↓           | 40ml                    |          |                |     |    |               |                      |      |          |   |   |          |          |   |                    |      |  |
| AA09618    | 3-A                    | ↓      | ↓           | 250cc A.                | ✓        | ✓              | ✓   | ✓  | ✓             | ✓                    | ✓    | ✓        | ✓ | ✓ | ✓        | ✓        | ✓ |                    |      |  |
| ↓          | 3-B                    | ↓      | ↓           | ↓                       |          |                |     |    |               |                      |      |          |   |   |          |          |   |                    |      |  |
| ↓          | 3-C                    | ↓      | ↓           | 40ml                    |          |                |     |    |               |                      |      |          |   |   |          |          |   |                    |      |  |
| AA09619    | 4-A                    | ↓      | ↓           | 250cc A.                | ✓        | ✓              | ✓   | ✓  | ✓             | ✓                    | ✓    | ✓        | ✓ | ✓ | ✓        | ✓        | ✓ |                    |      |  |
| ↓          | 4-B                    | ↓      | ↓           | ↓                       |          |                |     |    |               |                      |      |          |   |   |          |          |   |                    |      |  |
| ↓          | 4-C                    | ↓      | ↓           | 40ml                    |          |                |     |    |               |                      |      |          |   |   |          |          |   |                    |      |  |
| AA09620    | 5-A                    | ↓      | ↓           | 250cc A.                | ✓        | ✓              | ✓   | ✓  | ✓             | ✓                    | ✓    | ✓        | ✓ | ✓ | ✓        | ✓        | ✓ |                    |      |  |
| ↓          | 5-B                    | ↓      | ↓           | ↓                       |          |                |     |    |               |                      |      |          |   |   |          |          |   |                    |      |  |
| ↓          | 5-C                    | ↓      | ↓           | 40ml                    |          |                |     |    |               |                      |      |          |   |   |          |          |   |                    |      |  |
| AA09621    | Bldg A-1               | WIPE   | ↓           | ↓                       | ↓        | ↓              | ↓   | ↓  | ↓             | ↓                    | ↓    | ↓        | ↓ | ↓ | ↓        | ↓        | ↓ |                    |      |  |
| AA09622    | Bldg A-2               | ↓      | ↓           | ↓                       | ↓        | ↓              | ↓   | ↓  | ↓             | ↓                    | ↓    | ↓        | ↓ | ↓ | ↓        | ↓        | ↓ |                    |      |  |

Client: O'Brien & Gere  
 Project No: 142-03  
 Date: 2-29-88 Report To: D. ASHER

Date Received: 2/22/88  
 Received By: [Signature]  
 Sample Location: Cooler #1

K1ZE

ANALYSIS

| SAMPLE NO. | SAMPLE ID/ DESCRIPTION | MATRIX | SAMPLE DATE | CONTAINER/ PRESERVATIVE | ANALYSIS |               |          |     |    |               |                  |         |   |   | COMMENTS | DISPOSAL |   |      |      |   |   |  |                    |  |  |
|------------|------------------------|--------|-------------|-------------------------|----------|---------------|----------|-----|----|---------------|------------------|---------|---|---|----------|----------|---|------|------|---|---|--|--------------------|--|--|
|            |                        |        |             |                         | PCRS     | TOTAL CC-DVIX | EPTOX CC | TOC | PH | O.I. + Grease | * Vol To Exclude | % Moist |   |   |          |          |   | NORM | HAZ. |   |   |  |                    |  |  |
| AA09623    | Bldg B-1               | Wipe   | 2-22-88     | 40ml vial / Cold        | /        |               |          |     |    |               |                  |         |   |   |          |          |   |      |      |   |   |  | see ATTACHED pages |  |  |
| AA09624    | Bldg B-2               | ↓      |             | ↓                       | /        |               |          |     |    |               |                  |         |   |   |          |          |   |      |      |   |   |  |                    |  |  |
| AA09625    | B-1                    | Soil   |             | QT w/ no glass          | /        | /             | /        | /   | /  | /             | /                | /       | / | / | /        | /        | / | /    | /    | / | / |  |                    |  |  |
| AA09626    | B-2                    |        |             |                         | /        | /             | /        | /   | /  | /             | /                | /       | / | / | /        | /        | / | /    | /    | / | / |  |                    |  |  |
| AA09627    | B-3                    |        |             |                         | /        | /             | /        | /   | /  | /             | /                | /       | / | / | /        | /        | / | /    | /    | / | / |  |                    |  |  |
| AA09628    | B-4                    |        |             |                         | /        | /             | /        | /   | /  | /             | /                | /       | / | / | /        | /        | / | /    | /    | / | / |  |                    |  |  |
| AA09629    | B-6                    |        |             |                         | /        | /             | /        | /   | /  | /             | /                | /       | / | / | /        | /        | / | /    | /    | / | / |  |                    |  |  |
| AA09630    | B-7                    |        |             |                         | /        | /             | /        | /   | /  | /             | /                | /       | / | / | /        | /        | / | /    | /    | / | / |  |                    |  |  |
| AA09631    | B-9                    |        |             |                         | /        | /             | /        | /   | /  | /             | /                | /       | / | / | /        | /        | / | /    | /    | / | / |  |                    |  |  |
| AA09632    | B-11                   |        |             |                         | /        | /             | /        | /   | /  | /             | /                | /       | / | / | /        | /        | / | /    | /    | / | / |  |                    |  |  |
| AA09633    | B-13                   |        |             |                         | /        | /             | /        | /   | /  | /             | /                | /       | / | / | /        | /        | / | /    | /    | / | / |  |                    |  |  |
| AA09634    | B-15                   |        |             |                         | /        | /             | /        | /   | /  | /             | /                | /       | / | / | /        | /        | / | /    | /    | / | / |  |                    |  |  |

**Site Characterization and Soil Gas Survey  
at the EG&G KT Aerofab Plant, St. Louis, Missouri**

**Groundwater Technology, Inc.  
July 20, 1989**



ENVIRONMENTAL  
LABORATORIES, INC.

Midwest Region  
4211 May Avenue  
Wichita, KS 67209  
(316) 945-2624  
(800) 633-7936

CLIENT: Groundwater Technology, Inc.  
P.O. Box 2312  
Wichita, KS 67201

ATTN: Steve Persons  
SAMPLER: Steve Persons  
DATE SAMPLED: 05-18-89  
DATE ANALYZED: 05-22-89  
DATE RPTD: 05-23-89  
DATE RCVD: 05-19-89  
LAB NUMBER: 33880

SAMPLE SUBMITTED: Three 40-mL vials of water from GMW-1  
EG&G-St. Louis (#422-P1171)  
TYPE OF ANALYSIS: Volatile Organic Compound Analysis per EPA 601/602

CONCENTRATIONS IN (UG/L)

| <u>ANALYTE</u>                 | <u>UG/L</u> | <u>ANALYTE</u>                 | <u>UG/L</u> |
|--------------------------------|-------------|--------------------------------|-------------|
| Chloromethane.....             | < 0.4       | Trichloroethene.....           | < 0.2       |
| Bromomethane.....              | < 0.4       | Benzene.....                   | < 0.2       |
| Vinyl chloride.....            | < 0.3       | Dibromochloromethane.....      | < 0.3       |
| Chloroethane.....              | < 0.3       | 1,1,2-Trichloroethane.....     | < 0.2       |
| Methylene chloride.....        | < 0.9       | cis-1,3-Dichloropropene.....   | < 0.3       |
| Trichlorofluoromethane.....    | < 0.3       | 2-Chloroethylvinylether.....   | < 1.0       |
| 1,1-Dichloroethene.....        | < 0.2       | Bromoform.....                 | < 1.2       |
| 1,1-Dichloroethane.....        | < 0.2       | 1,1,2,2-Tetrachloroethane..... | < 0.2       |
| trans-1,2-Dichloroethene.....  | < 0.2       | Tetrachloroethene.....         | < 0.2       |
| Chloroform.....                | < 0.2       | Toluene.....                   | < 0.2       |
| 1,2-Dichloroethane.....        | < 0.2       | Chlorobenzene.....             | < 0.2       |
| 1,1,1-Trichloroethane.....     | < 0.2       | Ethylbenzene.....              | < 0.2       |
| Carbon tetrachloride.....      | < 0.2       | Total Xylenes.....             | < 0.4       |
| Bromodichloromethane.....      | < 0.4       | 1,3-Dichlorobenzene.....       | < 0.8       |
| 1,2-Dichloropropane.....       | < 0.2       | 1,2-Dichlorobenzene.....       | < 0.8       |
| trans-1,3-Dichloropropene..... | < 0.3       | 1,4-Dichlorobenzene.....       | < 0.8       |

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.  
MIDWEST REGION

  
Terry R. Loucks, LAB DIRECTOR



Midwest Region  
 4211 May Avenue  
 Wichita, KS 67209  
 (316) 945-2624  
 (800) 633-7936

CLIENT: Groundwater Technology, Inc.  
 P.O. Box 2312  
 Wichita, KS 67201

ATTN: Steve Persons  
 SAMPLER: Steve Persons  
 DATE SAMPLED: 05-18-89  
 DATE ANALYZED: 05-22-89  
 DATE RPTD: 05-23-89  
 DATE RCVD: 05-19-89  
 LAB NUMBER: 33881

SAMPLE SUBMITTED: Three 40-mL vials of water from GMW-2  
 EG&G-St. Louis (#422-P1171)  
 TYPE OF ANALYSIS: Volatile Organic Compound Analysis per EPA 601/602

CONCENTRATIONS IN (UG/L)

| <u>ANALYTE</u>              | <u>UG/L</u> | <u>ANALYTE</u>                 | <u>UG/L</u> |
|-----------------------------|-------------|--------------------------------|-------------|
| Chloromethane.....          | < 0.4       | Trichloroethene.....           | 49          |
| Bromomethane.....           | < 0.4       | Benzene.....                   | < 0.2       |
| Vinyl chloride.....         | 4.5         | Dibromochloromethane.....      | < 0.3       |
| Chloroethane.....           | < 0.3       | 1,1,2-Trichloroethane.....     | < 0.2       |
| Methylene chloride.....     | < 0.9       | cis-1,3-Dichloropropene.....   | < 0.3       |
| Trichlorofluoromethane..... | < 0.3       | 2-Chloroethylvinylether.....   | < 1.0       |
| 1,1-Dichloroethene.....     | 0.6         | Bromoform.....                 | < 1.2       |
| 1,1-Dichloroethane.....     | < 0.2       | 1,1,2,2-Tetrachloroethane..... | < 0.2       |
| trans-1,2-Dichloroethene... | 49          | Tetrachloroethene.....         | 1.0         |
| Chloroform.....             | < 0.2       | Toluene.....                   | < 0.2       |
| 1,2-Dichloroethane.....     | < 0.2       | Chlorobenzene.....             | < 0.2       |
| 1,1,1-Trichloroethane.....  | < 0.2       | Ethylbenzene.....              | < 0.2       |
| Carbon tetrachloride.....   | < 0.2       | Total Xylenes.....             | < 0.4       |
| Bromodichloromethane.....   | < 0.4       | 1,3-Dichlorobenzene.....       | < 0.8       |
| 1,2-Dichloropropane.....    | < 0.2       | 1,2-Dichlorobenzene.....       | < 0.8       |
| trans-1,3-Dichloropropene.. | < 0.3       | 1,4-Dichlorobenzene.....       | < 0.8       |

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.  
 MIDWEST REGION

  
 Terry R. Loucks, LAB DIRECTOR



# GTEL

ENVIRONMENTAL  
LABORATORIES, INC.

Midwest Region  
4211 May Avenue  
Wichita, KS 67209  
(316) 945-2624  
(800) 633-7936

CLIENT: Groundwater Technology, Inc.  
P.O. Box 2312  
Wichita, KS 67201

ATTN: Steve Persons  
SAMPLER: Steve Persons  
DATE SAMPLED: 05-18-89  
DATE ANALYZED: 05-22-89  
DATE RPTD: 05-23-89  
DATE RCVD: 05-19-89  
LAB NUMBER: 33882

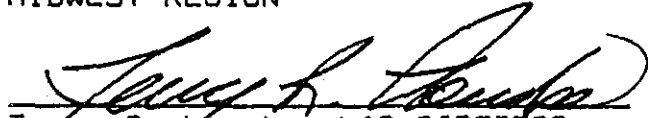
SAMPLE SUBMITTED: Three 40-mL vials of water from GMW-3  
EG&G-St. Louis (#422-P1171)  
TYPE OF ANALYSIS: Volatile Organic Compound Analysis per EPA 601/602

### CONCENTRATIONS IN (UG/L)

| ANALYTE                     | UG/L  | ANALYTE                        | UG/L  |
|-----------------------------|-------|--------------------------------|-------|
| Chloromethane.....          | < 0.4 | Trichloroethene.....           | 110   |
| Bromomethane.....           | < 0.4 | Benzene.....                   | < 0.2 |
| Vinyl chloride.....         | 12    | Dibromochloromethane.....      | < 0.3 |
| Chloroethane.....           | < 0.3 | 1,1,2-Trichloroethane.....     | < 0.2 |
| Methylene chloride.....     | < 0.9 | cis-1,3,Dichloropropene.....   | < 0.3 |
| Trichlorofluoromethane..... | < 0.3 | 2-Chloroethylvinylether.....   | < 1.0 |
| 1,1-Dichloroethene.....     | 2.6   | Bromoform.....                 | < 1.2 |
| 1,1-Dichloroethane.....     | < 0.2 | 1,1,2,2-Tetrachloroethane..... | < 0.2 |
| trans-1,2-Dichloroethene..  | 270   | Tetrachloroethene.....         | 1.4   |
| Chloroform.....             | < 0.2 | Toluene.....                   | < 0.2 |
| 1,2-Dichloroethane.....     | < 0.2 | Chlorobenzene.....             | < 0.2 |
| 1,1,1-Trichloroethane.....  | < 0.2 | Ethylbenzene.....              | < 0.2 |
| Carbon tetrachloride.....   | < 0.2 | Total Xylenes.....             | < 0.4 |
| Bromodichloromethane.....   | < 0.4 | 1,3-Dichlorobenzene.....       | < 0.8 |
| 1,2-Dichloropropane.....    | < 0.2 | 1,2-Dichlorobenzene.....       | < 0.8 |
| trans-1,3-Dichloropropene.. | < 0.3 | 1,4-Dichlorobenzene.....       | < 0.8 |

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.  
MIDWEST REGION

  
Terry R. Loucks, LAB DIRECTOR



Midwest Region  
 4211 May Avenue  
 Wichita, KS 67209  
 (316) 945-2624  
 (800) 633-7936

CLIENT: Groundwater Technology, Inc.  
 P.O. Box 2312  
 Wichita, KS 67201

ATTN: Steve Persons  
 SAMPLER: Steve Persons  
 DATE SAMPLED: 05-18-89  
 DATE ANALYZED: 05-22-89  
 DATE RPTD: 05-23-89  
 DATE RCVD: 05-19-89  
 LAB NUMBER: 33883

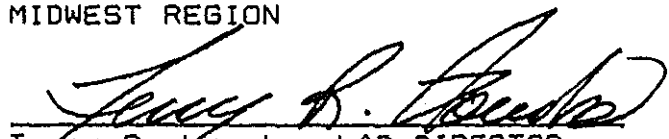
SAMPLE SUBMITTED: Three 40-mL vials of water from GMW-4  
 EG&G-St. Louis (#422-P1171)  
 TYPE OF ANALYSIS: Volatile Organic Compound Analysis per EPA 601/602

CONCENTRATIONS IN (UG/L)

| <u>ANALYTE</u>              | <u>UG/L</u> | <u>ANALYTE</u>                 | <u>UG/L</u> |
|-----------------------------|-------------|--------------------------------|-------------|
| Chloromethane.....          | < 0.4       | Trichloroethene.....           | 0.3         |
| Bromomethane.....           | < 0.4       | Benzene.....                   | < 0.2       |
| Vinyl chloride.....         | < 0.3       | Dibromochloromethane.....      | < 0.3       |
| Chloroethane.....           | < 0.3       | 1,1,2-Trichloroethane.....     | < 0.2       |
| Methylene chloride.....     | < 0.9       | cis-1,3-Dichloropropene.....   | < 0.3       |
| Trichlorofluoromethane..... | < 0.3       | 2-Chloroethylvinylether.....   | < 1.0       |
| 1,1-Dichloroethene.....     | < 0.2       | Bromoform.....                 | < 1.2       |
| 1,1-Dichloroethane.....     | < 0.2       | 1,1,2,2-Tetrachloroethane..... | < 0.2       |
| trans-1,2-Dichloroethene... | 3.7         | Tetrachloroethene.....         | < 0.2       |
| Chloroform.....             | < 0.2       | Toluene.....                   | < 0.2       |
| 1,2-Dichloroethane.....     | < 0.2       | Chlorobenzene.....             | < 0.2       |
| 1,1,1-Trichloroethane.....  | < 0.2       | Ethylbenzene.....              | < 0.2       |
| Carbon tetrachloride.....   | < 0.2       | Total Xylenes.....             | < 0.4       |
| Bromodichloromethane.....   | < 0.4       | 1,3-Dichlorobenzene.....       | < 0.8       |
| 1,2-Dichloropropane.....    | < 0.2       | 1,2-Dichlorobenzene.....       | < 0.8       |
| trans-1,3-Dichloropropene.. | < 0.3       | 1,4-Dichlorobenzene.....       | < 0.8       |

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.  
 MIDWEST REGION

  
 Terry R. Loucks, LAB DIRECTOR





# GTEL

ENVIRONMENTAL  
LABORATORIES, INC.

Midwest Region  
902 West Second Street  
Wichita, KS 67203  
(316) 264-4480  
(316) 262-2713 (FAX)  
(800) 633-7936

CLIENT: Groundwater Technology, Inc.  
P.O. Box 2312  
Wichita, KS 67201

ATTN: David Daniels/Steve Persons  
SAMPLER: Steve Persons  
DATE SAMPLED: 05-25-89  
DATE ANALYZED: 05-30-89  
DATE RCVD: 05-30-89  
DATE RPTD: 06-07-89  
LAB NUMBER: W9-05-077

SAMPLE SUBMITTED: Three 40-mL vials of water from Creek  
EG&G-St. Louis (#422-209-9341)

TYPE OF ANALYSIS: Volatile Organic Compound Analysis per EPA 601/602

CONCENTRATIONS IN (UG/L)

| <u>ANALYTE</u>               | <u>UG/L</u> | <u>ANALYTE</u>                 | <u>UG/L</u> |
|------------------------------|-------------|--------------------------------|-------------|
| Chloromethane.....           | < 0.4       | Trichloroethene.....           | 1.4         |
| Bromomethane.....            | < 0.4       | Benzene.....                   | < 0.2       |
| Vinyl chloride.....          | < 0.3       | Dibromochloromethane.....      | < 0.3       |
| Chloroethane.....            | < 0.3       | 1,1,2-Trichloroethane.....     | < 0.2       |
| Methylene chloride.....      | < 0.9       | cis-1,3-Dichloropropene.....   | < 0.3       |
| Trichlorofluoromethane.....  | < 0.3       | 2-Chloroethylvinylether.....   | < 1.0       |
| 1,1-Dichloroethene.....      | < 0.2       | Bromoform.....                 | < 1.2       |
| 1,1-Dichloroethane.....      | < 0.2       | 1,1,2,2-Tetrachloroethane..... | < 0.2       |
| trans-1,2-Dichloroethene...  | 1.1         | Tetrachloroethene.....         | < 0.2       |
| Chloroform.....              | < 0.2       | Toluene.....                   | < 0.2       |
| 1,2-Dichloroethane.....      | < 0.2       | Chlorobenzene.....             | < 0.2       |
| 1,1,1-Trichloroethane.....   | < 0.2       | Ethylbenzene.....              | < 0.2       |
| Carbon tetrachloride.....    | < 0.2       | Total Xylenes.....             | < 0.4       |
| Bromodichloromethane.....    | < 0.4       | 1,3-Dichlorobenzene.....       | < 0.8       |
| 1,2-Dichloropropane.....     | < 0.2       | 1,2-Dichlorobenzene.....       | < 0.8       |
| trans-1,3-Dichloropropene... | < 0.3       | 1,4-Dichlorobenzene.....       | < 0.8       |

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.  
MIDWEST REGION

*Rodney J. Gorges*  
Rodney J. Gorges, CHEMIST

*Terry R. Loucks*  
Terry R. Loucks, LAB DIRECTOR



# GTEL

ENVIRONMENTAL  
LABORATORIES, INC.

Midwest Region  
902 West Second Street  
Wichita, KS 67203  
(316) 264-4480  
(316) 262-2713 (FAX)  
(800) 633-7936

CLIENT: Groundwater Technology, Inc.  
P.O. Box 2312  
Wichita, KS 67201

ATTN: Steve Persons  
DATE RCVD: 05-30-89  
DATE RPTD: 06-08-89  
LAB NUMBER: W9-05-076-01A

SAMPLE SUBMITTED: One cubitainer of water labeled GMW-1  
EG&G (#422-209-9341)

| <u>TOTAL METALS</u> | <u>CONCENTRATION &amp; UNITS</u> |         |      | <u>METHOD</u> |
|---------------------|----------------------------------|---------|------|---------------|
| Antimony            | ND                               | (.005)  | mg/L | EPA 204.2     |
| Arsenic             | ND                               | (.005)  | mg/L | EPA 206.2     |
| Beryllium           | ND                               | (.03)   | mg/L | EPA 210.1     |
| Cadmium             |                                  | .0006   | mg/L | EPA 213.2     |
| Chromium            | ND                               | (.005)  | mg/L | EPA 218.2     |
| Copper              | ND                               | (.04)   | mg/L | EPA 220.1     |
| Lead                |                                  | .006    | mg/L | EPA 239.2     |
| Mercury             | ND                               | (.0002) | mg/L | EPA 245.1     |
| Nickel              |                                  | .08     | mg/L | EPA 249.1     |
| Selenium            | ND                               | (.003)  | mg/L | EPA 270.2     |
| Silver              | ND                               | (.03)   | mg/L | EPA 272.1     |
| Thallium            | ND                               | (.005)  | mg/L | EPA 279.2     |
| Zinc                |                                  | .07     | mg/L | EPA 289.1     |

ND = None detected with detection limit in parentheses.

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.  
MIDWEST REGION

Terry R. Loucks  
LAB DIRECTOR



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CLIENT: Groundwater Technology, Inc.  
P.O. Box 2312  
Wichita, KS 67201

ATTN: Steve Persons  
DATE RCVD: 05-30-89  
DATE RPTD: 06-08-89  
LAB NUMBER: W9-05-076-02A

SAMPLE SUBMITTED: One cubitainer of water labeled BMW-2  
EG&G (#422-209-9341)

| <u>TOTAL METALS</u> | <u>CONCENTRATION &amp; UNITS</u> |         |      | <u>METHOD</u> |
|---------------------|----------------------------------|---------|------|---------------|
| Antimony            | ND                               | (.005)  | mg/L | EPA 204.2     |
| Arsenic             | ND                               | (.005)  | mg/L | EPA 206.2     |
| Beryllium           | ND                               | (.03)   | mg/L | EPA 210.1     |
| Cadmium             |                                  | .007    | mg/L | EPA 213.2     |
| Chromium            | ND                               | (.005)  | mg/L | EPA 218.2     |
| Copper              |                                  | .04     | mg/L | EPA 220.1     |
| Lead                |                                  | .012    | mg/L | EPA 239.2     |
| Mercury             | ND                               | (.0002) | mg/L | EPA 245.1     |
| Nickel              |                                  | .05     | mg/L | EPA 249.1     |
| Selenium            | ND                               | (.003)  | mg/L | EPA 270.2     |
| Silver              | ND                               | (.03)   | mg/L | EPA 272.1     |
| Thallium            | ND                               | (.005)  | mg/L | EPA 279.2     |
| Zinc                |                                  | .10     | mg/L | EPA 289.1     |

ND = None detected with detection limit in parentheses.

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.  
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LAB DIRECTOR



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(800) 633-7936

CLIENT: Groundwater Technology, Inc.  
P.O. Box 2312  
Wichita, KS 67201

ATTN: Steve Persons  
DATE RCVD: 05-30-89  
DATE RPTD: 06-08-89  
LAB NUMBER: W9-05-076-03A

SAMPLE SUBMITTED: One cubitainer of water labeled GMW-3  
EG&G (#422-209-9341)

| <u>TOTAL METALS</u> | <u>CONCENTRATION &amp; UNITS</u> |        |      | <u>METHOD</u> |
|---------------------|----------------------------------|--------|------|---------------|
| Antimony            | ND                               | (.005) | mg/L | EPA 204.2     |
| Arsenic             |                                  | .016   | mg/L | EPA 206.2     |
| Beryllium           | ND                               | (.03)  | mg/L | EPA 210.1     |
| Cadmium             |                                  | .0011  | mg/L | EPA 213.2     |
| Chromium            |                                  | .223   | mg/L | EPA 218.2     |
| Copper              |                                  | .30    | mg/L | EPA 220.1     |
| Lead                |                                  | .616   | mg/L | EPA 239.2     |
| Mercury             |                                  | .0003  | mg/L | EPA 245.1     |
| Nickel              |                                  | .21    | mg/L | EPA 249.1     |
| Selenium            | ND                               | (.003) | mg/L | EPA 270.2     |
| Silver              | ND                               | (.03)  | mg/L | EPA 272.1     |
| Thallium            | ND                               | (.005) | mg/L | EPA 279.2     |
| Zinc                |                                  | 3.90   | mg/L | EPA 289.1     |

ND = None detected with detection limit in parentheses.

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.  
MIDWEST REGION

*Terry R. Loucks*

Terry R. Loucks  
LAB DIRECTOR



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CLIENT: Groundwater Technology, Inc.  
P.O. Box 2312  
Wichita, KS 67201

ATTN: Steve Persons  
DATE RCVD: 05-30-89  
DATE RPTD: 06-08-89  
LAB NUMBER: W9-05-076-04A

SAMPLE SUBMITTED: One cubitainer of water labeled GMW-4  
EG&G (#422-209-9341)

| <u>TOTAL METALS</u> | <u>CONCENTRATION &amp; UNITS</u> |        |      | <u>METHOD</u> |
|---------------------|----------------------------------|--------|------|---------------|
| Antimony            | ND                               | (.005) | mg/L | EPA 204.2     |
| Arsenic             | ND                               | (.005) | mg/L | EPA 206.2     |
| Beryllium           | ND                               | (.03)  | mg/L | EPA 210.1     |
| Cadmium             |                                  | .0021  | mg/L | EPA 213.2     |
| Chromium            |                                  | .005   | mg/L | EPA 218.2     |
| Copper              | ND                               | (.04)  | mg/L | EPA 220.1     |
| Lead                |                                  | .013   | mg/L | EPA 239.2     |
| Mercury             |                                  | .0002  | mg/L | EPA 245.1     |
| Nickel              |                                  | .05    | mg/L | EPA 249.1     |
| Selenium            | ND                               | (.003) | mg/L | EPA 270.2     |
| Silver              | ND                               | (.03)  | mg/L | EPA 272.1     |
| Thallium            | ND                               | (.005) | mg/L | EPA 279.2     |
| Zinc                |                                  | .07    | mg/L | EPA 289.1     |

ND = None detected with detection limit in parentheses.

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.  
MIDWEST REGION

Terry R. Loucks  
Terry R. Loucks  
LAB DIRECTOR

# GTEL

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902 West Second Street  
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(316) 264-4480  
(316) 262-2713 (FAX)  
(800) 633-7936

CLIENT: Groundwater Technology, Inc.  
P.O. Box 2312  
Wichita, KS 67201

ATTN: Steve Persons  
DATE RCVD: 05-30-89  
DATE RPTD: 06-08-89  
LAB NUMBER: W9-05-076-05A


SAMPLE SUBMITTED: One cubitainer of water labeled Creek  
EG&G (#422-209-9341)

| <u>TOTAL METALS</u> | <u>CONCENTRATION &amp; UNITS</u> |         |      | <u>METHOD</u> |
|---------------------|----------------------------------|---------|------|---------------|
| Antimony            | ND                               | (.005)  | mg/L | EPA 204.2     |
| Arsenic             | ND                               | (.005)  | mg/L | EPA 206.2     |
| Beryllium           | ND                               | (.03)   | mg/L | EPA 210.1     |
| Cadmium             | ND                               | (.0005) | mg/L | EPA 213.2     |
| Chromium            | ND                               | (.005)  | mg/L | EPA 218.2     |
| Copper              | ND                               | (.04)   | mg/L | EPA 220.1     |
| Lead                | ND                               | (.005)  | mg/L | EPA 239.2     |
| Mercury             |                                  | .0006   | mg/L | EPA 245.1     |
| Nickel              | ND                               | (.05)   | mg/L | EPA 249.1     |
| Selenium            | ND                               | (.003)  | mg/L | EPA 270.2     |
| Silver              | ND                               | (.03)   | mg/L | EPA 272.1     |
| Thallium            | ND                               | (.005)  | mg/L | EPA 279.2     |
| Zinc                |                                  | .09     | mg/L | EPA 289.1     |

ND = None detected with detection limit in parentheses.

Respectfully submitted,

GTEL ENVIRONMENTAL LABORATORIES, INC.  
MIDWEST REGION



Terry R. Loucks  
LAB DIRECTOR

**A Preliminary Site Assessment Report  
for EG&G KT Aerofab Missouri Metals (DRAFT)**

**Groundwater Technology, Inc.  
March 1, 1991**





Project Number: 042200376.04  
 Work Order Number: X0-07-505B  
 Date Reported: 08-15-90

Table 1

ANALYTICAL RESULTS

Total Metals in Soil  
 Priority Pollutant Metals

| GTEL Sample Number    |          |                | 01A                     | 02A                     | 03A                     | 04A                     |
|-----------------------|----------|----------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Client Identification |          |                | SB-1 6-9'               | SB-2 2-3'               | SB-3 1-3'               | SB-4 3-6'               |
| Date Digested         |          |                | 08-06-90                | 08-06-90                | 08-06-90                | 08-06-08                |
| Date Analyzed         |          |                | 08-08-90 to<br>08-10-90 | 08-08-90<br>to 08-10-90 | 08-08-90<br>to 08-10-90 | 08-08-90<br>to 08-10-90 |
| Analyte               | Method   | PQL,*<br>mg/Kg | Concentration, mg/Kg    |                         |                         |                         |
| Antimony              | EPA 7041 | 2              | <2                      | <2                      | <2                      | <2                      |
| Arsenic               | EPA 7060 | 1              | 1.6                     | 4.9                     | 4.3                     | 4.2                     |
| Beryllium             | EPA 7090 | 1              | <1                      | <1                      | <1                      | <1                      |
| Cadmium               | EPA 7130 | 1              | <1                      | <1                      | <1                      | <1                      |
| Chromium              | EPA 7190 | 1              | 16                      | 13                      | 14                      | 11                      |
| Copper                | EPA 7210 | 1              | 14                      | 15                      | 17                      | 17                      |
| Lead                  | EPA 7420 | 3              | 21                      | 15                      | 20                      | 17                      |
| Mercury               | EPA 7471 | .1             | <.1                     | <.1                     | <.1                     | <.1                     |
| Nickel                | EPA 7520 | 2              | 71                      | 16                      | 16                      | 17                      |
| Selenium              | EPA 7740 | 1              | <1                      | <1                      | <1                      | <1                      |
| Silver                | EPA 7760 | 1              | <1                      | <1                      | <1                      | <1                      |
| Thallium              | EPA 7841 | 2              | <2                      | <2                      | <2                      | <2                      |
| Zinc                  | EPA 7950 | 1              | 75                      | 47                      | 140                     | 200                     |

\* Practical Quantitation Limit.

a EPA 600/4-79-020, March 1983 revision; digestion by EPA Method 200.0

Project Number: 042200376.04  
 Work Order Number: X0-07-505A  
 Date Reported: 08-15-90

Table 1  
 ANALYTICAL RESULTS  
 Total Metals in Soil  
 Priority Pollutant Metals

| GTEL Sample Number    |          | 05A                     | 06A                     | 07A                     | 08A                     |     |
|-----------------------|----------|-------------------------|-------------------------|-------------------------|-------------------------|-----|
| Client Identification |          | GMW-7 6-9'              | GMW-8 6-9'              | GMW-5 3-6'              | GMW-6 6-9'              |     |
| Date Digested         |          | 08-06-90                | 08-06-90                | 08-06-90                | 08-06-08                |     |
| Date Analyzed         |          | 08-08-90 to<br>08-10-90 | 08-08-90<br>to 08-10-90 | 08-08-90<br>to 08-10-90 | 08-08-90<br>to 08-10-90 |     |
| Analyte               | Method   | PQL,*<br>mg/Kg          | Concentration, mg/Kg    |                         |                         |     |
| Antimony              | EPA 7041 | 2                       | <2                      | <2                      | <2                      | <2  |
| Arsenic               | EPA 7060 | 1                       | 8.4                     | 4.8                     | 1.2                     | 3.4 |
| Beryllium             | EPA 7090 | 1                       | <1                      | <1                      | <1                      | <1  |
| Cadmium               | EPA 7130 | 1                       | <1                      | <1                      | <1                      | <1  |
| Chromium              | EPA 7190 | 1                       | 23                      | 11                      | 9                       | 14  |
| Copper                | EPA 7210 | 1                       | 20                      | 13                      | 8                       | 10  |
| Lead                  | EPA 7420 | 3                       | 12                      | 12                      | 10                      | 10  |
| Mercury               | EPA 7471 | .1                      | <.1                     | <.1                     | <.1                     | <.1 |
| Nickel                | EPA 7520 | 2                       | 33                      | 19                      | 10                      | 16  |
| Selenium              | EPA 7740 | 1                       | <1                      | <1                      | <1                      | <1  |
| Silver                | EPA 7760 | 1                       | <1                      | <1                      | <1                      | <1  |
| Thallium              | EPA 7841 | 2                       | <2                      | <2                      | <2                      | <2  |
| Zinc                  | EPA 7950 | 1                       | 54                      | 38                      | 26                      | 31  |

\* Practical Quantitation Limit.

a EPA 600/4-79-020, March 1983 revision; digestion by EPA Method 200.0

Project Number: 42200376.04  
 Work Order Number: X0-07-504B  
 Date Reported: 08-08-90

Table 1  
 ANALYTICAL RESULTS  
 Volatile Organic Compound Analysis in Soil  
 EPA Method 8010/8020<sup>a</sup>

| GTEL Sample Number        |                           | 01                   | 02        | 03        | 04        |
|---------------------------|---------------------------|----------------------|-----------|-----------|-----------|
| Client Identification     |                           | SB-1 6-9'            | SB-2 2-3' | SB-3 1-3' | SB-4 3-6' |
| Date Sampled              |                           | 07-17-90             | 07-18-90  | 07-18-90  | 07-18-90  |
| Date Extracted            |                           | 07-31-90             | 07-31-90  | 07-31-90  | 07-31-90  |
| Date Analyzed             |                           | 07-31-90             | 07-31-90  | 07-31-90  | 07-31-90  |
| Analyte                   | POL<br>mg/Kg <sup>b</sup> | Concentration, mg/Kg |           |           |           |
| Chloromethane             | .08                       | <.08                 | <.08      | <.08      | <.08      |
| Bromomethane              | .08                       | <.08                 | <.08      | <.08      | <.08      |
| Vinylchloride             | .06                       | <.06                 | <.06      | <.06      | <.06      |
| Chloroethane              | .06                       | <.06                 | <.06      | <.06      | <.06      |
| Methylene chloride        | .18                       | <.18                 | <.18      | <.18      | <.18      |
| Trichlorofluoromethane    | .06                       | <.06                 | <.06      | <.06      | <.06      |
| 1,1-Dichloroethene        | .04                       | <.04                 | <.04      | <.04      | <.04      |
| 1,1-Dichloroethane        | .04                       | <.04                 | <.04      | <.04      | <.04      |
| *trans-1,2-Dichloroethene | .04                       | <.04                 | .07       | <.04      | <.04      |
| Chloroform                | .04                       | <.04                 | <.04      | <.04      | <.04      |
| 1,2-Dichloroethane        | .04                       | <.04                 | <.04      | <.04      | <.04      |
| 1,1,1-Trichloroethane     | .04                       | <.04                 | <.04      | <.04      | <.04      |
| Carbon Tetrachloride      | .04                       | <.04                 | <.04      | <.04      | <.04      |
| Bromodichloromethane      | .08                       | <.08                 | <.08      | <.08      | <.08      |
| 1,2-Dichloropropane       | .04                       | <.04                 | <.04      | <.04      | <.04      |
| trans-1,3-Dichloropropene | .06                       | <.06                 | <.06      | <.06      | <.06      |
| Trichloroethene           | .04                       | <.04                 | .08       | .33       | <.04      |
| Benzene                   | .04                       | <.04                 | <.04      | <.04      | <.04      |
| Dibromochloromethane      | .06                       | <.06                 | <.06      | <.06      | <.06      |
| 1,1,2-Trichloroethane     | .04                       | <.04                 | <.04      | <.04      | <.04      |
| cis-1,3-Dichloropropene   | .06                       | <.06                 | <.06      | <.06      | <.06      |
| 2-Chloroethylvinylether   | .20                       | <.20                 | <.20      | <.20      | <.20      |
| Bromoform                 | .24                       | <.24                 | <.24      | <.24      | <.24      |

Table 1 continued on next page

Project Number: 42200376.04  
 Work Order Number: XO-07-504B  
 Date Reported: 08-08-90

Table 1 (continued)

ANALYTICAL RESULTS

Volatile Organic Compound Analysis in Soil  
 EPA Method 8010/8020<sup>a</sup>

| GTEL Sample Number        |                            | 01                   | 02        | 03        | 04        |
|---------------------------|----------------------------|----------------------|-----------|-----------|-----------|
| Client Identification     |                            | SB-1 6-9'            | SB-2 2-3' | SB-3 1-3' | SB-4 3-6' |
| Date Sampled              |                            | 07-17-90             | 07-18-90  | 07-18-90  | 07-18-90  |
| Date Extracted            |                            | 07-31-90             | 07-31-90  | 07-31-90  | 07-31-90  |
| Date Analyzed             |                            | 07-31-90             | 07-31-90  | 07-31-90  | 07-31-90  |
| Analyte                   | POL,<br>mg/Kg <sup>b</sup> | Concentration, mg/Kg |           |           |           |
| 1,1,2,2-Tetrachloroethane | .04                        | <.04                 | <.04      | <.04      | <.04      |
| Tetrachloroethene         | .04                        | <.04                 | .13       | 290       | .17       |
| Toluene                   | .04                        | <.04                 | <.04      | <.04      | <.04      |
| Chlorobenzene             | .04                        | <.04                 | <.04      | <.04      | <.04      |
| Ethylbenzene              | .04                        | <.04                 | <.04      | <.04      | <.04      |
| Total Xylenes             | .08                        | <.08                 | <.08      | <.08      | <.08      |
| 1,3-Dichlorobenzene       | .16                        | <.16                 | <.16      | <.16      | <.16      |
| 1,2-Dichlorobenzene       | .16                        | <.16                 | <.16      | <.16      | <.16      |
| 1,4-Dichlorobenzene       | .16                        | <.16                 | <.16      | <.16      | <.16      |
| POL Multiplier            |                            | 1                    | 1         | 1         | 1         |

- a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986; Methanolic extraction by EPA Method 5030 (purge and trap).
- b Practical quantitation limit.
- \* This number reflects a sum total of trans- + cis-1,2-Dichloroethene quantified exclusively as trans-1,2-Dichloroethene.

lis

Project Number: 42200376.01  
 Work Order Number: XO-07-504A  
 Date Reported: 08-08-90

Table 1

ANALYTICAL RESULTS

Volatile Organic Compound Analysis in Soil  
 EPA Method 8010/8020<sup>a</sup>

| GTEL Sample Number        |                           | 05                   | 06         | 07         | 08         |
|---------------------------|---------------------------|----------------------|------------|------------|------------|
| Client Identification     |                           | GMW-7 6-9'           | GMW-8 6-9' | GMW-5 3-6' | GMW-6 6-9' |
| Date Sampled              |                           | 07-17-90             | 07-17-90   | 07-18-90   | 07-19-90   |
| Date Extracted            |                           | 07-31-90             | 07-31-90   | 07-31-90   | 07-31-90   |
| Date Analyzed             |                           | 07-31-90             | 07-31-90   | 07-31-90   | 07-31-90   |
| Analyte                   | POL<br>mg/Kg <sup>b</sup> | Concentration, mg/Kg |            |            |            |
| Chloromethane             | .08                       | <.08                 | <.08       | <.08       | <.08       |
| Bromomethane              | .08                       | <.08                 | <.08       | <.08       | <.08       |
| Vinylchloride             | .06                       | <.06                 | <.06       | <.06       | <.06       |
| Chloroethane              | .06                       | <.06                 | <.06       | <.06       | <.06       |
| Methylene chloride        | .18                       | <.18                 | <.18       | <.18       | <.18       |
| Trichlorofluoromethane    | .06                       | <.06                 | <.06       | <.06       | <.06       |
| 1,1-Dichloroethene        | .04                       | <.04                 | <.04       | <.04       | <.04       |
| 1,1-Dichloroethane        | .04                       | <.04                 | <.04       | <.04       | <.04       |
| *trans-1,2-Dichloroethene | .04                       | <.04                 | .27        | <.04       | .23        |
| Chloroform                | .04                       | <.04                 | <.04       | <.04       | <.04       |
| 1,2-Dichloroethane        | .04                       | <.04                 | <.04       | <.04       | <.04       |
| 1,1,1-Trichloroethane     | .04                       | <.04                 | <.04       | <.04       | <.04       |
| Carbon Tetrachloride      | .04                       | <.04                 | <.04       | <.04       | <.04       |
| Bromodichloromethane      | .08                       | <.08                 | <.08       | <.08       | <.08       |
| 1,2-Dichloropropane       | .04                       | <.04                 | <.04       | <.04       | <.04       |
| trans-1,3-Dichloropropene | .06                       | <.06                 | <.06       | <.06       | <.06       |
| Trichloroethene           | .04                       | <.04                 | .10        | <.04       | .56        |
| Benzene                   | .04                       | <.04                 | <.04       | <.04       | <.04       |
| Dibromochloromethane      | .06                       | <.06                 | <.06       | <.06       | <.06       |
| 1,1,2-Trichloroethane     | .04                       | <.04                 | <.04       | <.04       | <.04       |
| cis-1,3-Dichloropropene   | .06                       | <.06                 | <.06       | <.06       | <.06       |
| 2-Chloroethylvinylether   | .20                       | <.20                 | <.20       | <.20       | <.20       |
| Bromoform                 | .24                       | <.24                 | <.24       | <.24       | <.24       |

Table 1 continued on next page

Project Number: 42200376.01  
 Work Order Number: X0-07-504A  
 Date Reported: 08-08-90

Table 1 (continued)

ANALYTICAL RESULTS

Volatile Organic Compound Analysis in Soil  
 EPA Method 8010/8020<sup>a</sup>

| GTEL Sample Number        |  | 05                   | 06         | 07         | 08         |
|---------------------------|--|----------------------|------------|------------|------------|
| Client Identification     |  | GMW-7 6-9'           | GMW-8 6-9' | GMW-5 3-6' | GMW-6 6-9' |
| Date Sampled              |  | 07-17-90             | 07-17-90   | 07-18-90   | 07-19-90   |
| Date Extracted            |  | 07-31-90             | 07-31-90   | 07-31-90   | 07-31-90   |
| Date Analyzed             |  | 07-31-90             | 07-31-90   | 07-31-90   | 07-31-90   |
| Analyte                   | POL <sub>s</sub><br>mg/Kg <sup>b</sup> | Concentration, mg/Kg |            |            |            |
| 1,1,2,2-Tetrachloroethane | .04                                    | <.04                 | <.04       | <.04       | <.04       |
| Tetrachloroethene         | .04                                    | <.04                 | <.04       | <.04       | 7.3        |
| Toluene                   | .04                                    | <.04                 | <.04       | <.04       | <.04       |
| Chlorobenzene             | .04                                    | <.04                 | <.04       | <.04       | <.04       |
| Ethylbenzene              | .04                                    | <.04                 | <.04       | <.04       | <.04       |
| Total Xylenes             | .08                                    | <.08                 | <.08       | <.08       | <.08       |
| 1,3-Dichlorobenzene       | .16                                    | <.16                 | <.16       | <.16       | <.16       |
| 1,2-Dichlorobenzene       | .16                                    | <.16                 | <.16       | <.16       | <.16       |
| 1,4-Dichlorobenzene       | .16                                    | <.16                 | <.16       | <.16       | <.16       |
| POL Multiplier            |  | 1                    | 1          | 1          | 1          |

- a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986; Methanolic extraction by EPA Method 5030 (purge and trap).
- b Practical quantitation limit.
- \* This number reflects a sum total of trans- + cis-1,2-Dichloroethene quantified exclusively as trans-1,2-Dichloroethene.

Project Number: 042200376.04  
EG&G St. Louis  
Work Order Number: X0-07-506B  
Date Reported: 08-30-90

Table 1

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Hydraulic Fluid in Soil  
Modified EPA Method 8015<sup>a</sup>

| Sample Identification |            | Date Extracted | Date Analyzed | Concentration, mg/kg | Percent Solids, % | Detection Limit, mg/kg |
|-----------------------|------------|----------------|---------------|----------------------|-------------------|------------------------|
| GTEL No.              | Client ID  |                |               |                      |                   |                        |
| 01                    | SB-3, 1-3' | 08-01-90       | 08-30-90      | 72                   | NA                | 20                     |

<sup>a</sup> Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986; Methylene chloride extraction by modified EPA Method 3550; modification as per California State Water Resources Control Board LUFTManual protocols, May 1988 revision.

NOTE: Quantitation of hydraulic fluid is suspect because of chromatographic inconsistency caused by the lack of a constantly reproducible fuel pattern.

Project Number: 042200376.01  
EG&G-St. Louis  
Work Order Number: X0-07-518A  
Date Reported: 08-30-90

Table 1

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Hydraulic Fluid in Water  
Modified EPA Method 8015<sup>a</sup>

| Sample Identification |           | Date Extracted | Date Analyzed | Concentration, ug/L | Detection Limit, ug/L |
|-----------------------|-----------|----------------|---------------|---------------------|-----------------------|
| GTEL No.              | Client ID |                |               |                     |                       |
| 01                    | GMW-6     | 07-27-90       | 08-29-90      | 12,000              | 500                   |
|                       |           |                |               |                     |                       |

<sup>a</sup> Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986; Methylene chloride extraction by modified EPA Method 3550; modification as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

NOTE: Quantitation of hydraulic fluid is suspect because of chromatographic inconsistency caused by the lack of a constantly reproducible fuel pattern.



Project Number: 042200376.01  
EG&G St. Louis  
Work Order Number: X0-07-506A  
Date Reported: 08-30-90

Table 1

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Hydraulic Fluid in Soil  
Modified EPA Method 8015<sup>a</sup>

| Sample Identification |            | Date Extracted | Date Analyzed | Concentration, mg/kg | Percent Solids, % | Detection Limit, mg/kg |
|-----------------------|------------|----------------|---------------|----------------------|-------------------|------------------------|
| GTEL No.              | Client ID  |                |               |                      |                   |                        |
| 02                    | GMW-6,6-9' | 08-01-90       | 08-29-90      | 890                  | NA                | 20                     |
|                       |            |                |               |                      |                   |                        |

<sup>a</sup> Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986; Methylene chloride extraction by modified EPA Method 3550; modification as per California State Water Resources Control Board LUFTManual protocols, May 1988 revision.

NOTE: Quantitation of hydraulic fluid is suspect because of chromatographic inconsistency caused by the lack of a constantly reproducible fuel pattern.

Project Number: 042200376.03  
 Work Order Number: X0-07-514  
 Date Reported: 08-14-90  
 Date Reissued: 08-20-90

Table 1  
 ANALYTICAL RESULTS

Volatile Organic Compound Analysis In Water  
 EPA Method 8010/8020<sup>a</sup>

| GTEL Sample Number        |                           | 01                  | 02       | 03       | 04       |
|---------------------------|---------------------------|---------------------|----------|----------|----------|
| Client Identification     |                           | GMW-1               | GMW-2    | GMW-3    | GMW-4    |
| Date Sampled              |                           | 07-20-90            | 07-20-90 | 07-20-90 | 07-20-90 |
| Date Analyzed             |                           | 08-06-90            | 08-06-90 | 08-06-90 | 08-03-90 |
| Analyte                   | PQL,<br>ug/L <sup>b</sup> | Concentration, ug/L |          |          |          |
| Chloromethane             | 0.4                       | <0.4                | <0.4     | <0.4     | <0.4     |
| Bromomethane              | 0.4                       | <0.4                | <0.4     | <0.4     | <0.4     |
| Vinylchloride             | 0.3                       | <0.3                | 6.0      | 14       | 11       |
| Chloroethane              | 0.3                       | <0.3                | <0.3     | <0.3     | <0.3     |
| Methylene chloride        | 0.9                       | <0.9                | <0.9     | <0.9     | <0.9     |
| Trichlorofluoromethane    | 0.3                       | <0.3                | <0.3     | <0.3     | <0.3     |
| 1,1-Dichloroethene        | 0.2                       | <0.2                | <0.2     | 1.6      | 1.8      |
| 1,1-Dichloroethane        | 0.2                       | <0.2                | <0.2     | <0.2     | <0.2     |
| *trans-1,2-Dichloroethene | 0.2                       | <0.2                | 43       | 100      | 110      |
| Chloroform                | 0.2                       | <0.2                | <0.2     | <0.2     | <0.2     |
| 1,2-Dichloroethane        | 0.2                       | <0.2                | <0.2     | <0.2     | <0.2     |
| 1,1,1-Trichloroethane     | 0.2                       | <0.2                | <0.2     | <0.2     | <0.2     |
| Carbon Tetrachloride      | 0.2                       | <0.2                | <0.2     | <0.2     | <0.2     |
| Bromodichloromethane      | 0.4                       | <0.4                | <0.4     | <0.4     | <0.4     |
| 1,2-Dichloropropane       | 0.2                       | <0.2                | <0.2     | <0.2     | <0.2     |
| trans-1,3-Dichloropropene | 0.3                       | <0.3                | <0.3     | <0.3     | <0.3     |
| Trichloroethene           | 0.2                       | <0.2                | 32       | 170      | 180      |
| Benzene                   | 0.2                       | <0.2                | 0.3      | 0.3      | <0.2     |
| Dibromochloromethane      | 0.3                       | <0.3                | <0.3     | <0.3     | <0.3     |
| 1,1,2-Trichloroethane     | 0.2                       | <0.2                | <0.2     | <0.2     | <0.2     |
| cis-1,3-Dichloropropene   | 0.3                       | <0.3                | <0.3     | <0.3     | <0.3     |
| 2-Chloroethylvinylether   | 1.0                       | <1.0                | <1.0     | <1.0     | <1.0     |
| Bromoform                 | 1.2                       | <1.2                | <1.2     | <1.2     | <1.2     |

Table 1 continued on next page

Project Number: 042200376.03  
 Work Order Number: X0-07-514  
 Date Reported: 08-14-90  
 Date Reissued: 08-20-90

Table 1 (continued)

ANALYTICAL RESULTS

Volatile Organic Compound Analysis in Water  
 EPA Method 8010/8020<sup>a</sup>

| GTEL Sample Number        |                           | 01                  | 02       | 03       | 04       |
|---------------------------|---------------------------|---------------------|----------|----------|----------|
| Client Identification     |                           | GMW-1               | GMW-2    | GMW-3    | GMW-4    |
| Date Sampled              |                           | 07-20-90            | 07-20-90 | 07-20-90 | 07-20-90 |
| Date Analyzed             |                           | 08-06-90            | 08-06-90 | 08-06-90 | 08-03-90 |
| Analyte                   | PQL,<br>ug/L <sup>b</sup> | Concentration, ug/L |          |          |          |
| 1,1,2,2-Tetrachloroethane | 0.2                       | <0.2                | <0.2     | <0.2     | <0.2     |
| Tetrachloroethene         | 0.2                       | <0.2                | <0.2     | <0.2     | <0.2     |
| Toluene                   | 0.2                       | <0.2                | <0.2     | 2.6      | 2.5      |
| Chlorobenzene             | 0.2                       | <0.2                | <0.2     | <0.2     | <0.2     |
| Ethylbenzene              | 0.2                       | <0.2                | <0.2     | <0.2     | <0.2     |
| Total Xylenes             | 0.4                       | <0.4                | <0.4     | <0.4     | <0.4     |
| 1,3-Dichlorobenzene       | 0.8                       | <0.8                | <0.8     | <0.8     | <0.8     |
| 1,2-Dichlorobenzene       | 0.8                       | <0.8                | <0.8     | <0.8     | <0.8     |
| 1,4-Dichlorobenzene       | 0.8                       | <0.8                | <0.8     | <0.8     | <0.8     |
| PQL Multiplier            |                           | 1                   | 1        | 1        | 1        |

- a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986; Preparation by EPA Method 5030 (purge and trap).
- b Practical quantitation limit.
- \* This number reflects a sum total of trans- + cis-1,2-Dichloroethene quantified exclusively as trans-1,2-Dichloroethene.

Project Number: 042200376.01  
 Work Order Number: X0-07-516  
 Date Reported: 08-16-90

Table 1  
 ANALYTICAL RESULTS  
 Volatile Organic Compound Analysis in Water  
 EPA Method 8010/8020<sup>a</sup>

| GTEL Sample Number        |                           | 01                  | 02       | 03       | 04       |
|---------------------------|---------------------------|---------------------|----------|----------|----------|
| Client Identification     |                           | GMW-5               | GMW-6    | GMW-7    | GMW-8    |
| Date Sampled              |                           | 07-20-90            | 07-20-90 | 07-20-90 | 07-20-90 |
| Date Analyzed             |                           | 08-03-90            | 08-03-90 | 08-06-90 | 08-07-90 |
| Analyte                   | PQL,<br>ug/L <sup>b</sup> | Concentration, ug/L |          |          |          |
| Chloromethane             | 0.4                       | <40                 | <40      | <0.4     | <200     |
| Bromomethane              | 0.4                       | <40                 | <40      | <0.4     | <200     |
| Vinylchloride             | 0.3                       | 760                 | 830      | 40       | 8900     |
| Chloroethane              | 0.3                       | <30                 | <30      | <0.3     | <150     |
| Methylene chloride        | 0.9                       | <90                 | 120      | <0.9     | <450     |
| Trichlorofluoromethane    | 0.3                       | <30                 | <0.3     | <0.3     | <150     |
| 1,1-Dichloroethene        | 0.2                       | <20                 | 180      | 0.7      | <100     |
| 1,1-Dichloroethane        | 0.2                       | <20                 | 82       | <0.2     | <100     |
| *trans-1,2-Dichloroethene | 0.2                       | 1400                | 9300     | 200      | 38000    |
| Chloroform                | 0.2                       | <20                 | <20      | 6.3      | <100     |
| 1,2-Dichloroethane        | 0.2                       | <20                 | <20      | <0.2     | <100     |
| 1,1,1-Trichloroethane     | 0.2                       | <20                 | 130      | <0.2     | <100     |
| Carbon Tetrachloride      | 0.2                       | <20                 | <20      | <0.2     | <100     |
| Bromodichloromethane      | 0.4                       | <40                 | <40      | <0.4     | <200     |
| 1,2-Dichloropropane       | 0.2                       | <20                 | <20      | <0.2     | <100     |
| trans-1,3-Dichloropropene | 0.3                       | <30                 | <30      | <0.3     | <150     |
| Trichloroethene           | 0.2                       | 2000                | 26000    | 4700 **  | 58000    |
| Benzene                   | 0.2                       | <20                 | <20      | 0.4      | <100     |
| Dibromochloromethane      | 0.3                       | <30                 | <30      | <0.3     | <150     |
| 1,1,2-Trichloroethane     | 0.2                       | <20                 | <20      | 1.5      | <100     |
| cis-1,3-Dichloropropene   | 0.3                       | <30                 | <30      | <0.3     | <150     |
| 2-Chloroethylvinylether   | 1.0                       | <100                | <100     | <1.0     | <500     |
| Bromoform                 | 1.2                       | <120                | <120     | <1.2     | <600     |

Table 1 continued on next page

Project Number: 042200376.01  
 Work Order Number: X0-07-516  
 Date Reported: 08-16-90

Table 1 (continued)

ANALYTICAL RESULTS

Volatile Organic Compound Analysis in Water  
 EPA Method 8010/8020<sup>a</sup>

| GTEL Sample Number        |                          | 01                  | 02       | 03       | 04       |
|---------------------------|--------------------------|---------------------|----------|----------|----------|
| Client Identification     |                          | GMW-5               | GMW-6    | GMW-7    | GMW-8    |
| Date Sampled              |                          | 07-20-90            | 07-20-90 | 07-20-90 | 07-20-90 |
| Date Analyzed             |                          | 08-03-90            | 08-03-90 | 08-06-90 | 08-07-90 |
| Analyte                   | PQL<br>ug/L <sup>b</sup> | Concentration, ug/L |          |          |          |
| 1,1,2,2-Tetrachloroethane | 0.2                      | <20                 | <20      | <0.2     | <100     |
| Tetrachloroethene         | 0.2                      | 6000                | 41000    | 11       | <100     |
| Toluene                   | 0.2                      | <20                 | <20      | 5.9      | <100     |
| Chlorobenzene             | 0.2                      | <20                 | 150      | <0.2     | <100     |
| Ethylbenzene              | 0.2                      | <20                 | <20      | <0.2     | <100     |
| Total Xylenes             | 0.4                      | <40                 | <40      | 1.1      | <200     |
| 1,3-Dichlorobenzene       | 0.8                      | <80                 | <80      | <0.8     | <400     |
| 1,2-Dichlorobenzene       | 0.8                      | <80                 | <80      | <0.8     | <400     |
| 1,4-Dichlorobenzene       | 0.8                      | 370                 | <80      | <0.8     | <400     |
| PQL Multiplier            |                          | 100                 | 100      | 1,100 ** | 500      |

- a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986; Preparation by EPA Method 5030 (purge and trap).
- b Practical quantitation limit.
- \* This number reflects a sum total of trans- + cis-1,2-Dichloroethene quantified exclusively as trans-1,2-Dichloroethene.
- \*\* Sample dilution by a factor of 100 to obtain an accurate result for trichloroethene.

Project Number: 042200376.01  
 Work Order Number: X0-07-516  
 Date Reported: 08-16-90

Table 1

ANALYTICAL RESULTS

Volatile Organic Compound Analysis in Water  
 EPA Method 8010/8020<sup>a</sup>

| GTBL Sample Number        |                           | 05                  | 06         |  |  |
|---------------------------|---------------------------|---------------------|------------|--|--|
| Client Identification     |                           | Field Blank         | Trip Blank |  |  |
| Date Sampled              |                           | 07-20-90            | 07-20-90   |  |  |
| Date Analyzed             |                           | 08-03-90            | 08-03-90   |  |  |
| Analyte                   | PQL,<br>ug/L <sup>b</sup> | Concentration, ug/L |            |  |  |
| Chloromethane             | 0.4                       | <0.4                | <0.4       |  |  |
| Bromomethane              | 0.4                       | <0.4                | <0.4       |  |  |
| Vinylchloride             | 0.3                       | <0.3                | <0.3       |  |  |
| Chloroethane              | 0.3                       | <0.3                | <0.3       |  |  |
| Methylene chloride        | 0.9                       | <0.9                | <0.9       |  |  |
| Trichlorofluoromethane    | 0.3                       | <0.3                | <0.3       |  |  |
| 1,1-Dichloroethene        | 0.2                       | <0.2                | <0.2       |  |  |
| 1,1-Dichloroethane        | 0.2                       | <0.2                | <0.2       |  |  |
| *trans-1,2-Dichloroethene | 0.2                       | <0.2                | <0.2       |  |  |
| Chloroform                | 0.2                       | 15                  | 15         |  |  |
| 1,2-Dichloroethane        | 0.2                       | <0.2                | <0.2       |  |  |
| 1,1,1-Trichloroethane     | 0.2                       | <0.2                | <0.2       |  |  |
| Carbon Tetrachloride      | 0.2                       | <0.2                | <0.2       |  |  |
| Bromodichloromethane      | 0.4                       | 0.7                 | 0.8        |  |  |
| 1,2-Dichloropropane       | 0.2                       | <0.2                | <0.2       |  |  |
| trans-1,3-Dichloropropene | 0.3                       | <0.3                | <0.3       |  |  |
| Trichloroethene           | 0.2                       | <0.2                | <0.2       |  |  |
| Benzene                   | 0.2                       | <0.2                | <0.2       |  |  |
| Dibromochloromethane      | 0.3                       | 0.9                 | 0.9        |  |  |
| 1,1,2-Trichloroethane     | 0.2                       | <0.2                | <0.2       |  |  |
| cis-1,3-Dichloropropene   | 0.3                       | <0.3                | <0.3       |  |  |
| 2-Chloroethylvinylether   | 1.0                       | <1.0                | <1.0       |  |  |
| Bromoform                 | 1.2                       | <1.2                | <1.2       |  |  |

Table 1 continued on next page

Project Number: 042200376.01  
 Work Order Number: X0-07-516  
 Date Reported: 08-16-90

Table 1 (continued)

ANALYTICAL RESULTS

Volatile Organic Compound Analysis in Water  
 EPA Method 8010/8020<sup>a</sup>

| GTEL Sample Number        |                                       | 05                  | 06         |  |  |
|---------------------------|---------------------------------------|---------------------|------------|--|--|
| Client Identification     |                                       | Field Blank         | Trip Blank |  |  |
| Date Sampled              |                                       | 07-20-90            | 07-20-90   |  |  |
| Date Analyzed             |                                       | 08-03-90            | 08-03-90   |  |  |
| Analyte                   | PQL <sup>b</sup><br>ug/L <sup>b</sup> | Concentration, ug/L |            |  |  |
| 1,1,2,2-Tetrachloroethane | 0.2                                   | <0.2                | <0.2       |  |  |
| Tetrachloroethene         | 0.2                                   | 2.4                 | 1.3        |  |  |
| Toluene                   | 0.2                                   | <0.2                | <0.2       |  |  |
| Chlorobenzene             | 0.2                                   | <0.2                | <0.2       |  |  |
| Ethylbenzene              | 0.2                                   | <0.2                | <0.2       |  |  |
| Total Xylenes             | 0.4                                   | 0.5                 | 0.6        |  |  |
| 1,3-Dichlorobenzene       | 0.8                                   | <0.8                | <0.8       |  |  |
| 1,2-Dichlorobenzene       | 0.8                                   | <0.8                | <0.8       |  |  |
| 1,4-Dichlorobenzene       | 0.8                                   | <0.8                | <0.8       |  |  |
| PQL Multiplier            |                                       | 1                   | 1          |  |  |

- a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986; Preparation by EPA Method 5030 (purge and trap).
- b Practical quantitation limit.
- \* This number reflects a sum total of trans- + cis-1,2-Dichloroethene quantified exclusively as trans-1,2-Dichloroethene.

Project Number: 042200376.02  
 EG&G St. Louis  
 Work Order Number: X0-10-602  
 Date Reported: 12-06-90

Table 1  
 ANALYTICAL RESULTS  
 Purgeable Organics in Water  
 Modified EPA Method 624<sup>a</sup>

| GTEL Sample Number         |                          | 01                               | 02       | 03       | 04       |
|----------------------------|--------------------------|----------------------------------|----------|----------|----------|
| Client Identification      |                          | GMW-8                            | GMW-7    | GMW-6    | GMW-5    |
| Date Sampled               |                          | 10-25-90                         | 10-25-90 | 10-25-90 | 10-25-90 |
| Date Analyzed              |                          | 10-07-90                         | 10-07-90 | 10-07-90 | 10-07-90 |
| Analyte                    | POL<br>ug/L <sup>b</sup> | Concentration, ug/L <sup>c</sup> |          |          |          |
| Chloromethane              | 10                       | <10                              | <10      | <10      | <10      |
| Bromomethane               | 10                       | <10                              | <10      | <10      | <10      |
| Vinyl Chloride             | 10                       | 14000                            | 21       | 860      | 2100     |
| Chloroethane               | 10                       | <10                              | <10      | <10      | <10      |
| Methylene Chloride         | 5                        | 2 JB                             | <10      | 26 JB    | <10      |
| 1,1-Dichloroethene         | 5                        | 170                              | 2 J      | 260      | 15       |
| 1,1-Dichloroethane         | 5                        | <5                               | <5       | 67       | <5       |
| 1,2-Dichloroethene (total) | 5                        | 100000                           | 1500     | 50000    | 4100     |
| Chloroform                 | 5                        | <5                               | <5       | <5       | <5       |
| 1,2-Dichloroethane         | 5                        | <5                               | <5       | <5       | <5       |
| 1,1,1-Trichloroethane      | 5                        | <5                               | <5       | 170      | <5       |
| Carbon Tetrachloride       | 5                        | <5                               | <5       | <5       | <5       |
| Bromodichloromethane       | 5                        | <5                               | <5       | <5       | <5       |
| 1,2-Dichloropropane        | 5                        | <5                               | <5       | <5       | <5       |
| cis-1,3-Dichloropropene    | 5                        | <5                               | <5       | <5       | <5       |
| Trichloroethene            | 5                        | 65000                            | 8200     | 53000    | 2700     |
| Dibromochloromethane       | 5                        | <5                               | <5       | <5       | <5       |

Table 1 continued on next page, footnotes at end of table



Project Number: 042200376.02  
 EG&G St. Louis  
 Work Order Number: X0-10-602  
 Date Reported: 12-06-90

Table 1 (continued)

## ANALYTICAL RESULTS

Purgeable Organics in Water  
 Modified EPA Method 624<sup>a</sup>

| GTEL Sample Number                |                           | 01                               | 02       | 03       | 04       |
|-----------------------------------|---------------------------|----------------------------------|----------|----------|----------|
| Client Identification             |                           | GMW-8                            | GMW-7    | GMW-6    | GMW-5    |
| Date Sampled                      |                           | 10-25-90                         | 10-25-90 | 10-25-90 | 10-25-90 |
| Date Analyzed                     |                           | 10-07-90                         | 10-07-90 | 10-07-90 | 10-07-90 |
| Analyte                           | PQL,<br>ug/L <sup>b</sup> | Concentration, ug/L <sup>c</sup> |          |          |          |
| 1,1,2-Trichloroethane             | 5                         | 30                               | <5       | <5       | <5       |
| Benzene                           | 5                         | <5                               | <5       | <5       | <5       |
| 2-Chloroethylvinyl Ether          | 10                        | <10                              | <10      | <10      | <10      |
| <i>trans</i> -1,3-Dichloropropene | 5                         | <5                               | <5       | <5       | <5       |
| Bromoform                         | 5                         | <5                               | <5       | <5       | <5       |
| Tetrachloroethene                 | 5                         | 10                               | <5       | 88000    | 22000    |
| 1,1,2,2-Tetrachloroethane         | 5                         | <5                               | <5       | <5       | <5       |
| Toluene                           | 5                         | 130                              | <5       | <5       | 133      |
| Chlorobenzene                     | 5                         | <5                               | <5       | <5       | <5       |
| Ethylbenzene                      | 5                         | <5                               | <5       | <5       | <5       |
| Xylenes (total)                   | 5                         | <5                               | <5       | <5       | <5       |
| 1,2-Dichlorobenzene               | 5                         | <5                               | <5       | <5       | <5       |
| 1,3-Dichlorobenzene               | 5                         | <5                               | <5       | <5       | <5       |
| 1,4-Dichlorobenzene               | 5                         | <5                               | <5       | <5       | <5       |
| PQL Multiplier                    |                           | 1                                | 1        | 1        | 1        |

Table 1 continued on next page, footnotes at end of table

Project Number: 042200376.02  
EG&G St. Louis  
Work Order Number: X0-10-602  
Date Reported: 12-06-90

Footnotes to Table 1

**ANALYTICAL RESULTS**

Purgeable Organics in Water  
Modified EPA Method 624<sup>A</sup>

- a 40 CFR pt. 136 App. A Protocol modified for QC per EPA 8240 and to include additional target compounds.
- b Practical quantitation limit.
- c Data Flag Definitions
  - J Indicates an estimated value. This flag is used when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the quantitation limit, but greater than zero, or when reporting an estimated concentration for a tentatively identified compound.
  - B Indicates that the analyte was found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
- e Practical quantitation limit multiplier indicates the adjustments made for sample dilution.

NOTE: Some surrogate recoveries and internal standard area counts were outside control limits in the undiluted analyses of samples 01 to 04, hence the reported concentrations less than 1 mg/L may be biased. All reported concentrations greater than 1 mg/L were achieved by dilutions in which all SS and IS recoveries were in control.

Project Number: 042200376.03  
 Work Order Number: X0-07-515  
 Date Reported: 08-10-90

Table 1

ANALYTICAL RESULTS

Total Dissolved Metals In Water  
 Priority Pollutant Metals

| GTEL Sample Number    |           |               | 01A                     | 02A                     | 03A                     | 04A                     |
|-----------------------|-----------|---------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Client Identification |           |               | GMW-1                   | GMW-2                   | GMW-3                   | GMW-4                   |
| Date Digested         |           |               | 08-03-90                | 08-03-90                | 08-03-90                | 08-03-90                |
| Date Analyzed         |           |               | 08-06-90 to<br>08-08-90 | 08-03-90 to<br>08-08-90 | 08-06-90 to<br>08-08-90 | 08-06-90 to<br>08-08-90 |
| Analyte               | Method    | PQL,*<br>mg/L | Concentration, mg/L     |                         |                         |                         |
| Antimony              | EPA 204.2 | .01           | <.01                    | <.01                    | <.01                    | <.01                    |
| Arsenic               | EPA 206.2 | .005          | <.005                   | <.005                   | <.005                   | <.005                   |
| Beryllium             | EPA 200.7 | .01           | <.01                    | <.01                    | <.01                    | <.01                    |
| Cadmium               | EPA 213.2 | .001          | <.001                   | <.001                   | .002                    | <.001                   |
| Chromium              | EPA 218.2 | .005          | <.005                   | <.005                   | <.005                   | <.005                   |
| Copper                | EPA 200.7 | .01           | .05                     | .06                     | .07                     | .04                     |
| Lead                  | EPA 239.2 | .005          | .007                    | <.005                   | .005                    | .008                    |
| Mercury               | EPA 245.1 | .0004         | <.0004                  | <.0004                  | <.0004                  | <.0004                  |
| Nickel                | EPA 200.7 | .02           | <.02                    | <.02                    | <.02                    | <.02                    |
| Selenium              | EPA 270.2 | .005          | <.005                   | <.005                   | <.005                   | <.005                   |
| Silver                | EPA 200.7 | .01           | <.01                    | <.01                    | <.01                    | <.01                    |
| Thallium              | EPA 279.2 | .01           | <.01                    | <.01                    | <.01                    | <.01                    |
| Zinc                  | EPA 200.7 | .01           | .04                     | .03                     | .28                     | .02                     |

\* Practical Quantitation Limit.

a EPA 600/4-79-020, March 1983 revision; digestion by EPA Method 200.0

Project Number: 042200376.01  
 Work Order Number: X0-07-517  
 Date Reported: 08-10-90

Table 1

ANALYTICAL RESULTS

Total Dissolved Metals in Water  
 Priority Pollutant Metals

| GTEL Sample Number    |           |               | 01A                     | 02A                     | 03A                     | 04A                     |
|-----------------------|-----------|---------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Client Identification |           |               | GMW-5                   | GMW-6                   | GMW-7                   | GMW-8                   |
| Date Digested         |           |               | 08-03-90                | 08-03-90                | 08-03-90                | 08-03-90                |
| Date Analyzed         |           |               | 08-06-90 to<br>08-08-90 | 08-06-90 to<br>08-08-90 | 08-06-90 to<br>08-08-90 | 08-06-90 to<br>08-08-90 |
| Analyte               | Method    | PQL,*<br>mg/L | Concentration, mg/L     |                         |                         |                         |
| Antimony              | EPA 204.2 | .01           | <.01                    | <.01                    | <.01                    | <.01                    |
| Arsenic               | EPA 206.2 | .005          | <.005                   | <.005                   | <.005                   | <.005                   |
| Beryllium             | EPA 200.7 | .01           | <.01                    | <.01                    | <.01                    | <.01                    |
| Cadmium               | EPA 213.2 | .001          | <.001                   | <.001                   | <.001                   | <.001                   |
| Chromium              | EPA 218.2 | .005          | <.005                   | <.005                   | <.005                   | <.005                   |
| Copper                | EPA 200.7 | .01           | .03                     | .08                     | .05                     | .09                     |
| Lead                  | EPA 239.2 | .005          | <.005                   | <.005                   | <.005                   | <.005                   |
| Mercury               | EPA 245.1 | .0004         | <.0004                  | <.0004                  | <.0004                  | <.0004                  |
| Nickel                | EPA 200.7 | .02           | <.02                    | <.02                    | <.02                    | <.02                    |
| Selenium              | EPA 270.2 | .005          | <.005                   | <.005                   | <.005                   | <.005                   |
| Silver                | EPA 200.7 | .01           | <.01                    | <.01                    | <.01                    | <.01                    |
| Thallium              | EPA 279.2 | .01           | <.01                    | <.01                    | <.01                    | <.01                    |
| Zinc                  | EPA 200.7 | .01           | .06                     | .10                     | .02                     | .03                     |

\* Practical Quantitation Limit.

a EPA 600/4-79-020, March 1983 revision; digestion by EPA Method 200.0

Project Number: 042200376.06  
 Work Order Number: X0-07-513  
 Date Reported: 07-31-90

Table 1  
 ANALYTICAL RESULTS  
 Air Screening Analysis Incorporating  
 EPA Method 8010/8020<sup>a</sup>

| GTEL Sample Number        |                          | 01                  |  |  |
|---------------------------|--------------------------|---------------------|--|--|
| Client Identification     |                          | SVB#1               |  |  |
| Date Sampled              |                          | 07-20-90            |  |  |
| Date Received             |                          | 07-24-90            |  |  |
| Date Analyzed             |                          | 07-26-90            |  |  |
| Analyte                   | PQL<br>ug/L <sup>b</sup> | Concentration, ug/L |  |  |
| Chloromethane             | 0.4                      | <0.4                |  |  |
| Bromomethane              | 0.4                      | <0.4                |  |  |
| Vinylchloride             | 0.3                      | <0.3                |  |  |
| Chloroethane              | 0.3                      | <0.3                |  |  |
| Methylene chloride        | 0.9                      | <0.9                |  |  |
| Trichlorofluoromethane    | 0.3                      | <0.3                |  |  |
| 1,1-Dichloroethene        | 0.2                      | <0.2                |  |  |
| 1,1-Dichloroethane        | 0.2                      | <0.2                |  |  |
| trans-1,2-Dichloroethene  | 0.2                      | 1.4                 |  |  |
| Chloroform                | 0.2                      | <0.2                |  |  |
| 1,2-Dichloroethane        | 0.2                      | <0.2                |  |  |
| 1,1,1-Trichloroethane     | 0.2                      | <0.2                |  |  |
| Carbon Tetrachloride      | 0.2                      | <0.2                |  |  |
| Bromodichloromethane      | 0.4                      | <0.4                |  |  |
| 1,2-Dichloropropane       | 0.2                      | <0.2                |  |  |
| trans-1,3-Dichloropropene | 0.3                      | <0.3                |  |  |
| Trichloroethene           | 0.2                      | 3.8                 |  |  |
| Benzene                   | 0.2                      | <0.2                |  |  |
| Dibromochloromethane      | 0.3                      | <0.3                |  |  |
| 1,1,2-Trichloroethane     | 0.2                      | <0.2                |  |  |
| cis-1,3-Dichloropropene   | 0.3                      | <0.3                |  |  |
| 2-Chloroethylvinylether   | 1.0                      | <1.0                |  |  |
| Bromoform                 | 1.2                      | <1.2                |  |  |

Table 1 continued on next page

Project Number: 042200376.06  
 Work Order Number: X0-07-513  
 Date Reported: 07-31-90

Table 1 (continued)

ANALYTICAL RESULTS

Air Screening Analysis Incorporating  
 EPA Method 8010/8020<sup>a</sup>

| GTEL Sample Number        |                           | 01                  |  |  |
|---------------------------|---------------------------|---------------------|--|--|
| Client Identification     |                           | SVB#1               |  |  |
| Date Sampled              |                           | 07-20-90            |  |  |
| Date Received             |                           | 07-24-90            |  |  |
| Date Analyzed             |                           | 07-26-90            |  |  |
| Analyte                   | PQL,<br>ug/L <sup>b</sup> | Concentration, ug/L |  |  |
| 1,1,2,2-Tetrachloroethane | 0.2                       | <0.2                |  |  |
| Tetrachloroethene         | 0.2                       | 3.3                 |  |  |
| Toluene                   | 0.2                       | <0.2                |  |  |
| Chlorobenzene             | 0.2                       | <0.2                |  |  |
| Ethylbenzene              | 0.2                       | <0.2                |  |  |
| Total Xylenes             | 0.4                       | <0.4                |  |  |
| 1,3-Dichlorobenzene       | 0.8                       | <0.8                |  |  |
| 1,2-Dichlorobenzene       | 0.8                       | <0.8                |  |  |
| 1,4-Dichlorobenzene       | 0.8                       | <0.8                |  |  |
| PQL Multiplier            |                           | 1                   |  |  |

a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986; Methanolic extraction by EPA Method 5030 (purge and trap).

b Practical quantitation limit.

\* This number reflects a sum total of trans- + cis-1,2-Dichloroethene quantified exclusively as trans-1,2-Dichloroethene.



Midwest Region  
4211 May Avenue  
Wichita, KS 67209

800-633-7936  
FAX 316-945-0506

CHAIN-OF-CUSTODY RECORD  
AND ANALYSIS REQUEST

NG 74-1156

CUSTOD. RECORD

ANALYSIS REQUEST

Project Manager: *Ron Klemovich* Phone #: \_\_\_\_\_  
 Address: *671-Lexington* Site location: *St. Louis*  
 Project Number: *042200376-06* Project Name: *6646/St. Louis*

I attest that the proper field sampling procedures were used during the collection of these samples. Sampler Name (Print): *Steve Fry*

| Field Sample ID    | Source of Sample | GTEL Lab # (Lab use only) | # CONTAINERS | Matrix |          |     |        |       | Method Preserved |                  |                                |          |      | Sampling |                |      |
|--------------------|------------------|---------------------------|--------------|--------|----------|-----|--------|-------|------------------|------------------|--------------------------------|----------|------|----------|----------------|------|
|                    |                  |                           |              | WATER  | SOIL     | AIR | SLUDGE | OTHER | HCl              | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | ICE      | NONE | OTHER    | DATE           | TIME |
| <i>SUR# 1GMW-5</i> | <i>X 07513</i>   |                           |              |        | <i>X</i> |     |        |       |                  |                  |                                | <i>X</i> |      |          | <i>7/20/5M</i> |      |

|                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | BTEX 602 <input type="checkbox"/> 8020 <input type="checkbox"/> with MTBE <input type="checkbox"/>   |
| <input type="checkbox"/>            | BTEX/TPH Gas. 602/8015 <input type="checkbox"/> 8020/8015 <input type="checkbox"/> MTBE <input type="checkbox"/>   |
| <input type="checkbox"/>            | TPH as <input type="checkbox"/> Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Jet Fuel  |
| <input type="checkbox"/>            | Product I.D. by GC (SIMDIS) <input type="checkbox"/>   |
| <input type="checkbox"/>            | Total Oil & Grease: 413.1 <input type="checkbox"/> 413.2 <input type="checkbox"/> 503A <input type="checkbox"/>  |
| <input type="checkbox"/>            | Total Petroleum Hydrocarbons: 418.1 <input type="checkbox"/> 503E <input type="checkbox"/>   |
| <input type="checkbox"/>            | EPA 601 <input type="checkbox"/> 8010 <input type="checkbox"/> DCA only <input type="checkbox"/>   |
| <input type="checkbox"/>            | EPA 602 <input type="checkbox"/> 8020 <input type="checkbox"/>   |
| <input type="checkbox"/>            | EPA 608 <input type="checkbox"/> 8080 <input type="checkbox"/> PCBs only <input type="checkbox"/>  |
| <input type="checkbox"/>            | EPA 610 <input type="checkbox"/> 8310 <input type="checkbox"/>   |
| <input type="checkbox"/>            | EPA 624 <input type="checkbox"/> 8240 <input type="checkbox"/> NBS +15 <input type="checkbox"/>  |
| <input type="checkbox"/>            | EPA 625 <input type="checkbox"/> 8270 <input type="checkbox"/> NBS +25 <input type="checkbox"/>  |
| <input type="checkbox"/>            | EPTOX: Metals <input type="checkbox"/> Pesticides <input type="checkbox"/> Herbicides <input type="checkbox"/>   |
| <input type="checkbox"/>            | TCLP Metals <input type="checkbox"/> VOA <input type="checkbox"/> Semi VOA <input type="checkbox"/>  |
| <input type="checkbox"/>            | EPA Priority Pollutant Metals <input type="checkbox"/> HSL <input type="checkbox"/>  |
| <input type="checkbox"/>            | LEAD 7420 <input type="checkbox"/> 7421 <input type="checkbox"/> 239.2 <input type="checkbox"/> 6010 <input type="checkbox"/> Org. Lead <input type="checkbox"/> |
| <input type="checkbox"/>            | CAM Metals <input type="checkbox"/> STLC <input type="checkbox"/> TTLG   |
| <input type="checkbox"/>            | Corrosivity <input type="checkbox"/> Flashpoint <input type="checkbox"/> Reactivity <input type="checkbox"/>   |
| <input checked="" type="checkbox"/> | <i>VAIATILE HYDROCARBONS-TEXAR</i>   |
| <input type="checkbox"/>            | <i>BAG</i>   |

|   |                        |   |
|---|------------------------|---|
| Relinquished by Sampler:<br><i>Steve Fry (SP)</i> | Date<br><i>7/23/90</i> | Received by:<br><i>[Signature]</i>            |
| Relinquished by:                                  | Date<br><i>7/24/90</i> | Received by:<br><i>[Signature]</i>            |
| Relinquished by:                                  | Date<br><i>7/24/90</i> | Received by Laboratory:<br><i>[Signature]</i> |

**SPECIAL HANDLING**  
 24 HOURS   
 EXPEDITED 48 Hours   
 SEVEN DAY   
 OTHER \_\_\_\_\_ (#) BUSINESS DAYS  
 QA/QC CLP Level  Blue Level   
 FAX

**SPECIAL DETECTION LIMITS (Specify)**  
  
**SPECIAL REPORTING REQUIREMENTS (Specify)**

**REMARKS:**  
  
 Lab Use Only \_\_\_\_\_ Storage Location \_\_\_\_\_  
 Lot #: \_\_\_\_\_ Work Order #: \_\_\_\_\_

*02.00*







Midwest Region  
4211 May Avenue  
Wichita, KS 67209

800-633-7936  
FAX 316-945-0506

CHAIN-OF-CUSTODY RECORD  
AND ANALYSIS REQUEST

NO 74-1151

CUSTOD RECORD

ANALYSIS REQUEST

Project Manager: Ron Klemovich Phone #: \_\_\_\_\_  
Address: 6TT-Genex Site location: St. Louis  
Project Number: 042200376-01 Project Name: E696/St. Louis

I attest that the proper field sampling procedures were used during the collection of these samples. Sampler Name (Print): Jim Pool

| Field Sample ID | Source of Sample | GTEL Lab # (Lab use only) | # CONTAINERS | Matrix |      |     |        | Method Preserved |     |                  |                                | Sampling |      |       |
|-----------------|------------------|---------------------------|--------------|--------|------|-----|--------|------------------|-----|------------------|--------------------------------|----------|------|-------|
|                 |                  |                           |              | WATER  | SOIL | AIR | SLUDGE | OTHER            | HCl | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | ICE      | NONE | OTHER |
| GMW-5           | Wp 11            | 07-56-01                  | 3            | X      |      |     |        | X                |     | X                |                                |          | 7/20 | 1730  |
| GMW-5           |                  | 07-57-01                  | 1            | X      |      |     |        |                  |     | X                |                                |          |      | 1730  |
| GMW-6           |                  | 07-56-02                  | 3            | X      |      |     |        | X                |     | Y                |                                |          |      | 1815  |
| GMW-6           |                  | 07-57-02                  | 1            | X      |      |     |        |                  |     | X                |                                |          |      | 1815  |
| GMW-6           |                  | 07-07-58                  | 2            | X      |      |     |        |                  |     | Y                |                                |          |      | 1815  |
| GMW-7           |                  | 07-56-03                  | 3            | Y      |      |     |        | X                |     | X                |                                |          |      | 1640  |
| GMW-7           |                  | 07-57-03                  | 1            | Y      |      |     |        |                  |     | Y                |                                |          |      | 1640  |
| GMW-8           |                  | 07-56-04                  | 3            | X      |      |     |        | X                |     | X                |                                |          |      | 1650  |
| GMW-8           |                  | 07-57-04                  | 1            | X      |      |     |        |                  |     | Y                |                                |          |      | 1650  |
| Field Blank     | Sampler          | 07-56-05                  | 3            | Y      |      |     |        | X                |     | Y                |                                |          |      | 1800  |
| Trip Blank      | D.J. water       | 07-56-06                  | 3            | X      |      |     |        | Y                |     | Y                |                                |          |      | 1415  |

|   |   |  |   |  |   |   |   |  |   |   |  |   |  |  |   |   |   |                                  |
|---|---|--|---|--|---|---|---|--|---|---|--|---|--|--|---|---|---|----------------------------------|
| <input type="checkbox"/> BTEX 602 <input type="checkbox"/> 8020 <input type="checkbox"/> with MTBE <input type="checkbox"/> | <input type="checkbox"/> BTEX/TPH Gas. 602/8015 <input type="checkbox"/> 8020/8015 <input type="checkbox"/> MTBE <input type="checkbox"/> | <input type="checkbox"/> TPH as <input type="checkbox"/> Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Jet Fuel | <input type="checkbox"/> Product I.D. by GC (SIMDIS) <input type="checkbox"/> | <input type="checkbox"/> Total Oil & Grease. 413.1 <input type="checkbox"/> 413.2 <input type="checkbox"/> 503A <input type="checkbox"/> | <input type="checkbox"/> Total Petroleum Hydrocarbons. 418.1 <input type="checkbox"/> 503E <input type="checkbox"/> | <input type="checkbox"/> EPA 601 <input type="checkbox"/> 8010 <input type="checkbox"/> DCA only <input type="checkbox"/> | <input type="checkbox"/> EPA 602 <input type="checkbox"/> 8020 <input type="checkbox"/> | <input type="checkbox"/> EPA 608 <input type="checkbox"/> 8080 <input type="checkbox"/> PCBs only <input type="checkbox"/> | <input type="checkbox"/> EPA 610 <input type="checkbox"/> 8310 <input type="checkbox"/> | <input type="checkbox"/> EPA 624 <input type="checkbox"/> 8240 <input type="checkbox"/> | <input type="checkbox"/> EPA 625 <input type="checkbox"/> 8270 <input type="checkbox"/> NBS +15 <input type="checkbox"/> | <input type="checkbox"/> EPTOX: Metals <input type="checkbox"/> Pesticides <input type="checkbox"/> Herbicides <input type="checkbox"/> | <input type="checkbox"/> TCLP Metals <input type="checkbox"/> VOA <input type="checkbox"/> Semi VOA <input type="checkbox"/> | <input type="checkbox"/> EPA Priority Pollutant Metals <input type="checkbox"/> HSL <input type="checkbox"/> | <input type="checkbox"/> LEAD 7420 <input type="checkbox"/> 7421 <input type="checkbox"/> 239.2 <input type="checkbox"/> 6010 <input type="checkbox"/> Org. Lead <input type="checkbox"/> | <input type="checkbox"/> CAM Metals <input type="checkbox"/> STLC <input type="checkbox"/> TTLC | <input type="checkbox"/> Corrosivity <input type="checkbox"/> Flashpoint <input type="checkbox"/> Reactivity <input type="checkbox"/> | <u>GC/FID Hydrocarbon Screen</u> |
|---|---|--|---|--|---|---|---|--|---|---|--|---|--|--|---|---|---|----------------------------------|

|              |              |                         |
|--------------|--------------|-------------------------|
| Received by: | Received by: | Received by Laboratory: |
| Date         | Date         | Date                    |
| Time         | Time         | Time                    |
| Way bill #   |              |                         |

**SPECIAL HANDLING**

24 HOURS

EXPEDITED 48 Hours

SEVEN DAY

OTHER \_\_\_\_\_ (#) BUSINESS DAYS

QA/QC CLP Level  Blue Level

FAX

**SPECIAL DETECTION LIMITS (Specify)**

\_\_\_\_\_

**SPECIAL REPORTING REQUIREMENTS (Specify)**

\_\_\_\_\_

**REMARKS:** *Samples to be analyzed for metals have not been filtered or acidified. Please do in lab, Total Dissolved Metals.*

Lab Use Only \_\_\_\_\_ Storage Location \_\_\_\_\_

Lot #: \_\_\_\_\_ Work Order #: \_\_\_\_\_

\* COMPARE THE GC/FID SCREEN RESULTS TO THE PRODUCT GC/FID SCREEN COMPLETED ON PRODUCT SAMPLE TURNED IN UNDER CHAIN OF CUSTODY # 74-1152. IS IT THE SAME MATERIAL AS THE VIRGIN PRODUCT.



Midwest Region  
4211 May Avenue  
Wichita, KS 67209

800-633-7936  
FAX 316-945-0506

CHAIN-OF-CUSTODY RECORD  
ANALYSIS REQUEST

N: 74-1154

CUSTODY RECORD

ANALYSIS REQUEST

Project Manager: Ron Klemovich Phone #: \_\_\_\_\_  
 Address: 6 T.I. - Lemexa Site location: St. Louis  
 Project Number: 042200376-01 Project Name: EG96/ST. LOUIS  
 I attest that the proper field sampling procedures were used during the collection of these samples. Sampler Name (Print): Jimi Pool

|                                  |                          |                                     |   |
|----------------------------------|--------------------------|-------------------------------------|---|
| BTEX 602                         | 8020                     | with MTBE                           | <input type="checkbox"/>  |
| BTEX/TPH Gas                     | 602/8015                 | <input type="checkbox"/>            | 8020/8015 <input type="checkbox"/> MTBE <input type="checkbox"/>                                |
| TPH as Gas                       | <input type="checkbox"/> | Diesel <input type="checkbox"/>     | Jet Fuel <input type="checkbox"/>   |
| Product I.D. by GC (SIMDIS)      | <input type="checkbox"/> |                                     |   |
| Total Oil & Grease               | 413.1                    | <input type="checkbox"/>            | 413.2 <input type="checkbox"/> 503A <input type="checkbox"/> 503E <input type="checkbox"/>      |
| Total Petroleum Hydrocarbons     | 418.1                    | <input type="checkbox"/>            | DCA only <input type="checkbox"/>   |
| EPA 601                          | 8010-BL                  | <input type="checkbox"/>            |   |
| EPA 602                          | 8020-BL                  | <input type="checkbox"/>            |   |
| EPA 608                          | 8080                     | <input type="checkbox"/>            | PCBs only <input type="checkbox"/>  |
| EPA 610                          | 8310                     | <input type="checkbox"/>            |   |
| EPA 624                          | 8240                     | <input type="checkbox"/>            | NBS +15 <input type="checkbox"/>  |
| EPA 625                          | 8270                     | <input type="checkbox"/>            | NBS +25 <input type="checkbox"/>  |
| EPTOX: Metals                    | <input type="checkbox"/> | Pesticides <input type="checkbox"/> | Herbicides <input type="checkbox"/>   |
| TCLP Metals                      | <input type="checkbox"/> | VOA <input type="checkbox"/>        | Semi VOA <input type="checkbox"/>   |
| EPA Priority Pollutant Metals    | <input type="checkbox"/> |                                     | HSL <input type="checkbox"/>  |
| LEAD 7420                        | <input type="checkbox"/> | 7421 <input type="checkbox"/>       | 239.2 <input type="checkbox"/> 6010 <input type="checkbox"/> Org. Lead <input type="checkbox"/> |
| CAM Metals                       | <input type="checkbox"/> | STLC <input type="checkbox"/>       | TTLC <input type="checkbox"/>   |
| Corrosivity                      | <input type="checkbox"/> | Flashpoint <input type="checkbox"/> | Reactivity <input type="checkbox"/>   |
| <u>GC/FID Hydrocarbon Screen</u> |                          |                                     |   |

| Field Sample ID | Source of Sample | GTEL Lab # (Lab use only) | # CONTAINERS | Matrix |      |     |        | Method Preserved |     |                  |                                | Sampling |      |       |
|-----------------|------------------|---------------------------|--------------|--------|------|-----|--------|------------------|-----|------------------|--------------------------------|----------|------|-------|
|                 |                  |                           |              | WATER  | SOIL | AIR | SLUDGE | OTHER            | HCl | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | ICE      | NONE | OTHER |
| GMW-7<br>6-9'   | Boring           | 07-504 <sup>A</sup> -05   | 1            | X      |      |     |        |                  |     | X                |                                |          | 7/17 | -     |
| GMW-7<br>6-9'   |                  | 07-505 <sup>CA</sup> -05  | 1            | X      |      |     |        |                  |     | X                |                                |          | 7/17 | -     |
| GMW-8<br>6-9'   |                  | 07-504 <sup>A</sup> -06   | 1            | X      |      |     |        |                  |     | X                |                                |          | 7/17 | -     |
| GMW-8<br>6-9'   |                  | 07-505 <sup>CA</sup> -06  | 1            | X      |      |     |        |                  |     | X                |                                |          | 7/17 | -     |
| GMW-5<br>3-6'   |                  | 07-504 <sup>A</sup> -07   | 1            | X      |      |     |        |                  |     | X                |                                |          | 7/18 | -     |
| GMW-5<br>3-6'   |                  | 07-505 <sup>CA</sup> -07  | 1            | X      |      |     |        |                  |     | X                |                                |          | 7/18 | -     |
| GMW-6<br>6-9'   |                  | 07-504 <sup>A</sup> -08   | 1            | X      |      |     |        |                  |     | X                |                                |          | 7/19 | -     |
| GMW-6<br>6-9'   |                  | 07-505 <sup>CA</sup> -08  | 1            | X      |      |     |        |                  |     | X                |                                |          | 7/19 | -     |

|                         |      |      |
|-------------------------|------|------|
| Received by:            | Time | Date |
| Received by:            | Time | Date |
| Received by Laboratory: | Time | Date |

Way bill # \_\_\_\_\_  
*Mason Jones*

**SPECIAL HANDLING**

24 HOURS   
 EXPEDITED 48 Hours   
 SEVEN DAY   
 OTHER \_\_\_\_\_ (#) BUSINESS DAYS  
 QA/QC CLP Level  Blue Level   
 FAX

**SPECIAL DETECTION LIMITS (Specify)**

---

**SPECIAL REPORTING REQUIREMENTS (Specify)**

**REMARKS:** \* See note on bottom of C-O-C # 74-1151 for GMW-6 sample to be analyzed for GC/FID Hydrocarbon Screen.

Lab Use Only \_\_\_\_\_ Storage Location \_\_\_\_\_  
 Lot #: \_\_\_\_\_ Work Order #: \_\_\_\_\_

31402



Midwest Region  
4211 May Avenue  
Wichita, KS 67209

800-633-7938  
FAX 316-945-0506

CHAIN-OF-CUSTODY RECORD NO 74-1150  
AND ANALYSIS REQUEST

CUSTOMER'S COPY

Project Manager: *Ron Klemavich* Phone #: \_\_\_\_\_  
 Address: *GTT-Lenexa* Site location: *St. Louis*  
 Project Number: *042200376-03* Project Name: *EG96/St. Louis*

I attest that the proper field sampling procedures were used during the collection of these samples. Sampler Name (Print): *Jim Pool*

| ANALYSIS REQUEST  |   |
|---|---|
| <input type="checkbox"/> BTEX 602 <input type="checkbox"/> 8020 <input type="checkbox"/> with MTBE <input type="checkbox"/>   | <input type="checkbox"/> BTEX/TPH Gas. 602/8015 <input type="checkbox"/> 8020/8015 <input type="checkbox"/> MTBE <input type="checkbox"/> |
| <input type="checkbox"/> TPH as <input type="checkbox"/> Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Jet Fuel  | <input type="checkbox"/> Product I.D. by GC (SIMDIS) <input type="checkbox"/>   |
| <input type="checkbox"/> Total Oil & Grease: 413.1 <input type="checkbox"/> 413.2 <input type="checkbox"/> 503A <input type="checkbox"/>  | <input type="checkbox"/> Total Petroleum Hydrocarbons: 418.1 <input type="checkbox"/> 503E <input type="checkbox"/>                       |
| <input type="checkbox"/> EPA 601- <del>2</del> 8010 <input type="checkbox"/> DCA only <input type="checkbox"/>  | <input type="checkbox"/> EPA 602- <del>2</del> 8020 <input type="checkbox"/>  |
| <input type="checkbox"/> EPA 608 <input type="checkbox"/> 8080 <input type="checkbox"/> PCBs only <input type="checkbox"/>  | <input type="checkbox"/> EPA 610 <input type="checkbox"/> 8310 <input type="checkbox"/>   |
| <input type="checkbox"/> EPA 624 <input type="checkbox"/> 8240 <input type="checkbox"/> NBS +15 <input type="checkbox"/>  | <input type="checkbox"/> EPA 625 <input type="checkbox"/> 8270 <input type="checkbox"/> NBS +25 <input type="checkbox"/>                  |
| <input type="checkbox"/> EPTOX: Metals <input type="checkbox"/> Pesticides <input type="checkbox"/> Herbicides <input type="checkbox"/>   | <input type="checkbox"/> TCLP Metals <input type="checkbox"/> VOA <input type="checkbox"/> Semi VOA <input type="checkbox"/>              |
| <input type="checkbox"/> EPA Priority Pollutant Metals: <input checked="" type="checkbox"/>   | <input type="checkbox"/> HSL <input type="checkbox"/>   |
| <input type="checkbox"/> LEAD 7420 <input type="checkbox"/> 7421 <input type="checkbox"/> 239.2 <input type="checkbox"/> 6010 <input type="checkbox"/> Org. Lead <input type="checkbox"/> | <input type="checkbox"/> CAM Metals <input type="checkbox"/> STL <input type="checkbox"/> TTL <input type="checkbox"/>                    |
| <input type="checkbox"/> Corrosivity <input type="checkbox"/> Flashpoint <input type="checkbox"/> Reactivity <input type="checkbox"/>   | <input type="checkbox"/>  |

| Field Sample ID | Source of Sample | GTEL Lab # (Lab use only) | # CONTAINERS | Matrix   |      |     |        | Method Preserved |     |                  |                                | Sampling |             |             |
|-----------------|------------------|---------------------------|--------------|----------|------|-----|--------|------------------|-----|------------------|--------------------------------|----------|-------------|-------------|
|                 |                  |                           |              | WATER    | SOIL | AIR | SLUDGE | OTHER            | HCl | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | ICE      | NONE        | OTHER       |
| <i>GMW-1</i>    | <i>Well</i>      | <i>07-514-01</i>          | <i>3</i>     | <i>X</i> |      |     |        | <i>X</i>         |     |                  |                                |          | <i>7/20</i> | <i>1430</i> |
| <i>GMW-1</i>    |                  | <i>07-515-01</i>          | <i>1</i>     | <i>X</i> |      |     |        |                  |     |                  |                                |          |             | <i>1430</i> |
| <i>GMW-2</i>    |                  | <i>07-514-02</i>          | <i>3</i>     | <i>X</i> |      |     |        | <i>X</i>         |     |                  |                                |          | <i>7/20</i> | <i>1450</i> |
| <i>GMW-2</i>    |                  | <i>07-515-02</i>          | <i>1</i>     | <i>X</i> |      |     |        |                  |     |                  |                                |          |             | <i>1450</i> |
| <i>GMW-3</i>    |                  | <i>07-514-03</i>          | <i>3</i>     | <i>X</i> |      |     |        | <i>X</i>         |     |                  |                                |          |             | <i>1455</i> |
| <i>GMW-3</i>    |                  | <i>07-515-03</i>          | <i>1</i>     | <i>X</i> |      |     |        |                  |     |                  |                                |          |             | <i>1455</i> |
| <i>GMW-4</i>    |                  | <i>07-514-04</i>          | <i>3</i>     | <i>X</i> |      |     |        | <i>X</i>         |     |                  |                                |          |             | <i>1445</i> |
| <i>GMW-4</i>    |                  | <i>07-515-04</i>          | <i>1</i>     | <i>X</i> |      |     |        |                  |     |                  |                                |          |             | <i>1445</i> |

Received by: \_\_\_\_\_  
 Received by: \_\_\_\_\_  
 Received by Laboratory: *M. Mendenhall* Way bill # \_\_\_\_\_

Date: *7/23/90* Time: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Date: *7/24/90* Time: *7am*

Relinquished by Sampler: *Jim Pool*  
 Relinquished by: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_

**SPECIAL HANDLING**  
 24 HOURS   
 EXPEDITED 48 Hours   
 SEVEN DAY   
 OTHER \_\_\_\_\_ (#) BUSINESS DAYS  
 QA/QC CLP Level  Blue Level   
 FAX

**SPECIAL DETECTION LIMITS (Specify)**  
 \_\_\_\_\_  
**SPECIAL REPORTING REQUIREMENTS (Specify)**  
 \_\_\_\_\_

REMARKS: *\* Samples to be analyzed for metals have not been filtered or acidified. Please do in lab. TOTAL DISSOLVED METALS.*  
 Lab Use Only \_\_\_\_\_ Storage Location \_\_\_\_\_  
 Lot #: \_\_\_\_\_ Work Order #: \_\_\_\_\_

*2.00*



Midwest Region  
4211 May Avenue  
Wichita, KS 67209

800-633-7936  
FAX 316-945-0506

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST No. 74-4540

CUSTODIAN RECORD

ANALYSIS REQUEST

Project Manager: *Don Klemovich* Phone #: *316-579-0262*  
FAX #:

Address: *ETI Law Firm* Site location: *St. Louis*

Project Number: *04200376-02* Project Name: *ECIF St. Louis*

I attest that the proper field sampling procedures were used during the collection of these samples. Sampler Name (Print): *Steve Fry*

| Field Sample ID | Source of Sample | GTEL Lab # (Lab use only) | # CONTAINERS | Matrix |      |     |        |       |     | Method Preserved |                                |     |      |       | Sampling |      |
|-----------------|------------------|---------------------------|--------------|--------|------|-----|--------|-------|-----|------------------|--------------------------------|-----|------|-------|----------|------|
|                 |                  |                           |              | WATER  | SOIL | AIR | SLUDGE | OTHER | HCl | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | ICE | NONE | OTHER | DATE     | TIME |
|                 |                  |                           |              |        |      |     |        |       |     |                  |                                |     |      |       |          |      |
| G11W-8          |                  | 10-602-01                 | 4            | X      |      |     |        |       | X   |                  | X                              |     |      | 10/25 | 12:05    |      |
| G11W-7          |                  | 10-602-02                 | 4            | X      |      |     |        |       | X   |                  | X                              |     |      | 10/25 | 12:45    |      |
| G11W-6          |                  | 10-602-03                 | 4            | X      |      |     |        |       | X   |                  | X                              |     |      | 10/25 | 13:00    |      |
| G11W-5          |                  | 10-602-04                 | 4            | X      |      |     |        |       | X   |                  | X                              |     |      | 10/25 | 13:15    |      |

|   |   |  |   |  |   |   |   |  |   |   |  |  |  |  |   |   |   |
|---|---|--|---|--|---|---|---|--|---|---|--|--|--|--|---|---|---|
| <input type="checkbox"/> BTEX 602 <input type="checkbox"/> 8020 <input type="checkbox"/> with MTBE <input type="checkbox"/> | <input type="checkbox"/> BTEX/TPH Gas: 602/8015 <input type="checkbox"/> 8020/8015 <input type="checkbox"/> MTBE <input type="checkbox"/> | <input type="checkbox"/> TPH as <input type="checkbox"/> Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Jet Fuel | <input type="checkbox"/> Product I.P. by GC (SIMDIS) <input type="checkbox"/> | <input type="checkbox"/> Total Oil & Grease: 413.1 <input type="checkbox"/> 413.2 <input type="checkbox"/> 503A <input type="checkbox"/> | <input type="checkbox"/> Total Petroleum Hydrocarbons: 418.1 <input type="checkbox"/> 503E <input type="checkbox"/> | <input type="checkbox"/> EPA 501 <input type="checkbox"/> 8010 <input type="checkbox"/> DCA only <input type="checkbox"/> | <input type="checkbox"/> EPA 602 <input type="checkbox"/> 8020 <input type="checkbox"/> | <input type="checkbox"/> EPA 808 <input type="checkbox"/> 8060 <input type="checkbox"/> PCBs only <input type="checkbox"/> | <input type="checkbox"/> EPA 610 <input type="checkbox"/> 8310 <input type="checkbox"/> | <input checked="" type="checkbox"/> EPA 824 <input type="checkbox"/> 8240 <input type="checkbox"/> NBS +15 <input type="checkbox"/> | <input type="checkbox"/> EPA 825 <input type="checkbox"/> 8270 <input type="checkbox"/> NBS +25 <input type="checkbox"/> | <input type="checkbox"/> ETOX Metals <input type="checkbox"/> Pooled Solids <input type="checkbox"/> Lead in Solids <input type="checkbox"/> | <input type="checkbox"/> TCLP Metals <input type="checkbox"/> VOA <input type="checkbox"/> Semi VOA <input type="checkbox"/> | <input type="checkbox"/> EPA Priority Pollutant Metals <input type="checkbox"/> HSL <input type="checkbox"/> | <input type="checkbox"/> LEAD 7420 <input type="checkbox"/> 7421 <input type="checkbox"/> 239.2 <input type="checkbox"/> 6010 <input type="checkbox"/> Org. Lead <input type="checkbox"/> | <input type="checkbox"/> CAM Metals <input type="checkbox"/> STLC <input type="checkbox"/> TLCL | <input type="checkbox"/> Corrosivity <input type="checkbox"/> Flashpoint <input type="checkbox"/> Reactivity <input type="checkbox"/> |
|---|---|--|---|--|---|---|---|--|---|---|--|--|--|--|---|---|---|

Received by: *[Signature]*  
Received by: *[Signature]*  
Received by Laboratory: *[Signature]*

Date Time: *10-25-90 / 8:45*  
Date Time: *10-25-90 / 1:00*  
Date Time: *10-25-90 / 1:00*

SPECIAL HANDLING

- 24 HOURS
- EXPEDITED 48 Hours
- SEVEN DAY
- OTHER \_\_\_\_\_ (H) BUSINESS DAYS
- QA/QC CLP Level  Blue Level
- FAX

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)

REMARKS:

Lab Use Only Lot #: \_\_\_\_\_ Storage Location Work Order #: \_\_\_\_\_

Relinquished by Sampler: *[Signature]*  
Relinquished by: \_\_\_\_\_  
Relinquished by: \_\_\_\_\_



Midwest Region  
4211 May Avenue  
Wichita, KS 67209

00-633-7936  
FAX 316-945-0506

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST No. 74-4540

CUSTODY RECORD

Project Manager: Row Klepovich Phone #: 913-599-0262  
FAX #:

Address: GTI LENEEXA Site location: St. Louis

Project Number: 042200375-02 Project Name: EGTG St. Louis

I attest that the proper field sampling procedures were used during the collection of these samples. Sampler Name (Print): Steve Fey

ANALYSIS REQUEST

- BTEX 602  8020  with MTBE
- BTEX/TPH Gas: 602/8015  8020/8015  MTBE
- TPH as  Gas  Diesel  Jet Fuel
- Product ID, by GC (SIMDIS)
- Total Oil & Grease: 413.1  413.2  503A
- Total Petroleum Hydrocarbons: 416.1  503E
- EPA 601  8010  DCA only
- EPA 602  8020
- EPA 608  8080  PCBs only
- EPA 624  8240  NBS +15
- EPA 625  8250  NBS +25
- EPTOX: Metals  Pesticides  Herbicides
- IULP Metals  VOAs  Semi VOAs
- EPA Priority Pollutant Metals  HSL
- I FAD 7420 7421  239.2  6010  Orig. Lead
- CAM Metals  U SILC  OTTLG
- Corrosivity  Flashpoint  Reactivity

| Field Sample ID | Source of Sample | GTEL Lab # (Lab use only) | # CONTAINERS | Matrix |      |     |        |       | Method Preserved |                  |                                |     |      | Sampling |       |
|-----------------|------------------|---------------------------|--------------|--------|------|-----|--------|-------|------------------|------------------|--------------------------------|-----|------|----------|-------|
|                 |                  |                           |              | WATER  | SOIL | AIR | SLUDGE | OTHER | HCl              | HNO <sub>3</sub> | H <sub>2</sub> SO <sub>4</sub> | ICE | PHOS | OTHER    | DATE  |
| GMW-8           |                  |                           | 4            | X      |      |     |        |       | X                |                  |                                |     |      | 10/25    | 12:05 |
| GMW-7           |                  |                           | 4            | X      |      |     |        |       | X                |                  |                                |     |      | 10/25    | 12:45 |
| GMW-6           |                  |                           | 4            | X      |      |     |        |       | X                |                  |                                |     |      | 10/25    | 13:00 |
| GMW-5           |                  |                           | 4            | X      |      |     |        |       | X                |                  |                                |     |      | 10/25    | 13:15 |

Purgeable Volatiles EPA-624  
GC/MS

Standard Time  
SPECIAL HANDLING  
24 HOURS   
EXPEDITE: 48 Hours   
SEVEN DAY   
OTHER \_\_\_\_\_ (#) BUSINESS DAYS  
QAVOC CLP Level  Blue Level   
FAX

SPECIAL DETECTION LIMITS (Specify)  
  
SPECIAL REPORTING REQUIREMENTS (Specify)

REMARKS:  
  
Lab Use Only Storage Location  
Lot #: Work Order #:

Recalibrated by: R. Dr. Stone  
Received by: Steve Fey  
Received by Laboratory: Wm. R. Stone Way bill #  
  
Date Time: 10-25-90 13:50  
Date Time: 10-25-90 14:02  
Date Time: 10-25-90 14:38  
  
Relinquished by Sampler: Steve Fey  
Relinquished by: Steve Fey  
Relinquished by: Wm. R. Stone

**Laboratory Analytical Results**

**Environmental Analysis, Inc.**

# Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63033 • 314-921-4488



LAB #1205816  
 CLIENT CODE: MMS  
 SAMPLE ID: GMW-6 10/25 1315  
 REPORT NO: 40784

VOLATILES

|                            | <u>Value</u> | <u>Units</u> |
|----------------------------|--------------|--------------|
| Chloromethane              | 10 U         | ug/l         |
| Bromomethane               | 10 U         | ug/l         |
| Vinyl Chloride             | 1500         | ug/l         |
| Chloroethane               | 10 U         | ug/l         |
| Methylene Chloride         | 5 U          | ug/l         |
| Acetone                    | 50 U         | ug/l         |
| Carbon Disulfide           | 50 U         | ug/l         |
| 1,1-Dichloroethene         | 30           | ug/l         |
| 1,1-Dichloroethane         | 5 U          | ug/l         |
| 1,2-Dichloroethene (total) | 2100 *       | ug/l         |
| Chloroform                 | 5 U          | ug/l         |
| 2-Butanone                 | 50 U         | ug/l         |
| 1,2-Dichloroethane         | 5 U          | ug/l         |
| 1,1,1-Trichloroethane      | 5 U          | ug/l         |
| Carbon Tetrachloride       | 5 U          | ug/l         |
| Vinyl Acetate              | 50 U         | ug/l         |
| Bromodichloromethane       | 5 U          | ug/l         |
| 1,2-Dichloropropane        | 5 U          | ug/l         |
| trans-1,3-Dichloropropene  | 5 U          | ug/l         |
| Trichloroethene            | 1700         | ug/l         |
| Benzene                    | 5 U          | ug/l         |
| Dibromochloromethane       | 5 U          | ug/l         |



## Environmental Analysis, Inc.

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AI LAB #1205816  
 CLIENT CODE: MMS  
 SAMPLE ID: GMW-6 10/25 1315  
 REPORT NO: 40784

| <u>VOLATILES</u>           | <u>Value</u> | <u>Units</u> |
|----------------------------|--------------|--------------|
| Chloromethane              | 10 U         | ug/l         |
| Bromomethane               | 10 U         | ug/l         |
| Vinyl Chloride             | 1600         | ug/l         |
| Chloroethane               | 10 U         | ug/l         |
| Methylene Chloride         | 5 U          | ug/l         |
| Acetone                    | 50 U         | ug/l         |
| Carbon Disulfide           | 50 U         | ug/l         |
| 1,1-Dichloroethene         | 30           | ug/l         |
| 1,1-Dichloroethane         | 5 U          | ug/l         |
| 1,2-Dichloroethene (total) | 2100 *       | ug/l         |
| Chloroform                 | 5 U          | ug/l         |
| 2-Butanone                 | 50 U         | ug/l         |
| 1,2-Dichloroethane         | 5 U          | ug/l         |
| 1,1,1-Trichloroethane      | 5 U          | ug/l         |
| Carbon Tetrachloride       | 5 U          | ug/l         |
| Vinyl Acetate              | 50 U         | ug/l         |
| Bromodichloromethane       | 5 U          | ug/l         |
| 1,2-Dichloropropane        | 5 U          | ug/l         |
| trans-1,3-Dichloropropene  | 5 U          | ug/l         |
| Trichloroethene            | 1700         | ug/l         |
| Benzene                    | 5 U          | ug/l         |
| Dibromochloromethane       | 5 U          | ug/l         |





# Environmental Analysis, Inc.

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2

SAMPLE ID: CMW-5 10/25 1316

|                           |       |      |
|---------------------------|-------|------|
| cis-1,3-Dichloropropene   | 6 U   | ug/l |
| 1,1,2-Trichloroethane     | 6 U   | ug/l |
| Bromoform                 | 6 U   | ug/l |
| 2-Hexanone                | 60 U  | ug/l |
| 4-Methyl-2-pentanone      | 50 U  | ug/l |
| Tetrachloroethene         | 9200  | ug/l |
| 1,1,2,2-Tetrachloroethane | 5 U   | ug/l |
| Toluene                   | 100   | ug/l |
| Chlorobenzene             | 5 U   | ug/l |
| Ethyl Benzene             | 6 U   | ug/l |
| Styrene                   | 6 U   | ug/l |
| Total Xylenes             | 6 U   | ug/l |
| Acrolein                  | 100 U | ug/l |
| Acrylonitrile             | 60 U  | ug/l |
| 2-chloroethylvinylether   | 10 U  | ug/l |
| *cis-1,2-dichloroethene   | 2100  | ug/l |
| *trans-1,2-dichloroethene | 15    | ug/l |

| Surrogate recoveries   | % Rec | Control Range |          |
|------------------------|-------|---------------|----------|
|                        |       | Water %       | Soil %   |
| cis-1,2-Dichloroethane | 126   | (76-114)      | (70-121) |
| m-Toluene              | 102   | (88-110)      | (81-117) |
| p-Bromofluorobenzene   | 96    | (86-115)      | (74-121) |



# Environmental Analysis, Inc.

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Page 3

SAMPLE ID: GMW-5 10/25 1316

## RESULTS

- B=Analyte found in blank as well as sample, indicates possible blank contamination.
- J=Estimated value-result is less than detection limit but greater than zero.
- U=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).
- =Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.



# Environmental Analysis, Inc.

9278 N. Lindbergh Blvd • Florissant, MO 63033 • 314-921-4488



LAB #1205815

CLIENT CODE: MMS

SAMPLE ID: GMW-6 10/25 1300

REPORT NO: 40784

## VOLATILES

|                            | <u>Value</u> | <u>Units</u> |
|----------------------------|--------------|--------------|
| Chloromethane              | 10 U         | ug/l         |
| Bromomethane               | 10 U         | ug/l         |
| Vinyl Chloride             | 1200         | ug/l         |
| Chloroethane               | 10 U         | ug/l         |
| Methylene Chloride         | 100          | ug/l         |
| Acetone                    | 50 U         | ug/l         |
| Carbon Disulfide           | 50 U         | ug/l         |
| 1,1-Dichloroethene         | 5 U          | ug/l         |
| 1,1-Dichloroethane         | 120          | ug/l         |
| 1,2-Dichloroethene (total) | 40500 *      | ug/l         |
| Chloroform                 | 5 U          | ug/l         |
| 2-Butanone                 | 50 U         | ug/l         |
| 1,2-Dichloroethane         | 5 U          | ug/l         |
| 1,1,1-Trichloroethane      | 100          | ug/l         |
| Carbon Tetrachloride       | 5 U          | ug/l         |
| Vinyl Acetate              | 50 U         | ug/l         |
| Bromodichloromethane       | 5 U          | ug/l         |
| 1,2-Dichloropropane        | 5 U          | ug/l         |
| trans-1,3-Dichloropropene  | 5 U          | ug/l         |
| Trichloroethene            | 27000        | ug/l         |
| Benzene                    | 5 U          | ug/l         |
| Dibromochloromethane       | 5 U          | ug/l         |



# Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63033 • 314-921-4488



Page 2

SAMPLE ID: GMW-6 10/25 1300

|                           |       |      |
|---------------------------|-------|------|
| cis-1,3-Dichloropropene   | 5 U   | ug/l |
| 1,1,2-Trichloroethane     | 5 U   | ug/l |
| Bromoform                 | 5 U   | ug/l |
| 2-Hexanone                | 50 U  | ug/l |
| 4-Methyl-2-pentanone      | 50 U  | ug/l |
| Tetrachloroethene         | 38500 | ug/l |
| 1,1,2,2-Tetrachloroethane | 5 U   | ug/l |
| Toluene                   | 65    | ug/l |
| Chlorobenzene             | 5 U   | ug/l |
| Ethyl Benzene             | 5 U   | ug/l |
| Styrene                   | 5 U   | ug/l |
| Total Xylenes             | 5 U   | ug/l |
| Acrolein                  | 100 U | ug/l |
| Acrylonitrile             | 50 U  | ug/l |
| 2-chloroethylvinylether   | 10 U  | ug/l |
| *cis-1,2-dichloroethene   | 40000 | ug/l |
| *trans-1,2-dichloroethene | 500   | ug/l |

| Surrogate recoveries  | % Rec | Control Range |          |
|-----------------------|-------|---------------|----------|
|                       |       | Water %       | Soil %   |
| d4-1,2-Dichloroethane | 90    | (76-114)      | (70-121) |
| d8-Toluene            | 102   | (88-110)      | (81-117) |
| 4-Bromofluorobenzene  | 98    | (86-115)      | (74-121) |



# Environmental Analysis, Inc.

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ge 3

SAMPLE ID: GMW-6 10/25 1300

## LATILES

Analyte found in blank as well as sample, indicates possible blank contamination.

Estimated value-result is less than detection limit but greater than zero.

Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.



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LAB #1205814  
 IDENT CODE: MMS  
 SAMPLE ID: GMW-7 10/25 1246  
 REPORT NO: 40784

| <u>Volatiles</u>           | <u>Value</u> | <u>Units</u> |
|----------------------------|--------------|--------------|
| Chloromethane              | 10 U         | ug/l         |
| Bromomethane               | 10 U         | ug/l         |
| Vinyl Chloride             | 10 U         | ug/l         |
| Chloroethane               | 10 U         | ug/l         |
| Methylene Chloride         | 5 U          | ug/l         |
| Acetone                    | 50 U         | ug/l         |
| Carbon Disulfide           | 50 U         | ug/l         |
| 1,1-Dichloroethene         | 5 U          | ug/l         |
| 1,1-Dichloroethane         | 5 U          | ug/l         |
| 1,2-Dichloroethene (total) | 76000 *      | ug/l         |
| Chloroform                 | 5 U          | ug/l         |
| 2-Butanone                 | 50 U         | ug/l         |
| 1,2-Dichloroethane         | 5 U          | ug/l         |
| 1,1,1-Trichloroethane      | 5 U          | ug/l         |
| Carbon Tetrachloride       | 5 U          | ug/l         |
| Vinyl Acetate              | 50 U         | ug/l         |
| Bromodichloromethane       | 5 U          | ug/l         |
| 1,2-Dichloropropane        | 5 U          | ug/l         |
| trans-1,3-Dichloropropene  | 5 U          | ug/l         |
| Trichloroethene            | 27000        | ug/l         |
| Benzene                    | 5 U          | ug/l         |
| Dibromochloromethane       | 5 U          | ug/l         |





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MPLE 1D: GMW-7 10/25 1245

|                           |       |      |
|---------------------------|-------|------|
| cis-1,3-Dichloropropene   | 5 U   | ug/l |
| 1,1,2-Trichloroethane     | 5 U   | ug/l |
| Bromóform                 | 5 U   | ug/l |
| 2-Hexanone                | 50 U  | ug/l |
| 4-Methyl-2-pentanone      | 50 U  | ug/l |
| Tetrachloroethene         | 130   | ug/l |
| 1,1,2,2-Tetrachloroethane | 5 U   | ug/l |
| Toluene                   | 5 U   | ug/l |
| Chlorobenzene             | 5 U   | ug/l |
| Ethyl Benzene             | 5 U   | ug/l |
| Styrene                   | 5 U   | ug/l |
| Total Xylenes             | 5 U   | ug/l |
| Acrolein                  | 100 U | ug/l |
| Acrylonitrile             | 50 U  | ug/l |
| 2-chloroethylvinylether   | 10 U  | ug/l |
| *cis-1,2-dichloroethene   | 75000 | ug/l |
| *trans-1,2-dichloroethene | < 5   | ug/l |

## Surrogate recoveries

|                       | % Rec | Control Range |          |
|-----------------------|-------|---------------|----------|
|                       |       | Water %       | Soil %   |
| d4-1,2-Dichloroethane | 90    | (76-114)      | (70-121) |
| 13-Toluene            | 98    | (88-110)      | (81-117) |
| 14-Bromofluorobenzene | 90    | (86-116)      | (74-121) |



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SAMPLE ID: GHW-7 10/25 1245

## VOLATILES

- =Analyte found in blank as well as sample, indicates possible blank contamination.
- =Estimated value-result is less than detection limit but greater than zero.
- =Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).
- =Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.





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LAB #1205813  
 CNT CODE: MMS  
 FILE ID: GMW-8.10/25 1206  
 RT NO: 40784

| <u>ATILES</u>              | <u>Value</u> | <u>Units</u> |
|----------------------------|--------------|--------------|
| Chloromethane              | 10 U         | ug/l         |
| Bromomethane               | 10 U         | ug/l         |
| Vinyl Chloride             | 21000        | ug/l         |
| Chloroethane               | 10 U         | ug/l         |
| Methylene Chloride         | 5 U          | ug/l         |
| Acetone                    | 50 U         | ug/l         |
| Carbon Disulfide           | 50 U         | ug/l         |
| 1,1-Dichloroethene         | 120          | ug/l         |
| 1,1-Dichloroethane         | 5 U          | ug/l         |
| 1,2-Dichloroethene (total) | 95000 *      | ug/l         |
| Chloroform                 | 5 U          | ug/l         |
| 2-Butanone                 | 50 U         | ug/l         |
| 1,2-Dichloroethane         | 5 U          | ug/l         |
| 1,1,1-Trichloroethane      | 5 U          | ug/l         |
| Carbon Tetrachloride       | 5 U          | ug/l         |
| Vinyl Acetate              | 50 U         | ug/l         |
| Bromodichloromethane       | 5 U          | ug/l         |
| 1,2-Dichloropropane        | 5 U          | ug/l         |
| trans-1,3-Dichloropropene  | 5 U          | ug/l         |
| Trichloroethene            | 35000        | ug/l         |
| Benzene                    | 5 U          | ug/l         |
| Dibromochloromethane       | 5 U          | ug/l         |



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SAMPLE ID: GMW-8 10/25 1205

|                           |       |      |
|---------------------------|-------|------|
| cis-1,3-Dichloropropene   | 5 U   | ug/l |
| 1,1,2-Trichloroethane     | 95    | ug/l |
| Bromoform                 | 5 U   | ug/l |
| 2-Hexanone                | 50 U  | ug/l |
| 4-Methyl-2-pentanone      | 50 U  | ug/l |
| Tetrachloroethene         | 20    | ug/l |
| 1,1,2,2-Tetrachloroethane | 5 U   | ug/l |
| Toluene                   | 100   | ug/l |
| Chlorobenzene             | 5 U   | ug/l |
| Ethyl Benzene             | 5 U   | ug/l |
| Styrene                   | 5 U   | ug/l |
| Total Xylenes             | 5 U   | ug/l |
| Acrolein                  | 100 U | ug/l |
| Acrylonitrile             | 50 U  | ug/l |
| 2-chloroethylvinylether   | 10 U  | ug/l |
| *cis-1,2-dichloroethene   | 94000 | ug/l |
| *trans-1,2-dichloroethene | 160   | ug/l |

Surrogate recoveries

% Rec

Control Range

Water %

Soil %

4-1,2-Dichloroethane

111

(76-114)

(70-121)

Toluene

102

(88-110)

(81-117)

4-Bromofluorobenzene

101

(88-115)

(74-121)



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SAMPLE ID: GMW-8 10/25 1205

## VOLATILES

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Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

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LAB #1215322  
 CLIENT CODE: MMS  
 SAMPLE ID: GMW#1 1/17/91  
 REPORT NO:

| <u>OLATILES</u>               | <u>Value</u> | <u>Units</u> |
|-------------------------------|--------------|--------------|
| 400R Chloromethane            | 10 U         | ug/l         |
| Bromomethane                  | 10 U         | ug/l         |
| 2 Vinyl Chloride              | 10 U         | ug/l         |
| Chloroethane                  | 10 U         | ug/l         |
| NL Methylene Chloride         | 75           | ug/l         |
| Acetone                       | 50 U         | ug/l         |
| Carbon Disulfide              | 50 U         | ug/l         |
| 1,1-Dichloroethene            | 5 U          | ug/l         |
| NL 1,1-Dichloroethane         | 5 U          | ug/l         |
| NL 1,2-Dichloroethene (total) | 50           | ug/l         |
| NL Chloroform                 | 6            | ug/l         |
| 2-Butanone                    | 50 U         | ug/l         |
| 1,2-Dichloroethane            | 5 U          | ug/l         |
| 200 1,1,1-Trichloroethane     | 5 U          | ug/l         |
| Carbon Tetrachloride          | 5 U          | ug/l         |
| Vinyl Acetate                 | 50 U         | ug/l         |
| Bromodichloromethane          | 5 U          | ug/l         |
| 1,2-Dichloropropane           | 5 U          | ug/l         |
| trans-1,3-Dichloropropene     | 5 U          | ug/l         |
| 5 <u>Trichloroethene</u>      | 40           | ug/l         |
| 5 Benzene                     | 5 U          | ug/l         |
| Dibromochloromethane          | 5 U          | ug/l         |



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Page 2

SAMPLE ID: GW#1 1/17/91

| <u>VOLATILES</u> |                           | <u>Value</u> | <u>Units</u> |
|------------------|---------------------------|--------------|--------------|
|                  | cis-1,3-Dichloropropene   | 5 U          | ug/l         |
| μL               | 1,1,2-Trichloroethane     | 5 U          | ug/l         |
|                  | Bromoform                 | 5 U          | ug/l         |
|                  | 2-Hexanone                | 50 U         | ug/l         |
|                  | 4-Methyl-2-pentanone      | 50 U         | ug/l         |
| 0.8              | Tetrachloroethene         | 5 U          | ug/l         |
|                  | 1,1,2,2-Tetrachloroethane | 5 U          | ug/l         |
| μL               | Toluene                   | 5 U          | ug/l         |
| 20               | Chlorobenzene             | 5 U          | ug/l         |
|                  | Ethyl Benzene             | 5 U          | ug/l         |
|                  | Styrene                   | 5 U          | ug/l         |
| μL               | Total Xylenes             | 5 U          | ug/l         |
|                  | Acrolein                  | 100 U        | ug/l         |
|                  | Acrylonitrile             | 50 U         | ug/l         |
|                  | 2-chloroethylvinylether   | 10 U         | ug/l         |

| Surrogate recoveries  | % Rec | Control Range |          |
|-----------------------|-------|---------------|----------|
|                       |       | Water %       | Soil %   |
| d4-1,2-Dichloroethane | 77    | (76-114)      | (70-121) |
| d8-Toluene            | 106   | (88-110)      | (81-117) |
| 4-Bromofluorobenzene  | 100   | (86-115)      | (74-121) |

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EAI LAB #1215203  
 CLIENT CODE: MMS  
 SAMPLE ID: GMW#2 1/16/91  
 REPORT NO:

## VOLATILES

|                            | <u>Value</u> | <u>Units</u> |
|----------------------------|--------------|--------------|
| Chloromethane              | 10 U         | ug/l         |
| Bromomethane               | 10 U         | ug/l         |
| Vinyl Chloride             | 10 U         | ug/l         |
| Chloroethane               | 10 U         | ug/l         |
| Methylene Chloride         | 55           | ug/l         |
| Acetone                    | 50 U         | ug/l         |
| Carbon Disulfide           | 50 U         | ug/l         |
| 1,1-Dichloroethene         | 5 U          | ug/l         |
| 1,1-Dichloroethane         | 5 U          | ug/l         |
| 1,2-Dichloroethene (total) | 80           | ug/l         |
| Chloroform                 | 6 U          | ug/l         |
| o-Dichlorobenzene          | 50 U         | ug/l         |
| 1,2-Dichloroethane         | 5 U          | ug/l         |
| 1,1,1-Trichloroethane      | 5 U          | ug/l         |
| Carbon Tetrachloride       | 5 U          | ug/l         |
| Vinyl Acetate              | 50 U         | ug/l         |
| Bromodichloromethane       | 5 U          | ug/l         |
| 1,2-Dichloropropane        | 5 U          | ug/l         |
| trans-1,3-Dichloropropene  | 5 U          | ug/l         |
| Trichloroethene            | 17           | ug/l         |
| Benzene                    | 5 U          | ug/l         |
| Dibromochloromethane       | 5 U          | ug/l         |



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SAMPLE ID: GMW#2 1/16/91

VOLATILES

|                           | <u>Value</u> | <u>Units</u> |
|---------------------------|--------------|--------------|
| cis-1,3-Dichloropropene   | 5 U          | ug/l         |
| 1,1,2-Trichloroethane     | 5 U          | ug/l         |
| Bromoform                 | 5 U          | ug/l         |
| 2-Hexanone                | 50 U         | ug/l         |
| 4-Methyl-2-pentanone      | 50 U         | ug/l         |
| Tetrachloroethene         | 5 U          | ug/l         |
| 1,1,2,2-Tetrachloroethane | 5 U          | ug/l         |
| Toluene                   | 5 U          | ug/l         |
| Chlorobenzene             | 5 U          | ug/l         |
| Ethyl Benzene             | 5 U          | ug/l         |
| Styrene                   | 5 U          | ug/l         |
| Total Xylenes             | 5 U          | ug/l         |
| Acrolein                  | 100 U        | ug/l         |
| Acrylonitrile             | 50 U         | ug/l         |
| 2-chloroethylvinylether   | 10 U         | ug/l         |

## Surrogate recoveries

% Rec

Control Range

Water %      Soil %

d4-1,2-Dichloroethane

108

(76-114)

(70-121)

18-Toluene

100

(88-110)

(81-117)

Bromofluorobenzene

103

(86-115)

(74-121)



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3

SAMPLE ID: GMW#2 1/16/91

VOLATILES

=Analyte found in blank as well as sample, indicates possible blank contamination.

=Estimated value-result is less than detection limit but greater than zero.

U=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

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LAB #1215323  
 CLIENT CODE: MMS  
 SAMPLE ID: GMW#3 1/17/91  
 REPORT NO:

| <u>VOLATILES</u>           | <u>Value</u> | <u>Units</u> |
|----------------------------|--------------|--------------|
| Chloromethane              | 10 U         | ug/l         |
| Bromomethane               | 10 U         | ug/l         |
| Vinyl Chloride             | 30           | ug/l         |
| Chloroethane               | 10 U         | ug/l         |
| Methylene Chloride         | 75           | ug/l         |
| Acetone                    | 50 U         | ug/l         |
| Carbon Disulfide           | 50 U         | ug/l         |
| 1,1-Dichloroethene         | 5 U          | ug/l         |
| 1,1-Dichloroethane         | 5 U          | ug/l         |
| 1,2-Dichloroethene (total) | 100          | ug/l         |
| Chloroform                 | 10           | ug/l         |
| 2-Butanone                 | 50 U         | ug/l         |
| 1,2-Dichloroethane         | 5 U          | ug/l         |
| 1,1,1-Trichloroethane      | 5 U          | ug/l         |
| Carbon Tetrachloride       | 5 U          | ug/l         |
| Vinyl Acetate              | 50 U         | ug/l         |
| Bromodichloromethane       | 5 U          | ug/l         |
| 1,2-Dichloropropane        | 5 U          | ug/l         |
| trans-1,3-Dichloropropene  | 5 U          | ug/l         |
| Trichloroethene            | 250          | ug/l         |
| Benzene                    | 5 U          | ug/l         |
| Dibromochloromethane       | 5 U          | ug/l         |



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2

SAMPLE ID: GMW#3 1/17/91

| <u>VOLATILES</u>          | <u>Value</u> | <u>Units</u> |
|---------------------------|--------------|--------------|
| cis 1,3-Dichloropropene   | 6 U          | ug/l         |
| 1,1,2-Trichloroethane     | 5 U          | ug/l         |
| Bromoform                 | 5 U          | ug/l         |
| 2-Hexanone                | 50 U         | ug/l         |
| 4-Methyl-2-pentanone      | 50 U         | ug/l         |
| Tetrachloroethene         | 8            | ug/l         |
| 1,1,2,2-Tetrachloroethane | 5 U          | ug/l         |
| Toluene                   | 5 U          | ug/l         |
| Chlorobenzene             | 5 U          | ug/l         |
| Ethyl Benzene             | 5 U          | ug/l         |
| Styrene                   | 5 U          | ug/l         |
| Total Xylenes             | 5 U          | ug/l         |
| Acrolein                  | 100 U        | ug/l         |
| Acrylonitrile             | 50 U         | ug/l         |
| 2-chloroethylvinylether   | 10 U         | ug/l         |

| Surrogate recoveries  | % Rec | Control Range |          |
|-----------------------|-------|---------------|----------|
|                       |       | Water %       | Soil %   |
| d4-1,2-Dichloroethane | 79    | (76-114)      | (70-121) |
| i8-Toluene            | 106   | (88-110)      | (81-117) |
| p4-bromofluorobenzene | 99    | (86-115)      | (74-121) |



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SAMPLE ID: GMW#3 1/17/91

DLATILES

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PAI LAB #1215324  
 CLIENT CODE: MMS.  
 SAMPLE ID: GMW#4 1/17/91  
 REPORT NO:

| <u>OLATILES</u>            | <u>Value</u> | <u>Units</u> |
|----------------------------|--------------|--------------|
| Chloromethane              | 10 U         | ug/l         |
| Bromomethane               | 10 U         | ug/l         |
| Vinyl Chloride             | 10 U         | ug/l         |
| Chloroethane               | 10 U         | ug/l         |
| Methylene Chloride         | 45           | ug/l         |
| Acetone                    | 50 U         | ug/l         |
| Carbon Disulfide           | 50 U         | ug/l         |
| 1,1-Dichloroethene         | 5 U          | ug/l         |
| 1,1-Dichloroethane         | 5 U          | ug/l         |
| 1,2-Dichloroethene (total) | 5 U          | ug/l         |
| Chloroform                 | 5 U          | ug/l         |
| 2-Butanone                 | 50 U         | ug/l         |
| 1,2-Dichloroethane         | 5 U          | ug/l         |
| 1,1,1-Trichloroethane      | 5 U          | ug/l         |
| Carbon Tetrachloride       | 5 U          | ug/l         |
| Vinyl Acetate              | 50 U         | ug/l         |
| Bromodichloromethane       | 5 U          | ug/l         |
| 1,2-Dichloropropane        | 5 U          | ug/l         |
| trans-1,3-Dichloropropene  | 5 U          | ug/l         |
| Trichloroethene            | 6            | ug/l         |
| Benzene                    | 5 U          | ug/l         |
| Dibromochloromethane       | 5 U          | ug/l         |



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2

SAMPLE ID: GMW#4 1/17/91

VOLATILES

|                           | <u>Value</u> | <u>Units</u> |
|---------------------------|--------------|--------------|
| cis-1,3-Dichloropropene   | 5 U          | ug/l         |
| 1,1,2-Trichloroethane     | 5 U          | ug/l         |
| Bromoform                 | 5 U          | ug/l         |
| 2-Hexanone                | 50 U         | ug/l         |
| 4-Methyl-2-pentanone      | 50 U         | ug/l         |
| Tetrachloroethene         | 5 U          | ug/l         |
| 1,1,2,2-Tetrachloroethane | 5 U          | ug/l         |
| Toluene                   | 6 U          | ug/l         |
| Chlorobenzene             | 5 U          | ug/l         |
| Ethyl Benzene             | 5 U          | ug/l         |
| Styrene                   | 5 U          | ug/l         |
| Total Xylenes             | 5 U          | ug/l         |
| Acrolein                  | 100 U        | ug/l         |
| Acrylonitrile             | 50 U         | ug/l         |
| 2-chloroethylvinylether   | 10 U         | ug/l         |

Surrogate recoveries

% Rec

Control Range

Water %

Soil %

d4-1,2-Dichloroethane

92

(76-114)

(70-121)

8-Toluene

107

(88-110)

(81-117)

4-Bromofluorobenzene

96

(86-115)

(74-121)



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SAMPLE ID: GMW#4 1/17/91

## VOLATILES

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=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.



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**Environment**  
3278 N. Lindbergh E

|       |                                     |         |                         |
|-------|-------------------------------------|---------|-------------------------|
| To    | David Daniels                       | From    | Bob Stone               |
| Co    | Groundwater Tech.                   | Co      | E G & G-Missouri Metals |
| Dept. |                                     | Phone # | 314-428-3363            |
| Fax # | 722-9307<br><del>316-862-9913</del> | Fax #   | 314-428-8402            |

LAB #1215326  
CLIENT CODE: MMS  
SAMPLE ID: GMW #5 1/17/91  
REPORT NO: 42110



| <u>Volatiles</u>                  | <u>Value</u> | <u>Units</u> |
|-----------------------------------|--------------|--------------|
| Chloromethane                     | 10 U         | ug/l         |
| Bromomethane                      | 10 U         | ug/l         |
| <u>Vinyl Chloride</u>             | 2000         | ug/l         |
| Chloroethane                      | 10 U         | ug/l         |
| <u>Methylene Chloride</u>         | 55           | ug/l         |
| Acetone                           | 50 U         | ug/l         |
| Carbon Disulfide                  | 50 U         | ug/l         |
| <u>1,1-Dichloroethene</u>         | 35           | ug/l         |
| 1,1-Dichloroethane                | 5 U          | ug/l         |
| <u>1,2-Dichloroethene (total)</u> | 5700         | ug/l         |
| <u>Chloroform</u>                 | 10           | ug/l         |
| 2-Butanone                        | 50 U         | ug/l         |
| 1,2-Dichloroethane                | 5 U          | ug/l         |
| 1,1,1-Trichloroethane             | 5 U          | ug/l         |
| Carbon Tetrachloride              | 6 U          | ug/l         |
| Vinyl Acetate                     | 50 U         | ug/l         |
| Bromodichloromethane              | 5 U          | ug/l         |
| 1,2-Dichloropropane               | 6 U          | ug/l         |
| trans-1,3-Dichloropropene         | 5 U          | ug/l         |
| <u>Trichloroethene</u>            | 1100         | ug/l         |
| Benzene                           | 5 U          | ug/l         |
| Dibromochloromethane              | 5 U          | ug/l         |



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MPLE ID: GMW #5 1/17/91

| <u>VOLATILES</u>             | <u>Value</u> | <u>Units</u> |
|------------------------------|--------------|--------------|
| cis-1,3-Dichloropropene      | 5 U          | ug/l         |
| <u>1,1,2-Trichloroethane</u> | <u>18</u>    | ug/l         |
| Bromoform                    | 6 U          | ug/l         |
| 2-Hexanone                   | 50 U         | ug/l         |
| 4-Methyl-2-pentanone         | 50 U         | ug/l         |
| <u>Tetrachloroethene</u>     | <u>8800</u>  | ug/l         |
| 1,1,2,2-Tetrachloroethane    | 5 U          | ug/l         |
| <u>Toluene</u>               | <u>40</u>    | ug/l         |
| Chlorobenzene                | 5 U          | ug/l         |
| Ethyl Benzene                | 6 U          | ug/l         |
| Styrene                      | 6 U          | ug/l         |
| Total Xylenes                | 5 U          | ug/l         |
| Acrolein                     | 100 U        | ug/l         |
| Acrylonitrile                | 50 U         | ug/l         |
| 2-chloroethylvinylether      | 10 U         | ug/l         |

| Surrogate recoveries   | % Rec | Control Range |          |
|------------------------|-------|---------------|----------|
|                        |       | Water %       | Soil %   |
| cis-1,2-Dichloroethane | 99    | (76-114)      | (70-121) |
| cis-Toluene            | 101   | (88-110)      | (81-117) |
| 4-Bromofluorobenzene   | 105   | (86-115)      | (74-121) |





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SAMPLE ID: GMW #5 1/17/91

## VOLATILES

- Analyte found in blank as well as sample, indicates possible blank contamination.
- Estimated value-result is less than detection limit but greater than zero.
- Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).
- Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.



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AI LAB #1215326  
 CLIENT CODE: MMS  
 SAMPLE ID: GMW #6 1/17/91  
 REPORT NO: 42110

| <u>VOLATILES</u>                  | <u>Value</u> | <u>Units</u> |
|-----------------------------------|--------------|--------------|
| Chloromethane                     | 10 U         | ug/l         |
| Bromomethane                      | 10 U         | ug/l         |
| Vinyl Chloride                    | 1200         | ug/l         |
| <u>Chloroethane</u>               | 10 U         | ug/l         |
| <u>Methylene Chloride</u>         | 580          | ug/l         |
| Acetone                           | 50 U         | ug/l         |
| Carbon Disulfide                  | 50 U         | ug/l         |
| <u>1,1-Dichloroethene</u>         | 300          | ug/l         |
| <u>1,1-Dichloroethane</u>         | 250          | ug/l         |
| <u>1,2-Dichloroethene (total)</u> | 70000        | ug/l         |
| <u>Chloroform</u>                 | 8            | ug/l         |
| 2-Butanone                        | 50 U         | ug/l         |
| <u>1,2-Dichloroethane</u>         | 7            | ug/l         |
| <u>1,1,1-Trichloroethane</u>      | 55           | ug/l         |
| Carbon Tetrachloride              | 5 U          | ug/l         |
| Vinyl Acetate                     | 50 U         | ug/l         |
| Bromodichloromethane              | 5 U          | ug/l         |
| 1,2-Dichloropropane               | 5 U          | ug/l         |
| trans-1,3-Dichloropropene         | 5 U          | ug/l         |
| <u>Trichloroethene</u>            | 32000        | ug/l         |
| <u>Benzene</u>                    | 14           | ug/l         |
| Dibromochloromethane              | 5 U          | ug/l         |



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SAMPLE ID: GMW #6 1/17/91

| <u>ATILES</u>             | <u>Value</u> | <u>Units</u> |
|---------------------------|--------------|--------------|
| cis-1,3-Dichloropropene   | 5 U          | ug/l         |
| 1,1,2-Trichloroethane     | 5 U          | ug/l         |
| Bromoform                 | 5 U          | ug/l         |
| 2-Hexanone                | 50 U         | ug/l         |
| 4-Methyl-2-pentanone      | 50 U         | ug/l         |
| <u>Tetrachloroethene</u>  | <u>35000</u> | ug/l         |
| 1,1,2,2-Tetrachloroethane | 5 U          | ug/l         |
| <u>Toluene</u>            | <u>45</u>    | ug/l         |
| Chlorobenzene             | 5 U          | ug/l         |
| Ethyl Benzene             | 5 U          | ug/l         |
| Styrene                   | 5 U          | ug/l         |
| Total Xylenes             | 6 U          | ug/l         |
| Acrolein                  | 100 U        | ug/l         |
| Acrylonitrile             | 50 U         | ug/l         |
| 2-chloroethylvinylether   | 10 U         | ug/l         |

arrogate recoveries

% Rec

Control Range

|                     | % Rec | Water %  | Soil %   |
|---------------------|-------|----------|----------|
| -1,2-Dichloroethane | 100   | (76-114) | (70-121) |
| -Toluene            | 101   | (88-110) | (81-117) |
| -Bromofluorobenzene | 107   | (86-115) | (74-121) |



# Environmental Analysis, Inc.

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SAMPLE ID: GMW #6 1/17/91

## VOLATILES

- =Analyte found in blank as well as sample, indicates possible blank contamination.
- =Estimated value-result is less than detection limit but greater than zero.
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- =Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.



## Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63033 • 314-921-4488



LAB #1215204  
 CLIENT CODE: MMS  
 SAMPLE ID: GMW#7. 1/16/91  
 REPORT NO:

| <u>OLATILES</u>            | <u>Value</u> | <u>Units</u> |
|----------------------------|--------------|--------------|
| Chloromethane              | 10 U         | ug/l         |
| Bromomethane               | 10 U         | ug/l         |
| Vinyl Chloride             | 300          | ug/l         |
| Chloroethane               | 10 U         | ug/l         |
| Methylene Chloride         | 60           | ug/l         |
| Acetone                    | 50 U         | ug/l         |
| Carbon Disulfide           | 50 U         | ug/l         |
| 1,1-Dichloroethene         | 5 U          | ug/l         |
| 1,1-Dichloroethane         | 5 U          | ug/l         |
| 1,2-Dichloroethene (total) | 880          | ug/l         |
| Chloroform                 | 5 U          | ug/l         |
| 2-Butanone                 | 50 U         | ug/l         |
| 1,2-Dichloroethane         | 5 U          | ug/l         |
| 1,1,1 Trichloroethane      | 5 U          | ug/l         |
| Carbon Tetrachloride       | 5 U          | ug/l         |
| Vinyl Acetate              | 50 U         | ug/l         |
| Bromodichloromethane       | 5 U          | ug/l         |
| 1,2-Dichloropropane        | 5 U          | ug/l         |
| trans-1,3-Dichloropropene  | 5 U          | ug/l         |
| Trichloroethene            | 2500         | ug/l         |
| Benzene                    | 5 U          | ug/l         |
| Dibromochloromethane       | 5 U          | ug/l         |



# Environmental Analysis, Inc.

3270 N. Lindbergh Blvd., • Lees Summit, MO 64083 • 314-921-4400



SAMPLE ID: GMW#7 1/16/91

| <u>Volatiles</u>                     | <u>Value</u> | <u>Units</u> |
|--------------------------------------|--------------|--------------|
| cis-1,3-Dichloropropene              | 5 U          | ug/l         |
| 1,1,2-Trichloroethane                | 5 U          | ug/l         |
| Bromoform                            | 5 U          | ug/l         |
| 2-Hexanone                           | 50 U         | ug/l         |
| 4-Methyl-2-pentanone                 | 50 U         | ug/l         |
| Tetrachloroethene                    | 9            | ug/l         |
| <del>1,1,2,2-Tetrachloroethane</del> | 5 U          | ug/l         |
| Toluene                              | 5 U          | ug/l         |
| Chlorobenzene                        | 5 U          | ug/l         |
| Ethyl Benzene                        | 5 U          | ug/l         |
| Styrene                              | 5 U          | ug/l         |
| Total Xylenes                        | 5 U          | ug/l         |
| Acrolein                             | 100 U        | ug/l         |
| Acrylonitrile                        | 50 U         | ug/l         |
| 2-chloroethylvinylether              | 10 U         | ug/l         |

| Surrogate recoveries  | % Rec | Control Range |          |
|-----------------------|-------|---------------|----------|
|                       |       | Water %       | Soil %   |
| d4-1,2-Dichloroethane | 105   | (76-114)      | (70-121) |
| d8-Toluene            | 94    | (88-110)      | (81-117) |
| Bromofluorobenzene    | 106   | (86-115)      | (74-121) |



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age 3

SAMPLE ID: GMW#7 1/16/91

## VOLATILES

B=Analyte found in blank as well as sample, indicates possible blank contamination.

J=Estimated value-result is less than detection limit but greater than zero.

U=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

E=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.



# Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63033 • 314-921-4488



LAB #1215205  
 CLIENT CODE: MMS  
 SAMPLE ID: GMW #8A 1/16/91  
 REPORT NO: 42109

| <u>VOLATILES</u>          | <u>Value</u> | <u>Units</u> |
|---------------------------|--------------|--------------|
| Chloromethane             | 10 U         | ug/l         |
| Bromomethane              | 10 U         | ug/l         |
| Vinyl Chloride            | 8500         | ug/l         |
| Chloroethane              | 10 U         | ug/l         |
| Methylene Chloride        | 50           | ug/l         |
| Acetone                   | 60 U         | ug/l         |
| Carbon Disulfide          | 50 U         | ug/l         |
| 1,1-Dichloroethene        | 120          | ug/l         |
| 1,1-Dichloroethane        | 5 U          | ug/l         |
| 1,2-Dichloroethene(total) | 180000       | ug/l         |
| Chloroform                | 5 U          | ug/l         |
| 2-Butanone                | 50 U         | ug/l         |
| 1,2-Dichloroethane        | 5 U          | ug/l         |
| 1,1,1-Trichloroethane     | 5 U          | ug/l         |
| Carbon Tetrachloride      | 5 U          | ug/l         |
| Vinyl Acetate             | 50 U         | ug/l         |
| Bromodichloromethane      | 5 U          | ug/l         |
| 1,2-Dichloropropane       | 5 U          | ug/l         |
| trans-1,3-Dichloropropene | 5 U          | ug/l         |
| Trichloroethene           | 32000        | ug/l         |
| Benzene                   | 5 U          | ug/l         |
| Dibromochloromethane      | 5 U          | ug/l         |





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2

SAMPLE ID: GMW-#8A 1/16/91

VATILES

|                              | <u>Value</u> | <u>Units</u> |
|------------------------------|--------------|--------------|
| cis-1,3-Dichloropropene      | 5 U          | ug/l         |
| <u>1,1,2-Trichloroethane</u> | 50           | ug/l         |
| Bromoform                    | 5 U          | ug/l         |
| 2-Hexanone                   | 50 U         | ug/l         |
| 4-Methyl-2-pentanone         | 50 U         | ug/l         |
| <u>Tetrachloroethene</u>     | 10           | ug/l         |
| 1,1,2,2-Tetrachloroethane    | 5 U          | ug/l         |
| <u>Toluene</u>               | 60           | ug/l         |
| Chlorobenzene                | 5 U          | ug/l         |
| Ethyl Benzene                | 5 U          | ug/l         |
| Styrene                      | 5 U          | ug/l         |
| Total Xylenes                | 5 U          | ug/l         |
| Acrolein                     | 100 U        | ug/l         |
| Acrylonitrile                | 50 U         | ug/l         |
| 2-chloroethylvinylether      | 10 U         | ug/l         |

Surrogate recoveries

% Rec

Control Range

4-1,2-Dichloroethane  
 3-Toluene  
 -Bromofluorobenzene

79  
 108  
 97

| Water %  | Soil %   |
|----------|----------|
| (76-114) | (70-121) |
| (88-110) | (81-117) |
| (86-115) | (74-121) |



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ge 3

SAMPLE ID: GMW #8A 1/16/91

OLATILES

=Analyte found in blank as well as sample, indicates possible blank contamination.

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LAB #1216206  
 CLIENT CODE: MMS  
 SAMPLE ID: GMW #8B 1/16/91  
 PORT NO: 42109

| <u>VOLATILES</u>                 | <u>Value</u> | <u>Units</u> |
|----------------------------------|--------------|--------------|
| Chloromethane                    | 10 U         | ug/l         |
| Bromomethane                     | 10 U         | ug/l         |
| <u>Vinyl Chloride</u>            | 5000         | ug/l         |
| Chloroethane                     | 10 U         | ug/l         |
| <u>Methylene Chloride</u>        | 50           | ug/l         |
| Acetone                          | 50 U         | ug/l         |
| Carbon Disulfide                 | 50 U         | ug/l         |
| <u>1,1-Dichloroethene</u>        | 190          | ug/l         |
| 1,1-Dichloroethane               | 5 U          | ug/l         |
| <u>1,2-Dichloroethene(total)</u> | 190000       | ug/l         |
| <u>Chloroform</u>                | 5            | ug/l         |
| 2-Butanone                       | 50 U         | ug/l         |
| 1,2-Dichloroethane               | 5 U          | ug/l         |
| 1,1,1-Trichloroethane            | 5 U          | ug/l         |
| Carbon Tetrachloride             | 5 U          | ug/l         |
| Vinyl Acetate                    | 50 U         | ug/l         |
| Bromodichloromethane             | 5 U          | ug/l         |
| 1,2-Dichloropropane              | 5 U          | ug/l         |
| trans-1,3-Dichloropropene        | 5 U          | ug/l         |
| <u>Trichloroethene</u>           | 45000        | ug/l         |
| Benzene                          | 5 U          | ug/l         |
| Dibromochloromethane             | 5 U          | ug/l         |



# Environmental Analysis, Inc.

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SAMPLE ID: GMW #8B 1/16/91

VOLATILES

|                              | <u>Value</u> | <u>Units</u> |
|------------------------------|--------------|--------------|
| cis-1,3-Dichloropropene      | 5 U          | ug/l         |
| <u>1,1,2-Trichloroethane</u> | <u>35</u>    | ug/l         |
| Bromoform                    | 5 U          | ug/l         |
| 2-Hexanone                   | 50 U         | ug/l         |
| 4-Methyl-2-pentanone         | 50 U         | ug/l         |
| <u>Tetrachloroethene</u>     | <u>20</u>    | ug/l         |
| 1,1,2,2-Tetrachloroethane    | 6 U          | ug/l         |
| <u>Toluene</u>               | <u>80</u>    | ug/l         |
| Chlorobenzene                | 5 U          | ug/l         |
| Ethyl Benzene                | 5 U          | ug/l         |
| Styrene                      | 5 U          | ug/l         |
| Total Xylenes                | 5 U          | ug/l         |
| Acrolein                     | 100 U        | ug/l         |
| Acrylonitrile                | 50 U         | ug/l         |
| 2-chloroethylvinylether      | 10 U         | ug/l         |

Surrogate recoveries

|                        | % Rec | Control Range |          |
|------------------------|-------|---------------|----------|
|                        |       | Water %       | Soil %   |
| 1,4-1,2-Dichloroethane | 81    | (78-114)      | (70-121) |
| 9-Toluene              | 110   | (88-110)      | (81-117) |
| 4-Bromofluorobenzene   | 96    | (86-115)      | (74-121) |



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PLE ID: GMW #8B 1/16/91

## VATILES

Analyte found in blank as well as sample, indicates possible blank contamination.

Estimated value-result is less than detection limit but greater than zero.

Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.



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LAB #1215207

CLIENT CODE: MMS

SAMPLE ID: GMW #8C 1/16/91

PORT NO: 42109

## VOLATILES

|                                   | <u>Value</u> | <u>Units</u> |
|-----------------------------------|--------------|--------------|
| Chloromethane                     | 10 U         | ug/l         |
| Bromomethane                      | 10 U         | ug/l         |
| <u>Vinyl Chloride</u>             | 7000         | ug/l         |
| Chloroethane                      | 10 U         | ug/l         |
| <u>Methylene Chloride</u>         | 100          | ug/l         |
| Acetone                           | 50 U         | ug/l         |
| Carbon Disulfide                  | 50 U         | ug/l         |
| <u>1,1-Dichloroethene</u>         | 180          | ug/l         |
| 1,1-Dichloroethane                | 5 U          | ug/l         |
| <u>1,2-Dichloroethene (total)</u> | 80000        | ug/l         |
| <u>Chloroform</u>                 | 6            | ug/l         |
| 2-Butanone                        | 50 U         | ug/l         |
| 1,2-Dichloroethane                | 5 U          | ug/l         |
| 1,1,1-Trichloroethane             | 5 U          | ug/l         |
| Carbon Tetrachloride              | 5 U          | ug/l         |
| Vinyl Acetate                     | 50 U         | ug/l         |
| Bromodichloromethane              | 5 U          | ug/l         |
| 1,2-Dichloropropane               | 5 U          | ug/l         |
| trans-1,3-Dichloropropene         | 5 U          | ug/l         |
| <u>Trichloroethene</u>            | 30000        | ug/l         |
| Benzene                           | 5 U          | ug/l         |
| Dibromochloromethane              | 5 U          | ug/l         |



# Environmental Analysis, Inc.

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SAMPLE ID: GMW-#8C 1/16/91

| <u>LATILES</u>            | <u>Value</u> | <u>Units</u> |
|---------------------------|--------------|--------------|
| cis-1,3-Dichloropropene   | 5 U          | ug/l         |
| 1,1,2-Trichloroethane     | 5 U          | ug/l         |
| Bromoform                 | 5 U          | ug/l         |
| 2-Hexanone                | 50 U         | ug/l         |
| 4-Methyl-2-pentanone      | 50 U         | ug/l         |
| <u>Tetrachloroethene</u>  | <u>120</u>   | ug/l         |
| 1,1,2,2-Tetrachloroethane | 5 U          | ug/l         |
| <u>Toluene</u>            | <u>160</u>   | ug/l         |
| Chlorobenzene             | 5 U          | ug/l         |
| Ethyl Benzene             | 5 U          | ug/l         |
| Styrene                   | 5 U          | ug/l         |
| Total Xylenes             | 5 U          | ug/l         |
| Acrolein                  | 100 U        | ug/l         |
| Acrylonitrile             | 50 U         | ug/l         |
| 2-chloroethylvinylether   | 10 U         | ug/l         |

Arrogate recoveries

% Rec

Control Range

|                        | % Rec | Water %  | Soil %   |
|------------------------|-------|----------|----------|
| cis-1,2-Dichloroethane | 84    | (76-114) | (70-121) |
| p-Toluene              | 109   | (88-110) | (81-117) |
| Bromofluorobenzene     | 98    | (86-115) | (74-121) |



# Environmental Analysis, Inc.

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SAMPLE ID: GMW #8C 1/16/91

## VOLATILES

B=Analyte found in blank as well as sample, indicates possible blank contamination.

J=Estimated value-result is less than detection limit but greater than zero.

U=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

F=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.





## Environmental Analysis, Inc.

3276 N. Lindbergh Blvd. Florissant, MO 63033 • 314-921-4468



LAB #1215208  
 IDENT CODE: MMS  
 SAMPLE ID: GMW#9. 1/16/91  
 REPORT NO:

| <u>LATILES</u>             | <u>Value</u> | <u>Units</u> |
|----------------------------|--------------|--------------|
| Chloromethane              | 10 U         | ug/l         |
| Bromomethane               | 10 U         | ug/l         |
| Vinyl Chloride             | 50           | ug/l         |
| Chloroethane               | 10 U         | ug/l         |
| Methylene Chloride         | 65           | ug/l         |
| Acetone                    | 50 U         | ug/l         |
| Carbon Disulfide           | 50 U         | ug/l         |
| 1,1-Dichloroethene         | 5 U          | ug/l         |
| 1,1-Dichloroethane         | 5 U          | ug/l         |
| 1,2-Dichloroethene (total) | 900          | ug/l         |
| Chloroform                 | 7            | ug/l         |
| 2-Butanone                 | 50 U         | ug/l         |
| 1,2-Dichloroethane         | 5 U          | ug/l         |
| 1,1,1-Trichloroethane      | 5 U          | ug/l         |
| Carbon Tetrachloride       | 5 U          | ug/l         |
| Vinyl Acetate              | 50 U         | ug/l         |
| Bromodichloromethane       | 5 U          | ug/l         |
| 1,2-Dichloropropane        | 5 U          | ug/l         |
| trans-1,3-Dichloropropene  | 5 U          | ug/l         |
| Trichloroethene            | 4000         | ug/l         |
| Benzene                    | 5 U          | ug/l         |
| Dibromochloromethane       | 5 U          | ug/l         |



# Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63033 • 314-921-4488



SAMPLE ID: GMW#9 1/16/91

| <u>OLATILES</u>           | <u>Value</u> | <u>Units</u> |
|---------------------------|--------------|--------------|
| cis-1,3-Dichloropropene   | 5 U          | ug/l         |
| 1,1,2-Trichloroethane     | 13           | ug/l         |
| Bromoform                 | 5 U          | ug/l         |
| 2-Hexanone                | 50 U         | ug/l         |
| 4-Methyl-2-pentanone      | 50 U         | ug/l         |
| Tetrachloroethene         | 680          | ug/l         |
| 1,1,2,2-Tetrachloroethane | 5 U          | ug/l         |
| Toluene                   | 5 U          | ug/l         |
| Chlorobenzene             | 5 U          | ug/l         |
| Ethyl Benzene             | 5 U          | ug/l         |
| Styrene                   | 5 U          | ug/l         |
| Total Xylenes             | 5 U          | ug/l         |
| Acrolein                  | 100 U        | ug/l         |
| Acrylonitrile             | 50 U         | ug/l         |
| 2-chloroethylvinylether   | 10 U         | ug/l         |

| Surrogate recoveries | % Rec | Control Range |          |
|----------------------|-------|---------------|----------|
|                      |       | Water %       | Soil %   |
| 1,1,2-Dichloroethane | 80    | (76-114)      | (70-121) |
| 8-Toluene            | 104   | (88-110)      | (81-117) |
| 4-bromofluorobenzene | 99    | (86-115)      | (74-121) |



# Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63033 • 314-921-4488



Page 3

SAMPLE ID: GMW#9 1/16/91

LATILES

- Analyte found in blank as well as sample, indicates possible blank contamination.
- Estimated value-result is less than detection limit but greater than zero.
- Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).
- Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.



## Environmental Analysis, Inc.

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EAI LAB #1215209  
 CLIENT CODE: MMS  
 SAMPLE ID: GMW#10 1/16/91  
 REPORT NO:

VLATILES

|                            | <u>Value</u> | <u>Units</u> |
|----------------------------|--------------|--------------|
| Chloromethane              | 10 U         | ug/l         |
| Bromomethane               | 10 U         | ug/l         |
| Vinyl Chloride             | 60           | ug/l         |
| Chloroethane               | 10 U         | ug/l         |
| Methylene Chloride         | 70           | ug/l         |
| Acetone                    | 50 U         | ug/l         |
| Carbon Disulfide           | 50 U         | ug/l         |
| 1,1-Dichloroethene         | 5 U          | ug/l         |
| 1,1-Dichloroethane         | 5 U          | ug/l         |
| 1,2-Dichloroethene (total) | 60           | ug/l         |
| Chloroform                 | 5            | ug/l         |
| 2-Butanone                 | 50 U         | ug/l         |
| 1,2-Dichloroethane         | 5 U          | ug/l         |
| 1,1,1-Trichloroethane      | 5 U          | ug/l         |
| Carbon Tetrachloride       | 5 U          | ug/l         |
| Vinyl Acetate              | 50 U         | ug/l         |
| Bromodichloromethane       | 5 U          | ug/l         |
| 1,2-Dichloropropane        | 5 U          | ug/l         |
| trans-1,3-Dichloropropene  | 5 U          | ug/l         |
| Trichloroethene            | 620          | ug/l         |
| Benzene                    | 5 U          | ug/l         |
| Dibromochloromethane       | 5 U          | ug/l         |



# Environmental Analysis, Inc.

3278 N Lindbergh Blvd • Florissant, MO 63033 • 314.921-4488



2

SAMPLE ID: GMW#10 1/16/01

| <u>VOLATILES</u>          | <u>Value</u> | <u>Units</u> |
|---------------------------|--------------|--------------|
| cis-1,3-Dichloropropene   | 5 U          | ug/l         |
| 1,1,2-Trichloroethane     | 5 U          | ug/l         |
| Bromoform                 | 5 U          | ug/l         |
| 2-Hexanone                | 50 U         | ug/l         |
| 4-Methyl-2-pentanone      | 50 U         | ug/l         |
| Tetrachloroethene         | 55           | ug/l         |
| 1,1,2,2-Tetrachloroethane | 5 U          | ug/l         |
| Toluene                   | 5 U          | ug/l         |
| Chlorobenzene             | 5 U          | ug/l         |
| Ethyl Benzene             | 5 U          | ug/l         |
| Styrene                   | 5 U          | ug/l         |
| Total Xylenes             | 5 U          | ug/l         |
| Acrolein                  | 100 U        | ug/l         |
| Acrylonitrile             | 50 U         | ug/l         |
| 2-chloroethylvinylether   | 10 U         | ug/l         |

Surrogate recoveries

% Rec

Control Range

Water %      Soil %

1,4-1,2-Dichloroethane

84

(76-114)

(70-121)

1,3-Toluene

110

(88-110)

(81-117)

Bromofluorobenzene

104

(86-115)

(74-121)



# Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63033 • 314-921-4488



Page 3

SAMPLE ID: GMW#10 1/16/91

## VOLATILES

=Analyte found in blank as well as sample, indicates possible blank contamination.

\*=Estimated value-result is less than detection limit but greater than zero.

U=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.



# Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63033 • 314-921-4488



LAB #1215210  
 CLIENT CODE: MMS  
 SAMPLE ID: GMW#11 1/16/91  
 REPORT NO:

| <u>VOLATILES</u>           | <u>Value</u> | <u>Units</u> |
|----------------------------|--------------|--------------|
| Chloromethane              | 10 U         | ug/l         |
| Bromomethane               | 10 U         | ug/l         |
| Vinyl Chloride             | 50           | ug/l         |
| Chloroethane               | 10 U         | ug/l         |
| Methylene Chloride         | 45           | ug/l         |
| Acetone                    | 50 U         | ug/l         |
| Carbon Disulfide           | 50 U         | ug/l         |
| 1,1-Dichloroethene         | 35           | ug/l         |
| 1,1-Dichloroethane         | 5 U          | ug/l         |
| 1,2-Dichloroethene (total) | 6000         | ug/l         |
| Chloroform                 | 5 U          | ug/l         |
| 2-Butanone                 | 50 U         | ug/l         |
| 1,2-Dichloroethane         | 5 U          | ug/l         |
| 1,1,1-Trichloroethane      | 5 U          | ug/l         |
| Carbon Tetrachloride       | 5 U          | ug/l         |
| Vinyl Acetate              | 50 U         | ug/l         |
| Bromodichloromethane       | 5 U          | ug/l         |
| 1,2-Dichloropropane        | 5 U          | ug/l         |
| trans-1,3-Dichloropropene  | 5 U          | ug/l         |
| Trichloroethene            | 200          | ug/l         |
| Benzene                    | 5 U          | ug/l         |
| Dibromochloromethane       | 5 U          | ug/l         |



# Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. - Florissant, MO 63033 - 314-921-4488



2

SAMPLE ID: GMW#11 1/16/91

VOLATILES

|                           | <u>Value</u> | <u>Units</u> |
|---------------------------|--------------|--------------|
| cis-1,3-Dichloropropene   | 5 U          | ug/l         |
| 1,1,2-Trichloroethane     | 5 U          | ug/l         |
| Bromoform                 | 5 U          | ug/l         |
| 2-Hexanone                | 50 U         | ug/l         |
| 4-Methyl-2-pentanone      | 50 U         | ug/l         |
| Tetrachloroethene         | 5 U          | ug/l         |
| 1,1,2,2-Tetrachloroethane | 5 U          | ug/l         |
| Toluene                   | 5 U          | ug/l         |
| Chlorobenzene             | 5 U          | ug/l         |
| Ethyl Benzene             | 5 U          | ug/l         |
| Styrene                   | 5 U          | ug/l         |
| Total Xylenes             | 5 U          | ug/l         |
| Acrolein                  | 100 U        | ug/l         |
| Acrylonitrile             | 50 U         | ug/l         |
| 2-chloroethylvinylether   | 10 U         | ug/l         |

| Surrogate recoveries  | % Rec | Control Range |          |
|-----------------------|-------|---------------|----------|
|                       |       | Water-%       | Soil %   |
| d4-1,2-Dichloroethane | 76    | (76-114)      | (70-121) |
| o-Toluene             | 104   | (88-110)      | (81-117) |
| 4-Bromofluorobenzene  | 97    | (86-115)      | (74-121) |





# Environmental-Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63022 • 314.921.4488



ge-3

SAMPLE ID: GMW#11 1/16/91

## LATTLES

-Analyte found in blank as well as sample. indicates possible blank contamination.

=Estimated value-result is less than detection limit but greater than zero.

=Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.



# Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63033 • 314-921-4488



LAB #1215327

CLIENT CODE: MMS

SAMPLE ID: GMW #12 1/17/91

REPORT NO: 42110

VOLATILES

|                                   | <u>Value</u> | <u>Units</u> |
|-----------------------------------|--------------|--------------|
| Chloromethane                     | 10 U         | ug/l         |
| Bromomethane                      | 10 U         | ug/l         |
| <u>Vinyl Chloride</u>             | 1800         | ug/l         |
| Chloroethane                      | 10 U         | ug/l         |
| <u>Methylene Chloride</u>         | 140          | ug/l         |
| Acetone                           | 50 U         | ug/l         |
| Carbon Disulfide                  | 50 U         | ug/l         |
| <u>1,1-Dichloroethene</u>         | 16           | ug/l         |
| <u>1,1-Dichloroethane</u>         | 18           | ug/l         |
| <u>1,2-Dichloroethene (total)</u> | 7800         | ug/l         |
| <u>Chloroform</u>                 | 8            | ug/l         |
| 2-Butanone                        | 50 U         | ug/l         |
| 1,2-Dichloroethane                | 5 U          | ug/l         |
| 1,1,1-Trichloroethane             | 5 U          | ug/l         |
| Carbon Tetrachloride              | 5 U          | ug/l         |
| Vinyl Acetate                     | 50 U         | ug/l         |
| Bromodichloromethane              | 5 U          | ug/l         |
| 1,2-Dichloropropane               | 5 U          | ug/l         |
| trans-1,3-Dichloropropene         | 5 U          | ug/l         |
| <u>Trichloroethene</u>            | 170          | ug/l         |
| Benzene                           | 5 U          | ug/l         |
| Dibromochloromethane              | 5 U          | ug/l         |



# Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63033 • 314-921-4488



2

FILE ID: GMW #12 1/17/91

| <u>ATILES</u>             | <u>Value</u> | <u>Units</u> |
|---------------------------|--------------|--------------|
| cis-1,3-Dichloropropene   | 5 U          | ug/l         |
| 1,1,2-Trichloroethane     | 5 U          | ug/l         |
| Bromoform                 | 5 U          | ug/l         |
| 2-Hexanone                | 50 U         | ug/l         |
| 4-Methyl-2-pentanone      | 50 U         | ug/l         |
| <u>Tetrachloroethene</u>  | <u>140</u>   | ug/l         |
| 1,1,2,2-Tetrachloroethane | 5 U          | ug/l         |
| Toluene                   | 5 U          | ug/l         |
| Chlorobenzene             | 5 U          | ug/l         |
| Ethyl Benzene             | 5 U          | ug/l         |
| Styrene                   | 5 U          | ug/l         |
| Total Xylenes             | 5 U          | ug/l         |
| Acrolein                  | 100 U        | ug/l         |
| Acrylonitrile             | 50 U         | ug/l         |
| 2-chloroethylvinylether   | 10 U         | ug/l         |

arrogate recoveries

% Rec

| Control Range |          |
|---------------|----------|
| Water %       | Soil %   |
| (76-114)      | (70-121) |
| (88-110)      | (81-117) |
| (86-115)      | (74-121) |

|                    |     |
|--------------------|-----|
| 1,2-Dichloroethane | 82  |
| 1-Toluene          | 107 |
| Bromofluorobenzene | 98  |



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ge 3

SAMPLE ID: GMW #12 1/17/91

## VOLATILES

=Analyte found in blank as well as sample, indicates possible blank contamination.

=Estimated value-result is less than detection limit but greater than zero.

-Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

-Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.



# Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63033 • 314-921-4488



LAB #1215328  
 IDENT CODE: MMS  
 SAMPLE ID: GMW #13 1/17/91  
 REPORT NO: 42110

| <u>LATILES</u>                    | <u>Value</u> | <u>Units</u> |
|-----------------------------------|--------------|--------------|
| Chloromethane                     | 10 U         | ug/l         |
| Bromomethane                      | 10 U         | ug/l         |
| <u>Vinyl Chloride</u>             | 900          | ug/l         |
| Chloroethane                      | 10 U         | ug/l         |
| <u>Methylene Chloride</u>         | 155          | ug/l         |
| Acetone                           | 50 U         | ug/l         |
| Carbon Disulfide                  | 50 U         | ug/l         |
| <u>1,1-Dichloroethene</u>         | 85           | ug/l         |
| 1,1-Dichloroethane                | 5 U          | ug/l         |
| <u>1,2-Dichloroethene (total)</u> | 120000       | ug/l         |
| Chloroform                        | 5 U          | ug/l         |
| 2-Butanone                        | 50 U         | ug/l         |
| 1,2-Dichloroethane                | 5 U          | ug/l         |
| 1,1,1-Trichloroethane             | 5 U          | ug/l         |
| Carbon Tetrachloride              | 5 U          | ug/l         |
| Vinyl Acetate                     | 50 U         | ug/l         |
| Bromodichloromethane              | 5 U          | ug/l         |
| 1,2-Dichloropropane               | 5 U          | ug/l         |
| trans-1,3-Dichloropropene         | 5 U          | ug/l         |
| <u>Trichloroethene</u>            | 74000        | ug/l         |
| Benzene                           | 5 U          | ug/l         |
| Dibromochloromethane              | 5 U          | ug/l         |



# Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63033 • 314-921-4488



Page 2

SAMPLE ID: GMW-#13 1/17/91

| <u>VOLATILES</u>             | <u>Value</u> | <u>Units</u> |
|------------------------------|--------------|--------------|
| cis-1,3-Dichloropropene      | 5 U          | ug/l         |
| <u>1,1,2-Trichloroethane</u> | 90           | ug/l         |
| Bromoform                    | 5 U          | ug/l         |
| 2-Hexanone                   | 50 U         | ug/l         |
| 4-Methyl-2-pentanone         | 50 U         | ug/l         |
| <u>Tetrachloroethene</u>     | 6000         | ug/l         |
| 1,1,2,2-Tetrachloroethane    | 5 U          | ug/l         |
| Toluene                      | 5 U          | ug/l         |
| Chlorobenzene                | 5 U          | ug/l         |
| Ethyl Benzene                | 5 U          | ug/l         |
| Styrene                      | 5 U          | ug/l         |
| Total Xylenes                | 5 U          | ug/l         |
| Acrolein                     | 100 U        | ug/l         |
| Acrylonitrile                | 50 U         | ug/l         |
| 2-chloroethylvinylether      | 10 U         | ug/l         |

| Surrogate recoveries | % Rec | Control Range |          |
|----------------------|-------|---------------|----------|
|                      |       | Water %       | Soil %   |
| 1,2-Dichloroethane   | 86    | (78-114)      | (70-121) |
| 2-Toluene            | 115   | (88-110)      | (81-117) |
| 4-Bromofluorobenzene | 108   | (86-115)      | (74-121) |



# Environmental Analysis, Inc.

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e 3

SAMPLE ID: GMW #13 1/17/91

## ATILES

Analyte found in blank as well as sample, indicates possible blank contamination.

Estimated value-result is less than detection limit but greater than zero.

Indicates compound analyzed but not detected. Number reported is minimum detection limit for sample based on necessary concentration/dilution actions (not necessarily the instrument detection limit).

=Identifies compounds whose concentrations exceed the calibration range of the GC/MS for that specific analysis.



IEA Data

CLIENT ENVIRONMENTAL ANALYSIS  
 JOB NO. CH910206

WATER

EPA TARGET COMPOUND LIST (TCL)  
 VOLATILE COMPOUNDS  
 ug/L

| Dilution Factor (DF)       |          | 1.0             | 1.0             | 1.0             | 1.0                | 1.0                | Lower Limits<br>Quantitation<br>(LLD) with<br>no Dilution* |
|----------------------------|----------|-----------------|-----------------|-----------------|--------------------|--------------------|--|
| Method Blank               |          | VW0125          | VW0201          | VW0204          | VW0125             | VW0125             |  |
| Client I.D.                |          | METHOD<br>BLANK | METHOD<br>BLANK | METHOD<br>BLANK | 1215-<br>203<br>#2 | 1215-<br>204<br>#7 |  |
| Compound                   | Lab I.D. | VW0125          | VW0201          | VW0204          | 10206<br>001       | 10206<br>002       |  |
| Chloromethane              |          | U               | U               | U               | U                  | U                  | 10   |
| Bromomethane               |          | U               | U               | U               | U                  | U                  | 10   |
| Vinyl Chloride             |          | U               | U               | U               | U                  | 40                 | 10   |
| Chloroethane               |          | U               | U               | U               | U                  | U                  | 10   |
| Dichloromethylene Chloride |          | U               | U               | U               | U                  | U                  | 5  |
| Acetone                    |          | U               | U               | U               | 58                 | 15                 | 10   |
| Carbon Disulfide           |          | U               | U               | U               | U                  | U                  | 5  |
| 1,1-Dichloroethane         |          | U               | U               | U               | U                  | U                  | 5  |
| 1,1-Dichloroethane         |          | U               | U               | U               | U                  | U                  | 5  |
| trans-1,2-Dichloroethane   |          | U               | U               | U               | U                  | 2J                 | 5  |
| Chloroform                 |          | U               | U               | U               | U                  | U                  | 5  |
| 1,2-Dichloroethane         |          | U               | U               | U               | U                  | U                  | 5  |
| 2-Butanone                 |          | U               | U               | U               | U                  | U                  | 10   |
| 1,1,1-Trichloroethane      |          | U               | U               | U               | U                  | U                  | 5  |
| Carbon Tetrachloride       |          | U               | U               | U               | U                  | U                  | 5  |
| Vinyl Acetate              |          | U               | U               | U               | U                  | U                  | 10   |
| Bromodichloromethane       |          | U               | U               | U               | U                  | U                  | 5  |
| 1,2-Dichloropropane        |          | U               | U               | U               | U                  | U                  | 5  |
| trans-1,3-dichloropropene  |          | U               | U               | U               | U                  | U                  | 5  |
| Trichloroethylene          |          | U               | U               | U               | 25                 | 3900               | 5  |
| Dibromochloromethane       |          | U               | U               | U               | U                  | U                  | 5  |
| 1,1,2-Trichloroethane      |          | U               | U               | U               | U                  | U                  | 5  |
| Benzene                    |          | U               | U               | U               | U                  | U                  | 5  |
| cis-1,3-Dichloropropene    |          | U               | U               | U               | U                  | U                  | 5  |
| 2-Chloroethylvinylether    |          | U               | U               | U               | U                  | U                  | 5  |
| Bromoform                  |          | U               | U               | U               | U                  | U                  | 5  |
| 4-Methyl-2-Pentanone       |          | U               | U               | U               | U                  | U                  | 10   |
| 2-Hexanone                 |          | U               | U               | U               | U                  | U                  | 10   |
| Tetrachloroethylene        |          | U               | U               | U               | U                  | 7                  | 5  |
| 1,1,2,2-Tetrachloroethane  |          | U               | U               | U               | U                  | U                  | 5  |
| Toluene                    |          | U               | U               | U               | 11                 | 4J                 | 5  |
| Chlorobenzene              |          | U               | U               | U               | U                  | U                  | 5  |
| Ethylbenzene               |          | U               | U               | U               | U                  | U                  | 5  |
| Styrene                    |          | U               | U               | U               | U                  | U                  | 5  |
| Total Xylenes              |          | U               | U               | U               | U                  | U                  | 5  |



CLIENT ENVIRONMENTAL ANALYSIS  
 LAB NO. CH910206

WATER

EPA TARGET COMPOUND LIST (TCL)  
 VOLATILE COMPOUNDS  
 ug/L

| Dilution Factor (DF)      | 1.0             | 1.0             | 1.0            | 1.0            | 1.0             | Lower Limits<br>Quantitation<br>(LLD) with<br>no Dilution* |
|---------------------------|-----------------|-----------------|----------------|----------------|-----------------|--|
| Method Blank              | VW0125          | VW0125          | VW0125         | VW0125         | VW0125          |  |
| Client I.D.               | 1215-<br>205#8# | 1215-<br>206#6# | 1215-<br>207#C | 1215-<br>208#9 | 1215-<br>209#10 |  |
| Compound                  | 10206<br>003    | 10206<br>004    | 10206<br>005   | 10206<br>006   | 10206<br>007    |  |
| Chloromethane             | U               | U               | U              | U              | U               | 10   |
| Bromomethane              | U               | U               | U              | U              | U               | 10   |
| Vinyl Chloride            | 8200            | 5100            | 7500           | 52             | 11              | 10   |
| Chloroethane              | U               | U               | U              | U              | U               | 10   |
| Methylene Chloride        | U               | U               | U              | U              | U               | 5  |
| Acetone                   | 8J              | U               | U              | U              | U               | 10   |
| Carbon Disulfide          | U               | U               | U              | U              | U               | 5  |
| 1,1-Dichloroethane        | 51              | 57              | 73             | 4J             | U               | 5  |
| 1,2-Dichloroethane        | U               | U               | U              | U              | U               | 5  |
| trans-1,2-Dichloroethene  | 170             | 160             | 120            | 3J             | U               | 5  |
| Chloroform                | U               | U               | U              | U              | U               | 5  |
| 1,2-Dichloroethane        | 5               | U               | 4J             | U              | U               | 5  |
| 2-Butanone                | U               | U               | U              | U              | U               | 10   |
| 1,1,1-Trichloroethane     | U               | U               | U              | U              | U               | 5  |
| Carbon Tetrachloride      | U               | U               | U              | U              | U               | 5  |
| Vinyl Acetate             | U               | U               | U              | U              | U               | 10   |
| Bromodichloromethane      | U               | U               | U              | U              | U               | 5  |
| 1,2-Dichloropropane       | U               | U               | U              | U              | U               | 5  |
| Trans-1,3-dichloropropene | U               | U               | U              | U              | U               | 5  |
| Trichloroethylene         | 32000           | 61000           | 45000          | 9000           | 1900            | 5  |
| Dibromochloromethane      | U               | U               | U              | U              | U               | 5  |
| 1,1,2-Trichloroethane     | 69              | 61              | 53             | U              | U               | 5  |
| Benzene                   | U               | U               | U              | U              | U               | 5  |
| cis-1,3-Dichloropropene   | U               | U               | U              | U              | U               | 5  |
| 2-chloroethylvinyl ether  | U               | U               | U              | U              | U               | 5  |
| Bromoform                 | U               | U               | U              | U              | U               | 5  |
| 4-Methyl-2-Pentanone      | U               | U               | U              | U              | U               | 10   |
| 2-Hexanone                | U               | U               | U              | U              | U               | 10   |
| Tetrachloroethylene       | 8               | 31              | 260            | 1400           | 110             | 5  |
| 1,1,2,2-Tetrachloroethane | U               | U               | U              | U              | U               | 5  |
| Toluene                   | 64              | 76              | 170            | U              | U               | 5  |
| Chlorobenzene             | U               | U               | U              | U              | U               | 5  |
| Ethylbenzene              | 2J              | U               | U              | U              | U               | 5  |
| Styrene                   | U               | U               | U              | U              | U               | 5  |
| o,pal Xylenes             | 4J              | 3J              | U              | U              | U               | 5  |

\*MDL (Minimum Detection Limit) = LLD x DF

**F ENVIRONMENTAL ANALYSIS**  
**OB NO. CH910206**

**WATER**

**EPA TARGET COMPOUND LIST (TCL)**  
**VOLATILE COMPOUNDS**  
 ug/L

| Dilution Factor (DF)      |          | 1.0                                       | 1.0                                       | 1.0                                       | 1.0                                       | 1.0                                       | Lower Limits<br>Quantitation<br>(LLD) with<br>no Dilution* |
|---------------------------|----------|---|---|---|---|---|--|
| Method Blank              |          | VW0125                                    | VW0201                                    | VW0201                                    | VW0201                                    | VW0201                                    |  |
| Client I.D.               |          | 1215-<br>210<br><small>(Sample 1)</small> | 1215-<br>322<br><small>(Sample 1)</small> | 1215-<br>323<br><small>(Sample 3)</small> | 1215-<br>324<br><small>(Sample 4)</small> | 1215-<br>325<br><small>(Sample 5)</small> |  |
| Compound                  | Lab I.D. | 10206<br>008                              | 10206<br>009                              | 10206<br>010                              | 10206<br>011                              | 10206<br>012                              |  |
| Chloromethane             |          | U   | U   | U   | U   | U   | 10   |
| Bromomethane              |          | U   | U   | U   | U   | U   | 10   |
| Vinyl Chloride            |          | 41  | U   | 13  | U   | 2000                                      | 10   |
| Chloroethane              |          | U   | U   | U   | U   | U   | 10   |
| Methylene Chloride        |          | U   | U   | U   | U   | U   | 5  |
| Acetone                   |          | 1000                                      | U   | U   | U   | U   | 10   |
| Carbon Disulfide          |          | U   | U   | U   | U   | U   | 5  |
| 1,1-Dichloroethene        |          | 13  | U   | U   | U   | 14  | 5  |
| 1,2-Dichloroethane        |          | U   | U   | U   | U   | U   | 5  |
| Trans-1,2-Dichloroethene  |          | 27  | U   | 4J  | U   | 22  | 5  |
| Chloroform                |          | U   | U   | U   | U   | U   | 5  |
| 1,2-Dichloroethane        |          | U   | U   | U   | U   | U   | 5  |
| n-Butanone                |          | U   | U   | U   | U   | U   | 10   |
| 1,1,1-Trichloroethane     |          | U   | U   | U   | U   | U   | 5  |
| Carbon Tetrachloride      |          | U   | U   | U   | U   | U   | 5  |
| Vinyl Acetate             |          | U   | U   | U   | U   | U   | 10   |
| Bromodichloromethane      |          | U   | U   | U   | U   | U   | 5  |
| 1,2-Dichloropropane       |          | U   | U   | U   | U   | U   | 5  |
| Trans-1,3-Dichloropropene |          | U   | U   | U   | U   | U   | 5  |
| Trichloroethylene         |          | 170                                       | 6   | 170                                       | 4J  | 2000                                      | 5  |
| Dibromochloromethane      |          | U   | U   | U   | U   | U   | 5  |
| 1,1,2-Trichloroethane     |          | U   | U   | U   | U   | U   | 5  |
| Benzene                   |          | U   | U   | U   | U   | U   | 5  |
| Cis-1,3-Dichloropropene   |          | U   | U   | U   | U   | U   | 5  |
| 2-Chloroethylvinylether   |          | U   | U   | U   | U   | U   | 5  |
| Bromoform                 |          | U   | U   | U   | U   | U   | 5  |
| 1-Methyl-2-Pentanone      |          | U   | U   | U   | U   | U   | 10   |
| 2-Hexanone                |          | U   | U   | U   | U   | U   | 10   |
| Tetrachloroethylene       |          | U   | U   | 4J  | U   | 15000                                     | 5  |
| 1,1,2,2-Tetrachloroethane |          | U   | U   | U   | U   | U   | 5  |
| Toluene                   |          | 2J  | U   | U   | U   | 33  | 5  |
| Chlorobenzene             |          | U   | U   | U   | U   | U   | 5  |
| Ethylbenzene              |          | U   | U   | U   | U   | U   | 5  |
| Xylene                    |          | U   | U   | U   | U   | U   | 5  |
| Total Xylenes             |          | U   | U   | U   | U   | 3J  | 5  |

\*MDL (Minimum Detection Limit) = LLD x DF

CLIENT ENVIRONMENTAL ANALYSIS  
 JOB NO. CH910206

WATER

EPA TARGET COMPOUND LIST (TCL)  
 VOLATILE COMPOUNDS  
 ug/L

| Dilution Factor (DF)      | 1.0           | 1.0            | 1.0            |  |  | Lower Limits<br>Quantitation<br>(LLD) with<br>no Dilution* |
|---------------------------|---------------|----------------|----------------|--|--|--|
| Method Blank              | VW0201        | VW0201         | VW0201         |  |  |  |
| Client I.D.               | 1215-<br>3266 | 1215-<br>32712 | 1215-<br>32813 |  |  |  |
| Compound Lab I.D.         | 10206<br>013  | 10206<br>014   | 10206<br>015   |  |  |  |
| Chloromethane             | U             | U              | U              |  |  | 10   |
| Bromomethane              | U             | U              | U              |  |  | 10   |
| Vinyl Chloride            | 1200          | 1900           | 1400           |  |  | 10   |
| Chloroethane              | U             | U              | U              |  |  | 10   |
| Methylene Chloride        | 82            | U              | U              |  |  | 5  |
| Acetone                   | U             | U              | U              |  |  | 10   |
| Carbon Disulfide          | U             | U              | U              |  |  | 5  |
| 1,1-Dichloroethene        | 250           | 8              | 37             |  |  | 5  |
| 1,1-Dichloroethane        | 110           | 7              | U              |  |  | 5  |
| trans-1,2-Dichloroethane  | 100           | 24             | 140            |  |  | 5  |
| Chloroform                | 3J            | U              | U              |  |  | 5  |
| 1,2-Dichloroethane        | U             | U              | U              |  |  | 5  |
| 2-Butanone                | U             | U              | U              |  |  | 10   |
| 1,1,1-Trichloroethane     | 140           | U              | U              |  |  | 5  |
| Carbon Tetrachloride      | U             | U              | U              |  |  | 5  |
| Vinyl Acetate             | U             | U              | U              |  |  | 10   |
| Bromodichloromethane      | U             | U              | U              |  |  | 5  |
| 1,2-Dichloropropane       | U             | U              | U              |  |  | 5  |
| Trans-1,3-dichloropropene | U             | U              | U              |  |  | 5  |
| Trichloroethylene         | 9600          | 260            | 62000          |  |  | 5  |
| Dibromochloromethane      | U             | U              | U              |  |  | 5  |
| 1,1,1-Trichloroethane     | 19            | U              | 78             |  |  | 5  |
| Benzene                   | 9             | U              | U              |  |  | 5  |
| cis-1,3-Dichloropropene   | U             | U              | U              |  |  | 5  |
| 2-Chloroethylvinylether   | U             | U              | U              |  |  | 5  |
| Bromoform                 | U             | U              | U              |  |  | 5  |
| 4-Methyl-2-Pentanone      | U             | U              | U              |  |  | 10   |
| 2-Hexanone                | U             | U              | U              |  |  | 10   |
| Tetrachloroethylene       | 16000         | 200            | 3500           |  |  | 5  |
| 1,1,2,2-Tetrachloroethane | U             | U              | U              |  |  | 5  |
| Toluene                   | 44            | U              | 6              |  |  | 5  |
| Chlorobenzene             | U             | U              | U              |  |  | 5  |
| Ethylbenzene              | U             | U              | U              |  |  | 5  |
| Xyrene                    | U             | U              | U              |  |  | 5  |
| Total Xylenes             | 4J            | U              | 5              |  |  | 5  |

**APPENDIX K**  
**DATA QUALITY REVIEW REPORT**

**QUALITY CONTROL EVALUATION  
REMEDIAL INVESTIGATION**

**EG&G KT AEROFAB  
OVERLAND, MISSOURI**

**OCTOBER 1992**

**91-319-1**

**Burns & McDonnell Waste Consultants, Inc.  
Engineers-Scientists-Geologists  
Overland Park, Kansas**

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\* \* \* \* \*

## 1.0 INTRODUCTION

### 1.1 PURPOSE

This document presents the results of the quality control evaluation performed on analytical data of samples collected from the EG&G KT Aerofab plant in Overland, Missouri. The field investigation was initiated in March 1992 and was completed in April 1992. NDRC Laboratories provided the analytical services for the project. Laboratory Quality Assurance/Quality Control (QA/QC) procedures followed the protocol outlined in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd Edition (SW-846). Data validation was performed by Burns & McDonnell following Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses (LDVO) and Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses (LDVI), USEPA, 1988.

### 1.2 DATA QUALITY PARAMETERS

The data quality parameters examined in this evaluation include precision, accuracy, representativeness, completeness, and comparability.

#### Precision

Precision is a measure of the reproducibility of measurements made under a set of conditions. Specifically, it is a quantitative measure of the variability of a group of measurements compared to their average value. Precision is assessed by examining inorganic, field, and matrix spike duplicate analytical results.

#### Accuracy

Accuracy is a measure of the deviation of a measurement from its true value. Laboratory analysis accuracy is assessed from the results of surrogate and matrix spike recovery samples and laboratory blanks. Sampling accuracy is assessed by examining the results of submitted field quality control samples, including field and trip blanks. Possible sources of error include inconsistent sampling or analytical procedures and laboratory or field contamination.



### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents the nature and extent of contamination at the site. The precision and accuracy of the analytical data is addressed in the above sections. Representativeness is further addressed by explaining the rationale used to select sampling locations and analytical parameters.

### Completeness

Completeness defines the percentage of measurements made which are judged to be valid measurements. Field completeness is assessed by comparing the number of samples collected to the number of samples planned. Laboratory completeness is assessed by comparing the number of samples yielding valid data to the number of samples submitted for analysis.

### Comparability

Comparability expresses the confidence with which one set of data may be compared to another. To address comparability, the standard techniques used to collect and analyze representative samples are evaluated.

## 1.3 SCOPE

### Report Organization

The remainder of the quality control evaluation is organized as follows:

- Chapter 2.0 – Calibration and maintenance of laboratory equipment
- Chapter 3.0 – Precision of duplicate sample results
- Chapter 4.0 – Accuracy of spike and blank sample results
- Chapter 5.0 – Representativeness
- Chapter 6.0 – Completeness
- Chapter 7.0 – Comparability

\* \* \* \* \*

## 2.0 LABORATORY CALIBRATION AND MAINTENANCE

All calibration, tuning, and maintenance of equipment were performed by NDRC Laboratories. The laboratory was responsible for the maintenance of equipment used during analytical procedures. The laboratory was responsible for ensuring the backup systems and equipment were available as required by EPA under SW-846 protocol. NDRC Laboratories did not report any problems in these areas.

\* \* \* \* \*

### 3.0 PRECISION

Precision is a measure of the reproducibility of measurements made under a set of conditions. Specifically, it is a quantitative measure of the variability of a group of measurements compared to their average value.

The precision of analytical data is assessed by reviewing duplicate sample results. One duplicate sample should be collected for every twenty field samples. Precision is expressed as the Relative Percent Difference (RPD) which is calculated as follows:

$$RPD = \frac{(D1-D2)}{(D1+D2)/2} \times 100$$

where: D1 = First Duplicate Result  
D2 = Second Duplicate Result

If there is no variability between two measurements, then the RPD = 0. All RPDs were reported as absolute values. Any problems encountered with duplicates are discussed in the appropriate sections below.

#### 3.1 LABORATORY DUPLICATES FOR INORGANICS

In laboratory duplicate analysis for inorganics, a sample is split into two fractions which are then analyzed for inorganic parameters. The RPD is calculated from the two concentration values. The LDVI specifies a maximum absolute RPD value of 20 percent for water samples and 35 percent for soil samples. If the RPD is greater than 20 percent for water or 35 percent for soil, then the results for that particular analyte must be qualified as estimated (J\*) for all associated samples.

##### 3.1.1 Groundwater

One groundwater sample (GMW-14 GW-2) was analyzed for inorganics. Duplicate analysis was performed for each inorganic parameter. The samples designated for duplicate analysis varied per parameter, and generally were "blind" samples. "Blind" samples are not identified specifically by the laboratory since they are

received from other clients. Duplicate analysis is performed at a minimum of one per twenty samples.

All RPD values were less than 20 percent for the duplicate analyses associated with groundwater sample GMW-14 GW-2.

### 3.1.2 Subsurface Soil

One subsurface soil sample (GMW-14 CME-3) was analyzed for inorganics. Duplicate analysis was performed for each inorganic parameter on "blind" samples (see Subsection 3.1.1 for explanation of "blind" sample). All RPD values were less than 35 percent for the duplicate analyses associated with subsurface soil sample GMW-14 CME-3.

### 3.2 MATRIX SPIKE DUPLICATES

Matrix spike duplicate (MSD) analysis is performed only for organic compounds. In MSD analysis, a known quantity of an analyte common to environmental samples is added to the matrix spike (MS) and MSD prior to preparation in the laboratory. The two samples are analyzed and the RPD is calculated from the percent recoveries. The RPD value gives information on the ability of the laboratory to reproduce results and accounts for error introduced from preparation, analysis, and matrix interference on analyte recovery.

The parameters for MSD analyses, corresponding percent recovery (REC) ranges, and maximum RPDs as specified in the USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) and used in the SW-846 program for organics analyses are as follows:

TABLE 3-1  
Matrix Spike/Matrix Spike Duplicate  
REC and RPD Values for Soil and Water

|   | <u>Water</u> |            | <u>Soil</u> |            |
|---|--------------|------------|-------------|------------|
|   | <u>REC</u>   | <u>RPD</u> | <u>REC</u>  | <u>RPD</u> |
| <u>Volatile Organic Compounds</u>         |              |            |             |            |
| 1,1-Dichloroethene                        | 61-145       | 14         | 59-172      | 22         |
| Trichloroethene                           | 71-120       | 14         | 62-137      | 24         |
| Benzene                                   | 76-127       | 11         | 60-133      | 21         |
| Toluene                                   | 76-125       | 13         | 59-139      | 21         |
| Chlorobenzene                             | 75-130       | 13         | 66-142      | 21         |
| <br><u>Semivolatile Organic Compounds</u> |              |            |             |            |
| Phenol                                    | 12-89        | 42         | 26-90       | 35         |
| 2-Chlorophenol                            | 27-123       | 40         | 25-102      | 50         |
| 1,4-Dichlorobenzene                       | 36-97        | 28         | 28-104      | 27         |
| N-Nitroso-di-n-propylamine                | 41-116       | 38         | 41-126      | 38         |
| 1,2,4-Trichlorobenzene                    | 39-98        | 28         | 38-107      | 23         |
| 4-Chloro-3-methylphenol                   | 23-97        | 42         | 26-103      | 33         |
| Acenaphthene                              | 46-118       | 31         | 31-137      | 19         |
| 4-Nitrophenol                             | 10-80        | 50         | 11-114      | 50         |
| 2,4-Dinitrotoluene                        | 24-96        | 38         | 28-89       | 47         |
| Pentachlorophenol                         | 9-103        | 50         | 17-109      | 47         |
| Pyrene                                    | 26-127       | 31         | 35-142      | 36         |

The RPD value is applied in this section, the REC values are applied in Subsection 4.2.2 for MS results.

The LDVO suggests that no action be taken on MSD results to qualify data for organics. The guidelines suggest that the extent of data affected be determined. This QA/QC evaluation of MSD results considered whether the RPD values indicated a systematic problem in the duplication of organics results.

### 3.2.1 Groundwater

VOC MSD analysis was performed by the laboratory at a minimum of one per twenty samples, primarily on "blind" (or unidentified) samples. All RPDs were within control limits for VOCs.

Two groundwater samples were analyzed for SVOCs. All RPDs were within control limits for the associated MSD sample.

One groundwater sample was analyzed for pesticides. The RPD for lindane (21.7 percent) exceeded the control limit of 15 percent. All other pesticide RPDs were within control limits. The elevated RPD for lindane is not expected to significantly effect the duplication of pesticide results.

### 3.2.2 Subsurface Soil

VOC MSD analysis was performed by the laboratory at a minimum frequency of one per twenty samples, primarily on "blind" (or unidentified) samples. All VOC RPDs were within control limits. RPDs could not be calculated for one MSD sample (Sample 3363.01) resulting from laboratory error during the MS analysis (see Subsection 4.2.2.2).

SVOC analysis was performed on one soil sample. All RPDs for the associated MSD analysis were within control limits.

Pesticide analysis was performed on one soil sample. The RPDs could not be calculated for the associated MSD analysis (Sample 3161.03) due to matrix interference (see Subsection 4.2.2.2).

### 3.3 FIELD DUPLICATES

The RPD value for field duplicates provides information on the ability to reproduce field results and accounts for error introduced from handling, shipping, storage, preparation, and analysis of field samples. No guidelines exist in the LDVI and LDVO on qualifying data from field duplicate results, but the maximum RPD specified for inorganic laboratory duplicates is 20 percent for water and 35 percent for soil samples. For QA/QC evaluation purposes, these limits were also applied to the field duplicates for comparison. Field duplicates account for error originating in the field as well as laboratory error. Since this error also includes handling and shipping sources, the RPD values outside of the limits are typically higher than those for the laboratory duplicates. All RPD values greater than 20 percent for water samples and 35 percent for soil samples are reported in this section. No data were qualified using field duplicate results.

### 3.3.1 Groundwater

One field duplicate pair (Samples GMW-17 GW-3 and GMW-17 GW-2) was collected at Monitoring Well GMW-17. A second field duplicate pair (Samples X GW-1 and GMW-7 GW-1) and a triplicate (Sample GMW-7) were collected at Monitoring Well GMW-7. The triplicate sample was analyzed by American Technical and Analytical Services, Inc. (ATAS). Results are presented in Table 3-2.

For the field duplicates collected at Monitoring Well GMW-17, the only RPD that exceeded 20 percent was for 1,2-dichloroethene (28 percent). The same three VOCs were detected in both of these samples at the same order of magnitude indicating no significant problems were encountered in the duplication of VOC results.

For the field duplicates collected at Monitoring Well GMW-7, the same four VOCs were detected in both samples with only one RPD exceeding 20 percent. The elevated RPD of 58 percent for tetrachloroethene (PCE) most likely resulted from increased possibility for error in concentrations at or near the quantitation limit. PCE was not detected in the triplicate collected at this well. However, the quantitation limit for the triplicate was ten times the concentration detected in the original sample (GMW-7 GW-1) due to dilution of the triplicate. Therefore, the lower level detected in the original sample was below the level of analytical sensitivity for the triplicate. Three compounds (methylene chloride, acetone, and benzene) were detected in the triplicate. Methylene chloride and acetone are common laboratory contaminants. Benzene and methylene chloride were detected in the associated laboratory blank. All three compounds were detected below the level of quantitation. None of these compounds were detected in either the original or duplicate sample at this well. These factors indicate that these compounds may have resulted from contamination in the laboratory or during shipping.

### 3.3.2 Subsurface Soil

Field duplicate pairs were collected at Borings SB-1, SB-4, and GMW-15. In addition, a triplicate was collected at Boring GMW-15 for analysis at ATAS. The results for these samples are presented in Table 3-3.

Table 3-2  
Field Duplicate Results  
for Groundwater

| Parameter          | Monitoring Well GMW-7 |                     |          |                      |            | Monitoring Well GMW-17 |                          |          |
|--------------------|-----------------------|---------------------|----------|----------------------|------------|------------------------|--------------------------|----------|
|                    | Sample<br>GMW-7 GW-1  | Duplicate<br>X GW-1 | RPD<br>% | Triplicate*<br>GMW-7 | RPD**<br>% | Sample<br>GMW-17 GW-2  | Duplicate<br>GMW-17 GW-3 | RPD<br>% |
| Vinyl Chloride     | 31.8                  | 26.4                | 19       | 41 J                 | 25         | ND(10)                 | ND(10)                   | -        |
| 1,2-Dichloroethene | 573                   | 552                 | 4        | 520                  | 10         | 26.4                   | 34.9                     | 28       |
| Trichloroethene    | 3360                  | 3570                | 6        | 3100                 | 8          | 756                    | 648                      | 15       |
| Tetrachloroethene  | 10.2                  | 5.6                 | 58       | ND(100)              | -          | 162                    | 149                      | 8        |
| Methylene Chloride | ND(5)                 | ND(5)               | -        | 26 JB                | -          | ND(5)                  | ND(5)                    | -        |
| Acetone            | ND(100)               | ND(100)             | -        | 160 J                | -          | ND(100)                | ND(100)                  | -        |
| Benzene            | ND(5)                 | ND(5)               | -        | 21 JB                | -          | ND(5)                  | ND(5)                    | -        |

Concentrations in units of  $\mu\text{g/L}$

Shading indicates the RPD exceeds 20 percent

ND(5) : Not detected, value in parentheses is quantitation limit

\* : Analyzed by American Technical and Analytical Services, Inc.

\*\* : RPD calculated between Sample GMW-7 GW-1 and Triplicate

- : RPD not calculated if one or both concentrations not detected

J : Estimated value

B : Compound detected in associated laboratory blank.



**Table 3-3  
Field Duplicate Results  
for Subsurface Soil**

| Parameter          | Boring SB-1     |                    | RPD<br>% | Boring SB-4     |                     | RPD<br>% | Boring GMW-15   |                     |          |                      |            |
|--------------------|-----------------|--------------------|----------|-----------------|---------------------|----------|-----------------|---------------------|----------|----------------------|------------|
|                    | Sample<br>CME-3 | Duplicate<br>CME-4 |          | Sample<br>CME-4 | Duplicate<br>CME-40 |          | Sample<br>CME-2 | Duplicate<br>CME-20 | RPD<br>% | Triplicate*<br>CME-2 | RPD**<br>% |
| 1,2-Dichloroethene | ND(5)           | ND(5)              | -        | ND(250)         | 26.4                | -        | 7.2             | ND(5)               | -        | 7                    | 3          |
| Trichloroethene    | ND(5)           | ND(5)              | -        | 1340            | 5100                | 117      | ND(5)           | ND(5)               | -        | ND(25)               | -          |
| Tetrachloroethene  | ND(5)           | ND(5)              | -        | 227000          | 636000              | 95       | 2620            | 4260                | 48       | 670                  | 119        |
| Xylenes            | ND(5)           | ND(5)              | -        | 619             | ND(5)               | -        | ND(5)           | ND(5)               | -        | ND(25)               | -          |
| Methylene Chloride | ND(5)           | ND(5)              | -        | ND(250)         | ND(5)               | -        | ND(5)           | ND(5)               | -        | 75 B                 | -          |
| Acetone            | ND(100)         | ND(100)            | -        | ND(5000)        | ND(100)             | -        | ND(100)         | ND(100)             | -        | 35 J                 | -          |

Concentrations in units of  $\mu\text{g}/\text{kg}$

Shading indicates the RPD exceeds 35 percent

ND(5) : Not detected, value in parentheses is quantitation limit

\* : Analyzed by American Technical and Analytical Services, Inc.

\*\* : RPD calculated between Sample GMW-15 CME-2 and Triplicate

- : RPD not calculated if one or both concentrations not detected

J : Estimate value

B : Compound detected in associated laboratory blank.

For the field duplicates collected at Boring SB-1, no VOCs were detected indicating results were duplicated.

For the field duplicates collected at Boring SB-4, the original sample (CME-4) was analyzed at a dilution factor of 50 while the duplicate was not diluted. As a result, 1,2-dichloroethene was not detected in the original sample. Also, the concentrations of trichloroethene (TCE) and PCE detected in the original sample were considerably lower than those in the duplicate because the analytical sensitivity was decreased. A positive detection of xylenes in the original sample is not explained by the dilution and was not duplicated.

For the duplicates collected at Boring GMW-15, the detection of 1,2-dichloroethene was not duplicated most likely because the concentration was close to the quantitation limit. The RPD for PCE was greater than 35 percent and most likely resulted from minor volatilization either during sample shipping or preparation. The triplicate sample at this boring also indicated some loss to volatilization of PCE. Two common laboratory contaminants (methylene chloride and acetone) were detected in the triplicate. These compounds were not detected in either the original or duplicate sample, indicating they most likely resulted from laboratory contamination.

\* \* \* \* \*

#### 4.0 ACCURACY

Accuracy is a measure of the deviation of a measurement from its true value. Possible sources of error include inconsistent sampling or analytical procedures, and laboratory or field contamination. The accuracy of chemical results for this set of data is assessed by examining the results of matrix spike recovery and blank samples.

Accuracy of spike samples is assessed by determining the percent recovery. A spike sample is prepared by splitting a sample into two portions, spiking one of the samples (adding a known quantity of the constituent of interest), and analyzing both portions as independent samples. The percent recovery is then calculated as follows:

$$\text{Percent Recovery} = \frac{\text{SSR} - \text{SR}}{\text{SA}} \times 100$$

where:       SSR = Spike Sample Results  
              SR = Sample Results  
              SA = Spike Added

Perfect accuracy would be defined by 100 percent recovery. An elevated recovery indicates hypersensitivity in detecting a compound, therefore all results indicating no compounds detected are still considered valid. A low recovery in the QC sample indicates low sensitivity in detecting a compound, leaving the possibility of a false negative result.

Only MS recoveries are measured for inorganic analyses. Both MS and surrogate recoveries are determined for organic samples.

Accuracy is also assessed through the analysis of laboratory, field, and trip blank samples. The detection of compounds in these samples gives information on contamination from handling of samples, either in the laboratory or the field. The results of these analyses allow the interpreter of the data to account for suspect positive detections.

#### 4.1 SURROGATES

Surrogate analysis is only run for organic compounds and gives a measure of the laboratory performance on individual samples. Surrogates are compounds that are not commonly found in environmental samples. As specified in the LDVO, if any one surrogate of the volatile fraction, or if any two surrogates within a base/neutral or acid semivolatile fraction are out of the control limits (see Table 4-1), then a reanalysis should be performed. If the reanalysis is also unsuccessful, all results for the sample should be qualified as estimated (J\*). If any one surrogate recovery is less than 10 percent, then the undetected (U) results should be qualified as unusable (R), and the positive detections should be qualified as estimated (J\*).

High levels of contamination in a sample may require the sample to be diluted. As a result, the surrogate added before preparation is also diluted and the concentration may become less than the detection level. No conclusions can be drawn for surrogates which are diluted out.

The parameters for volatile and semivolatile surrogate analysis with corresponding percent recovery range limits as specified for water and soil are as follows:

TABLE 4-1  
Surrogate Percent Recovery Ranges

| <u>Volatile Organic Compounds</u>     | <u>Water</u> | <u>Soil</u> |
|---------------------------------------|--------------|-------------|
| Toluene-d8                            | 88-110       | 81-117      |
| Bromofluorobenzene                    | 86-115       | 74-121      |
| 1,2-Dichloroethane                    | 76-114       | 70-121      |
| <br>                                  |              |             |
| <u>Semivolatile Organic Compounds</u> | <u>Water</u> | <u>Soil</u> |
| Base Neutral Fraction                 |              |             |
| Nitrobenzene-d5                       | 35-114       | 23-120      |
| 2-Fluorobiphenyl                      | 43-116       | 30-115      |
| Terphenyl-d14                         | 33-141       | 18-137      |
| Acid Fraction                         |              |             |
| Phenol-d5                             | 10-94        | 24-113      |
| 2-Fluorophenol                        | 21-150       | 25-121      |
| 2,4,6-Tribromophenol                  | 10-123       | 19-122      |

#### 4.1.1 Volatile Organic Compounds

Percent recoveries for all volatile organic surrogates were within QC limits, therefore no data were qualified.

#### 4.1.2 Semivolatile Organic Compounds

One semivolatile surrogate percent recovery was less than 10 percent for the acid extractable fraction of Sample GMW-14 GW-1. For this sample, all undetected values for acid fraction compounds were qualified as unusable (R) and all detected values were qualified as estimated (J\*).

#### 4.2 MATRIX SPIKES

MS analysis is performed for both inorganic and organic compounds and determines the recovery performance of the laboratory. For MS analysis, known amounts of a subset of the target analytes are added to the sample. One MS sample is collected and analyzed for up to twenty field samples and is considered to represent the recovery performance for the associated field samples. The MS results are used to qualify results for inorganics, but not for organics.

#### 4.2.1 Inorganics

The LDVI gives the following specific guidelines for qualifying data from inorganic MS results: for recovery greater than 125 percent, all positive detections are qualified as estimated (J\*) and all undetected values are acceptable for use without qualification; for recovery between 30-74 percent, all undetected and detected values are qualified as estimated (J\*); and for recovery less than 30 percent, all detected values are qualified as estimated (J\*) and all undetected values are qualified as unusable (R). Percent recoveries between 75 and 125 require no qualification.

##### 4.2.1.1 Groundwater

One groundwater sample (GMW-14 GW-2) was analyzed for inorganics. MS analyses were performed for each parameter on primarily "blind" samples. "Blind" samples are not identified specifically by the laboratory since they are received from other clients. MS analysis is performed at a minimum of one per twenty samples, often this sample is from another client or "blind". All recoveries were within the QC limit of 75 to 125 percent.

##### 4.2.1.2 Subsurface Soil

One subsurface soil sample (GMW-14 CME-3) was analyzed for inorganics. MS analyses were performed for each inorganic parameter on primarily "blind" samples (see Subsection 4.2.1.1 for an explanation of "blind"). All recoveries were within control limits.

#### 4.2.2 Organics

The LDVO suggests that the MS results for organics not be used to evaluate the accuracy of individual samples. The extent of data affected was determined from MS results by considering whether the laboratory was having systematic problems with the analysis of a particular analyte or if the problem was limited to the MS sample. See Subsection 3.1 on MSD results for a list of MS parameters and the corresponding percent recovery control limits.

#### 4.2.2.1 Groundwater

MS samples were analyzed by the laboratory primarily on "blind" samples at a minimum frequency of one per 20 field samples. All MS recoveries for VOCs, SVOCs, and pesticides were within control limits.

#### 4.2.2.2 Subsurface Soil

MS samples were analyzed by the laboratory primarily on "blind" samples at a minimum frequency of one per 20 field samples.

All MS recoveries were within control limits for VOCs. For Sample 3363.01 (reported in Episode 3281), the spike compounds were not detected in the MS analysis as a result of a laboratory error. Therefore, this sample could not be considered an indication of performance with respect to recovery of VOCs.

One subsurface soil sample was analyzed for SVOCs. All but two of the 22 recoveries for the associated MS/MSD analysis were within control limits. Both recoveries for pyrene (34 and 31 percent) were below the minimum control limit of 35 percent. However, these recoveries do not indicate a significant problem in the recovery of pyrene, specifically, and SVOCs, in general.

Matrix interference was encountered in the recovery of pesticides during MS/MSD analysis of a "blind" soil sample. However, MS/MSD analysis of a blank did not indicate any problems in recovery of pesticides.

#### 4.3 LABORATORY BLANKS

As specified in the LDVO, any laboratory blank with a positive detection should be used to qualify the data for associated field samples as follows. The sample results should be qualified as undetected (U\*) if the value in the sample is less than five times the value in the laboratory blank, except for the following compounds: methylene chloride, acetone, toluene, 2-butanone, and common phthalate esters. For the listed compounds, the result should be qualified as undetected (U\*) if the sample value is less than 10 times the value in the laboratory blank.

No compounds were detected in any of the laboratory blanks associated with inorganic and pesticide analysis of groundwater or subsurface soil.

Laboratory blank results were not available for either VOC or SVOC analysis of groundwater or subsurface soil.

#### 4.4 RINSATE BLANKS

Neither the LDVI nor the LDVO has guidelines on the qualification of data from rinsate blank results. If a compound was detected in a rinsate blank, an in-house qualifier (F) (a qualifier established by Burns and McDonnell personnel) was added to all detected values of this compound.

##### 4.4.1 Groundwater

None of the rinsate blanks collected to represent decontamination of groundwater sample collection equipment contained detections of any compounds, therefore no data were qualified.

##### 4.4.2 Subsurface Soil

None of the rinsate blanks collected to represent decontamination of subsurface soil sample collection equipment contained detections of any compounds, therefore no data were qualified.

#### 4.5 TRIP BLANKS

Trip blanks accompany the field samples throughout the sampling event but remain unopened. One trip blank is included in each shipping container returned to the laboratory which contains samples for VOC analyses. Trip blanks are analyzed for VOCs to indicate if any contamination occurred during handling of samples. The LDVO does not have guidelines on the qualification of data from trip blank results. If a positive detection occurred in a trip blank, an in-house qualifier (T) was added to any associated field sample with a detected value for the same parameter.

None of the trip blanks associated with groundwater and subsurface soil samples contained positive detections of any compounds, therefore no data were qualified.

\* \* \* \* \*



## 5.0 REPRESENTATIVENESS

The precision and accuracy of chemical data obtained during the EGGKTA investigation is addressed in Sections 3.0 and 4.0. Data were qualified to indicate problem areas in the ability to represent the actual site conditions. Representativeness is further addressed by the fact that sampling locations and analytical parameters were chosen based on the history of the site including results from previous investigations.

\* \* \* \* \*

## 6.0 COMPLETENESS

Completeness is assessed by determining the percentage of measurements which are judged to be valid. Both field and laboratory completeness were considered. Field completeness was assessed by comparing the number of samples collected to the number of samples planned. Laboratory completeness was assessed by comparing the number of samples having valid data to the number of analyses requested.

### 6.1 FIELD COMPLETENESS

#### 6.1.1 Groundwater

All 11 wells specified for groundwater collection in the Work Plan were sampled. Four additional wells were installed and sampled as a result of field observations. Field duplicates were collected at 2 of the 15 wells.

A total of 22 field samples were collected, including the two field duplicates.

#### 6.1.2 Subsurface Soil

All 7 borings specified for subsurface soil collection in the Work Plan were sampled. Two additional borings were installed and sampled during the Phase I remedial action. A tenth boring (GMW-18) was not sampled due to its proximity to Boring GMW-17.

Field duplicates were collected at three of the nine borings sampled. A total of 36 samples were collected, including three field duplicates.

### 6.2 LABORATORY COMPLETENESS

The holding times specified in the technical services agreement for the EGGKTA investigation followed SW-846 standards.

#### 6.2.1 Groundwater

The laboratory provided all requested analytical data for groundwater samples within the holding times specified in the technical services agreement.

6.2.2 Subsurface Soil

The laboratory provided all requested analytical data for subsurface soil samples within the holding times specified in the technical services agreement.

\* \* \* \* \*

## 7.0 COMPARABILITY

Comparability expresses how well data developed during the investigation compare with applicable criteria and, where appropriate, with data available from other scientific studies of the site.

The quantitation limits for volatile organics and semivolatile organics for groundwater were elevated in some samples due to matrix interference.

The quantitation limits for volatile organics were elevated for some subsurface soil samples due to matrix interference. The quantitation limits for some semivolatile organics were elevated for subsurface soil samples due to matrix interference.

The data collected during this investigation is comparable to other data analyzed by the same methods used in SW-846.

\* \* \* \* \*

## 8.0 CONCLUSION

The results of QC samples did not indicate any significant problems with the precision or accuracy of data collected during the EG&G KT Aerofab Plant investigation conducted in March through April 1992.

\* \* \* \* \*

**APPENDIX L**  
**MDNR WELL SURVEY**

## APPENDIX L

### MDNR WELL SURVEY

This existing well survey data was obtained from the HRS scoring package prepared by the Missouri Department of Natural Resources (MDNR) in September, 1989. The well survey information presented in this appendix represents well installation records for the proximity of Missouri Metals Shaping Company (MMSC) which are on file at the MDNR Division of Geology and Land Survey (DGLS). No records are available to indicate which, if any, of these wells are still being used. No operating records or water quality testing records are available for these wells.

The DGLS well records provide information on well location, date of installation and drilling logs indicating the formations encountered. Details of construction such as total well depth, casing length, and pumping yield at the time of construction are also provided on some logs.

Casing length records, where available, indicate the depth below the ground surface from which the groundwater is obtained. For wells in the vicinity of MMSC, the casing was typically extended to below the upper bedrock formation, the Pennsylvanian deposits. Water is obtained from the formations located between the bottom of the well casing and the total well depth. The minimum casing length indicated by DGLS records for the Missouri Metal area is 75 feet. Wells installed in this area were constructed to obtain water from the Upper Mississippian Aquifer. The upper water horizons of the Pennsylvania deposits, which are impacted by VOC contamination on the Missouri Metal property, were typically cased off due to the low groundwater quality and yield available from the upper bedrock formation.

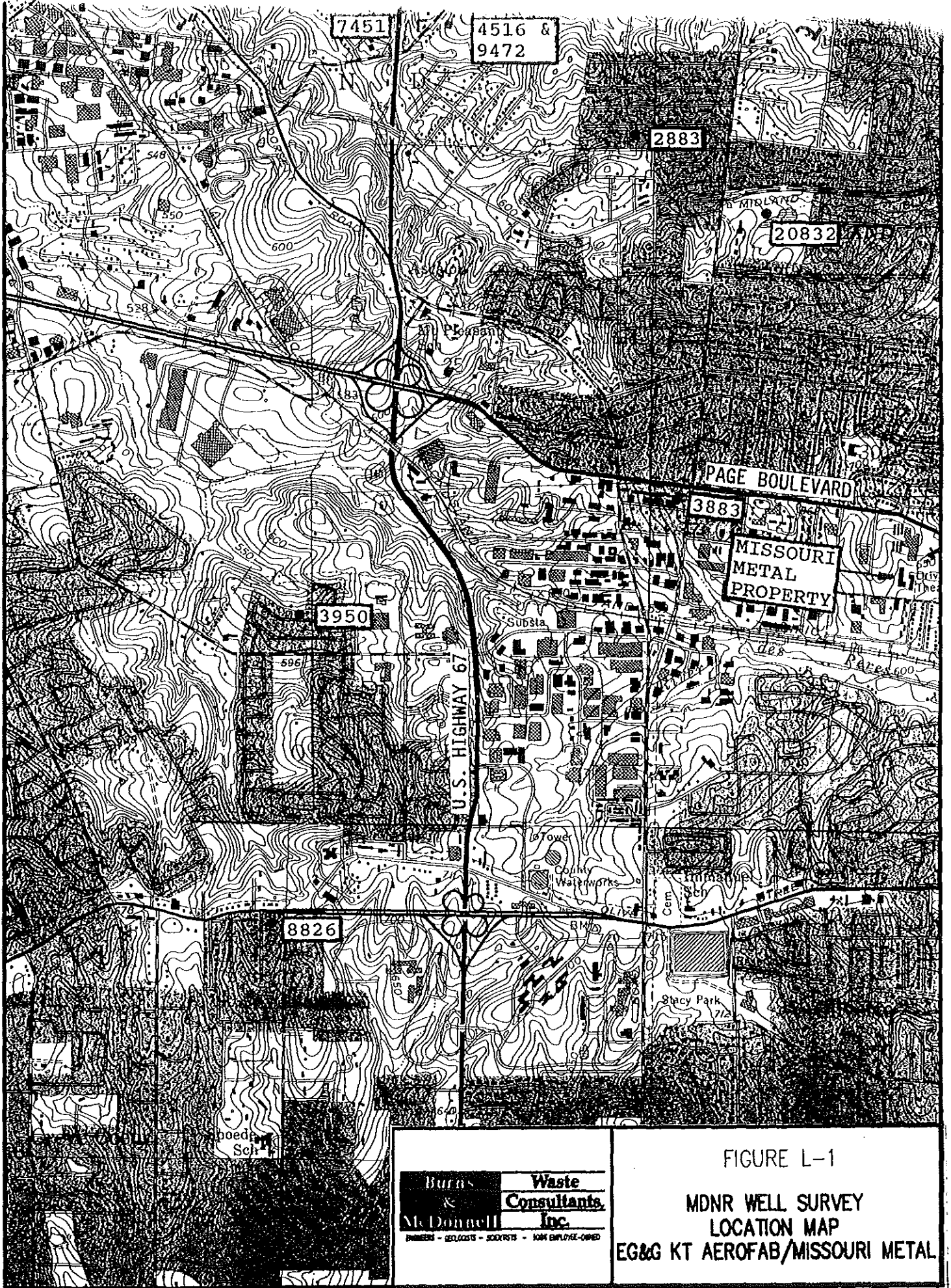
DGLS records provide no indication that any wells are located downgradient of the Missouri Metal property. Based on the location and the typical method of construction (casing length) for wells in the area, contamination on the Missouri Metal property would not pose groundwater quality concerns to these wells.

**Table L-1  
MDNR Well Survey Summary**

| MDNR Log No | Owner                | Location   | Total Well Depth (ft.) | Well Yield (GPM) | Casing Length (ft.) | Year Installed |
|-------------|----------------------|------------|------------------------|------------------|---------------------|----------------|
| 20832       | Holy Family Seminary | 2500 Ashby | 650                    | 12 (at 475 ft.)  | 234                 | 1962           |
| 2883        | Grave                | T46N R5E   | 250                    | NG               | NG                  | NR             |
| 7451        | J.B. Coston          | T46N R5E   | 410                    | 3                | 135                 | 1941           |
| 3950        | Augusta Schuetz      | T46N R5E   | 280                    | NG               | NG                  | 1936           |
| 3883        | Aubuchon             | T46N R6E   | 440                    | 1                | 75                  | 1936           |
| 9472        | C.J. Gay             | T46N R5E   | 565                    | 6                | 140                 | 1946           |
| 4516        | Lorris Greenspan     | T46N R5E   | 405                    | 2                | 184                 | 1937           |
| 8826        | W.M. Schmidt         | T45N R5E   | 195                    | 15               | 119                 | 1945           |

NG: Not Given  
 Note: All wells were drilled into the Mississippian Regional Aquifer.  
 NR: Not Readable





|                                       |   |
|---------------------------------------|---|
| <b>Burns</b><br>&<br><b>McDonnell</b> | <b>Waste</b><br><b>Consultants</b><br><b>Inc.</b>                       |
|                                       | <small>BUSINESS - GEOLOGISTS - SOIL TESTS - 100% EMPLOYEE-OWNED</small> |

FIGURE L-1  
 MDNR WELL SURVEY  
 LOCATION MAP  
 EG&G KT AEROFAB/MISSOURI METAL

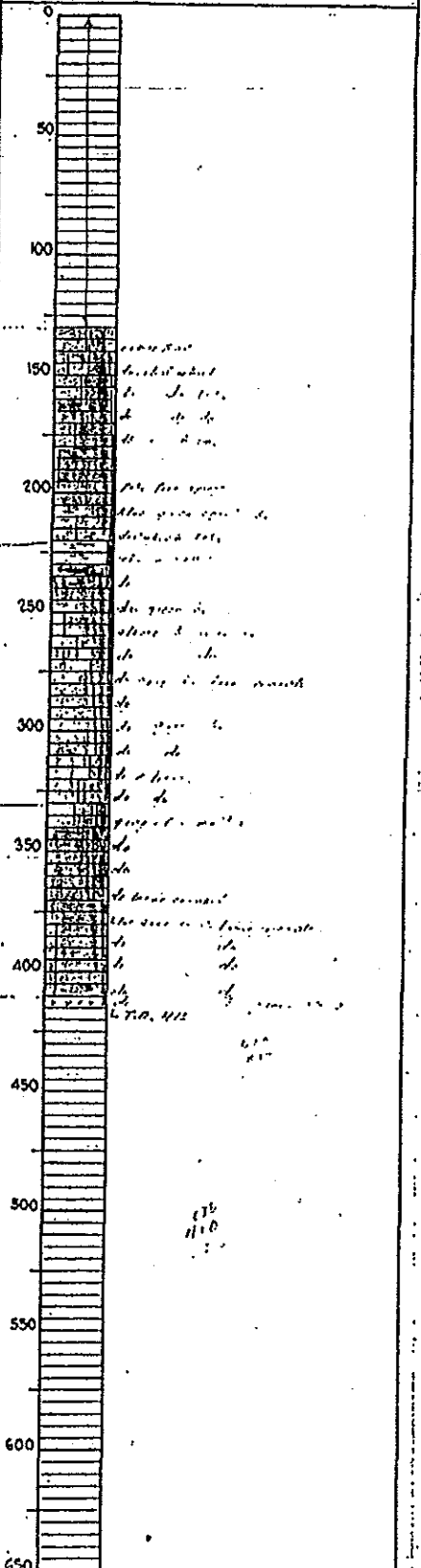
This appendix provides a summary table (Table L-1) of information obtained from DGLS well records, a location map showing well locations with respect to the Missouri Metal property and copies of well records obtained from MDNR files. The well installation records contained in this appendix represent the best quality copies obtainable from the well records provided in the HRS scoring package.

\* \* \* \* \*



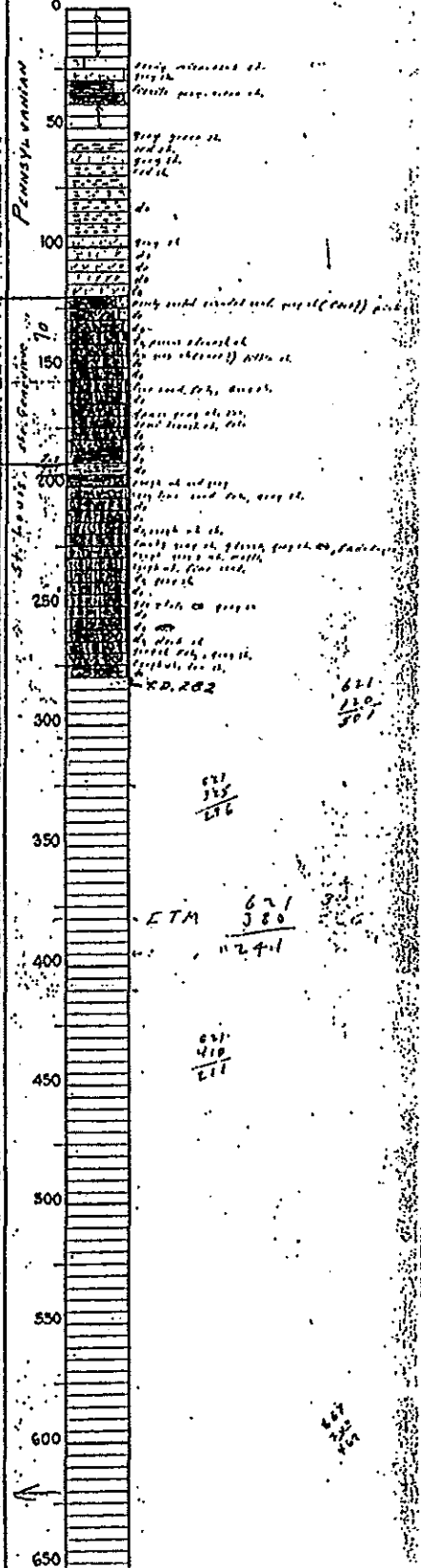
|   |                |                                  |                     |
|---|----------------|----------------------------------|---------------------|
| NO SURVEY NO<br><b>7451</b>                 |                | OWNER<br><b>Dr. J. B. Costen</b> |                     |
| COUNTY<br><b>St. Louis</b>                  |                | FARM<br><b>McC.</b>              | WELL NO<br><b>1</b> |
| T<br><b>46</b>                              | R<br><b>5E</b> | DRILLER<br><b>Clark Deas</b>     |                     |
| DATE<br><b>1911</b>                         |                |                                  |                     |
| ELEVATION<br><b>427.18</b>                  |                | PRODUCTION<br><b>3 G.P.M.</b>    |                     |
| SAMPLES STUDIED<br><b>Grohskopf 1-13-12</b> |                |                                  |                     |

REMARKS  
**155 ft of 6 1/2" casing**  
**West side of Ada Rd.**  
**Under Grohskopf well**



|                                     |                |                                 |                     |
|-------------------------------------|----------------|---------------------------------|---------------------|
| NO SURVEY NO<br><b>3950</b>         |                | OWNER<br><b>AUGUSTA SCHURTZ</b> |                     |
| COUNTY<br><b>St. Louis</b>          |                | FARM<br><b>Fee</b>              | WELL NO<br><b>1</b> |
| T<br><b>46</b>                      | R<br><b>5E</b> | DRILLER<br><b>M. M. RUTLER</b>  |                     |
| DATE<br><b>6-26 '10 to 7-10-10</b>  |                |                                 |                     |
| ELEVATION<br><b>421</b>             |                | PRODUCTION                      |                     |
| SAMPLES STUDIED<br><b>Grohskopf</b> |                |                                 |                     |

REMARKS





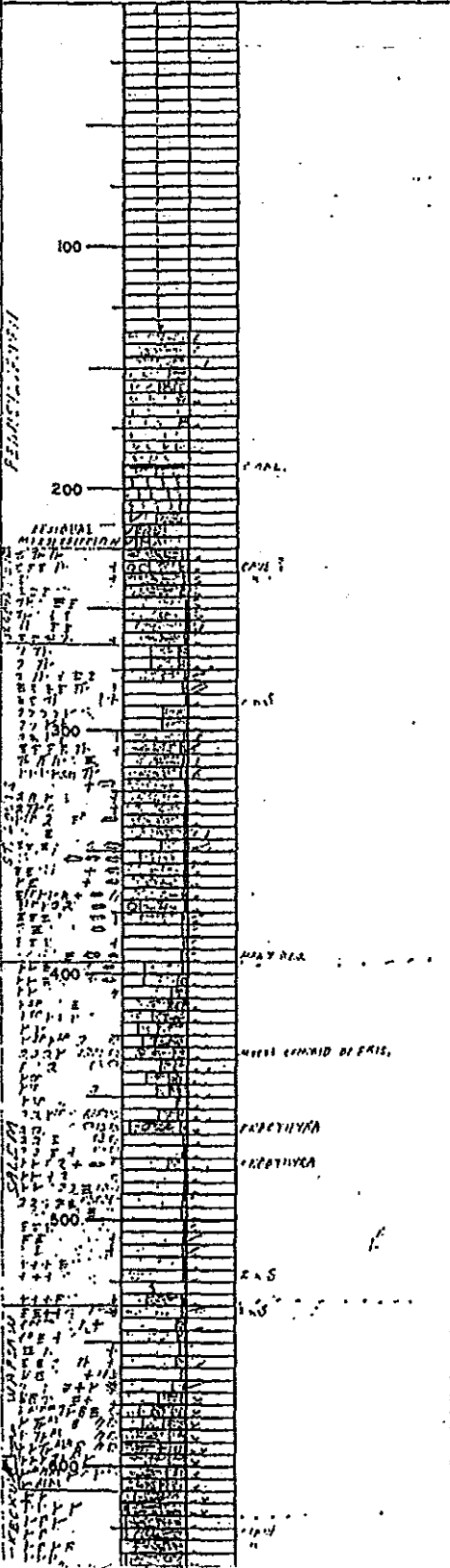
STATE OF MISSOURI  
DIVISION OF  
GEOLOGICAL SURVEY AND WATER RESOURCES

|                                      |  |                              |
|--------------------------------------|--|------------------------------|
| LOG NO.<br>20832                     | OWNER<br>Holy Family Seminary          |                              |
| COUNTY<br>St. Louis                  | FARM<br>2500 Ashby<br>N from Page ave. | WELL NO.<br>1                |
| T<br>66H                             | R<br>6E                                | DRILLER<br>Shanard Drlg. Co. |
| DATE<br>7-27-62                      |  | ELEV. <i>land</i>            |
| ELEV. <i>land</i>                    |  | PROD.<br>12 GPH @ 175'       |
| LOGGED BY<br>M.M. GRIVES<br>Oct. '62 |  |                              |

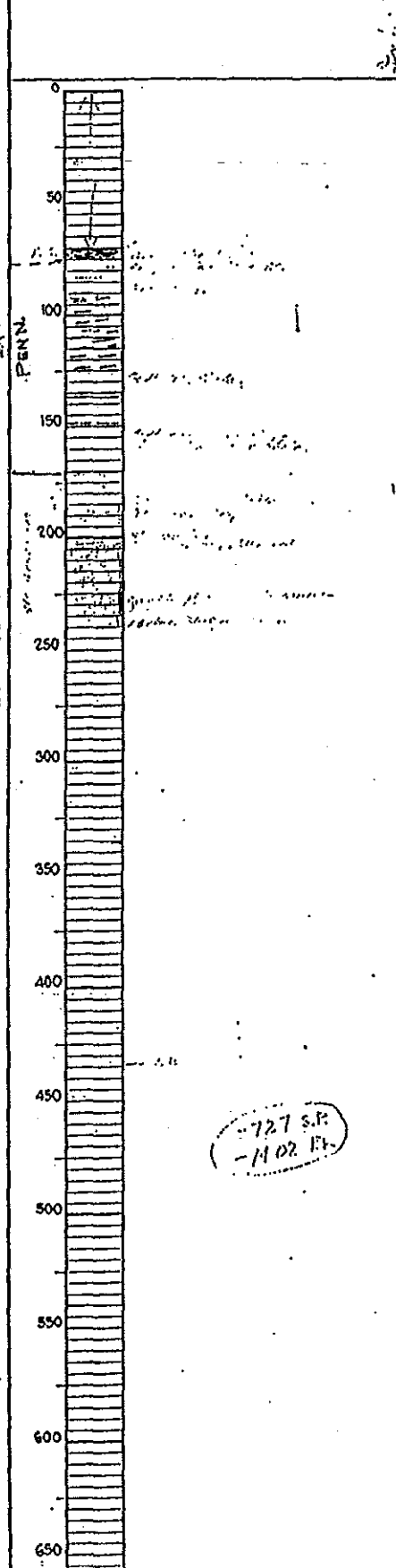
REMARKS 2 3/4" of 6 1/2" cog. Water 500 to 650. 6 1/2" hole @ bottom.

SHL 200' *Lat. 38°42'30"*  
*Long. 90°23'20"*

INDEX SHEET NO.



|   |                           |                             |
|---|---------------------------|-----------------------------|
| MISSOURI BUREAU OF GEOLOGY & MINES, COLUMBIA, MO. |                           |                             |
| NO SURVEY NO.<br>2883                             | OWNER<br><i>Trone</i>     |                             |
| COUNTY<br><i>St. Louis</i>                        | FARM<br><i>2500 Ashby</i> | WELL NO.<br>1               |
| DRILLER<br><i>Shanard Drlg. Co.</i>               |                           | DATE<br><i>7-27-62</i>      |
| ELEVATION   |                           | PRODUCTION<br><i>12 GPH</i> |
| SAMPLES STUDIED                                   |                           |                             |



**APPENDIX M**  
**HAZARD RANKING SCORE CALCULATIONS**

APPENDIX M  
HAZARD RANKING SCORE CALCULATIONS  
1.0 RESULTS SUMMARY

This appendix provides the estimated Hazard Ranking System (HRS) score for the Missouri Metal Shaping Company property in its current condition. The HRS score for this property was calculated to evaluate whether the low risk potential indicated by the qualitative risk assessment was confirmed by the HRS system. The HRS calculations were completed using guidance presented in Appendix A to Part 300 of 40 CFR (Code of Federal Regulations).

Based on the site information obtained during the remedial investigation, a HRS score of 0.53 to 3.32 was estimated for this property. This estimated score range is considered to be conservative in that it utilizes the highest levels of detected contamination to obtain the estimated HRS range developed for this property. For example, although soil VOC levels exceeding health-based levels were detected in only one soil sample from the southeast property corner, the single high detected level was utilized to represent a 12 to 22 foot diameter area of contamination in this portion of the property. Current sampling data does not indicate that soil contamination in the southeast property corner is widespread. Sampling data from the supplemental soil survey indicates that this elevated VOC soil level is an isolated occurrence.

The soil and groundwater exposure scores also present conservative estimates of exposure potential. Direct contact to contaminants in the southeast property corner is effectively prevented by the thick, compacted gravel layer provided in this area. Shallow soil sample collection in this area during the supplemental soil survey were extremely difficult to complete due to this thick gravel surface layer. Direct exposures to contaminated soil cannot be reasonably expected to occur during normal facility activities.

The groundwater pathway score assumes future use of the shallow groundwater system is possible. Actual use of this system as a source of water is doubtful due to the low quality and quantity of water available from this perched



groundwater system. A community water supply is readily available to the entire area downgradient of the Missouri Metal property.

This appendix provides the HRS score calculations, the worksheets and assumptions used to calculate a HRS score for the MMSC property. Assumptions and worksheets for estimating HRS scores for the air pathway, groundwater pathway and surface water pathway are presented in Sections 2.0, 3.0, and 4.0, respectively, of this appendix. Direct contact soil exposure scoring data is presented in Section 5.0. Pathway scores are combined in Section 6.0 to calculate the total HRS score range for the MMSC property. Factor scores for all pathways are summarized in Table M-1 of this appendix.

**Table M-1  
HRS Scoring Results Summary  
EG&G KT Areofab/Missouri Metals Property**

| Exposure Pathway           | Release Potential** |                       | Waste Characteristics** |                               | Targets**          |                                | HRS Pathway Score   |
|----------------------------|---------------------|-----------------------|-------------------------|-------------------------------|--------------------|--------------------------------|---------------------|
|                            | Observed Release    | Potential for Release | Toxicity/Mobility       | Source Quantity               | Exposed Population | Potentially Exposed Population |                     |
| Air                        | None<br>(0)         | Low<br>(360)          | Moderate<br>(10)        | Low<br>(> 1lb. to <1,000lb)   | None<br>(0)        | Small<br>(120)                 | 1.05 to 3.14        |
| Groundwater                | Yes<br>(550)        | NA                    | High<br>(100)           | Low<br>(>1 lb. to <1,000 lb.) | None<br>(0)        | Small<br>(0 to 5)              | 0 to 1.07           |
| Surface Water              | None<br>(0)         | None<br>(0)           | NA*                     | Low<br>(>1 lb. to <1,000 lb.) | None<br>(0)        | None<br>(0)                    | 0                   |
| Soil Contact               | Yes<br>(550)        | NA                    | Moderate<br>(10)        | Low<br>(>1 lb. to <1,000 lb.) | None<br>(0)        | Small<br>(5 and 15)***         | 0.07 to 0.2         |
| <b>TAL HRS SCORE RANGE</b> |                     |                       |                         |                               |                    |                                | <b>0.53 to 3.32</b> |

- \*\*\* - Potential on-site population (workers) and nearby population factors.
- \*\* - Factor values calculated for pathway shown in parentheses.
- NA - Not applicable due to presence of an observed release.
- NA\* - Not applicable, not calculated due to absence of surface water within target distance of property.

## 2.0 AIR PATHWAY

Key assumptions utilized to obtain an HRS score for the air pathway are as follows:

- No observed releases exist on the property. No non-process releases of chemical vapors or contaminated soil have been identified.
- Using HRS guidance, the potential for air releases exist only in the SE property corner. In all other property areas shallow soil contamination is covered with asphalt.
- Supplemental soil survey data shows area of shallow soil contamination in the SE property corner to be small or zero. For purpose of scoring, an area of 6 feet radius around GMW-14 is assumed to be contaminated. Assuming a 12-foot diameter and 2-foot deep volume of contaminated soil, a hazardous waste quantity of 29.3 pounds would be present on the property. The area of contamination would have to be 380 square feet (22-foot diameter) to exceed 100 pounds of VOCs.
- Target estimates (using areal photo and census data)
  - At source = 0
  - 0 to 1/4 mile = 2,000 population
  - 1/4 to 1/2 mile = 4,000 population
  - 1/2 to 1 mile = 8,500 population
  - 1 to 2 mile = 19,000 population
  
  - 2 to 3 mile = 45,700 population
  - 3 to 4 mile = 29,395 population

Based on these assumptions of chemical quantity and nearby population, a maximum HRS score for the air pathway would be 1.05 to 3.14, depending upon whether a 6- or 11-foot radius area of contamination is assumed to exist.

**Air Migration Pathway Scoresheet**

**Method of Release**

|   |     |            |
|---|-----|------------|
| 1. Observed Release . . . . .                                 | 550 | <u>0</u>   |
| 2. Potential to Release                                       |     |            |
| 2a. Gas Potential to Release . . . . .                        | 500 | <u>360</u> |
| 2b. Particulate Potential to Release . . . . .                | 500 | <u>0</u>   |
| 2c. Potential to Release (higher of lines 1 and 2c)           | 500 | <u>360</u> |
| 3. Likelihood of Release (higher of lines 1 and 2c) . . . . . | 500 | <u>360</u> |

**Method Characteristics**

|   |     |            |
|---|-----|------------|
| 4. Toxicity/Mobility . . . . .                          | (a) | <u>10</u>  |
| 5. Hazardous Waste Quantity . . . . .                   | (a) | <u>1</u>   |
| 6. Waste Characteristics . . . . .                      | 100 | <u>2</u>   |
| 7. Nearest Individual . . . . .                         | 50  | <u>20</u>  |
| 8. Population:  |     |            |
| 8a. Level I Concentrations . . . . .                    | (b) | <u>0</u>   |
| 8b. Level II Concentrations . . . . .                   | (b) | <u>0</u>   |
| 8c. Potential Contamination . . . . .                   | (b) | <u>100</u> |
| 8d. Population (lines 8a + 8b + 8c) . . . . .           | (b) | <u>100</u> |
| 9. Resources . . . . .                                  | 5   | <u>0</u>   |
| 10. Sensitive Environments                              |     |            |
| 10a. Actual Contamination . . . . .                     | (c) | <u>0</u>   |
| 10b. Potential Contamination . . . . .                  | (c) | <u>0</u>   |
| 10c. Sensitive Environments (lines 10a + 10b) . . . . . | (c) | <u>0</u>   |
| 11. Targets (lines 7 + 8d + 9 + 10c) . . . . .          | (c) | <u>120</u> |

**Air Migration Pathway Score**

|   |     |             |
|---|-----|-------------|
| 12. Pathway Score (S) $[(\text{lines } 3 \times 6 \times 11) / 82.500]^d$ . . . . . | 100 | <u>1.05</u> |
|---|-----|-------------|

- (a) - Maximum value applies to waste characteristics category.
- (b) - Maximum value not applicable.
- (c) - No specific maximum value applies to factor. However, pathway score based solely on sensitive environments is limited to a maximum of 60.
- (d) - Do not round to nearest integer.

US EPA ARCHIVE DOCUMENT

### 3.0 GROUNDWATER PATHWAY SCORE

Key assumptions used to calculate an HRS score for the groundwater pathway are as follows:

- Chemical analysis has confirmed release to shallow groundwater. As a result, an observed release exists.
- Toxicity/mobility of VOCs is high, resulting in toxicity/mobility factor of 100.
- Hazardous waste quantity is 54 pounds (estimate) resulting in a hazardous waste factor of 3 for the MMSC property.
- Increasing the assumed contaminant release to over 100 pounds would increase hazardous waste factor from 3 to 32.
- No use of the shallow groundwater; therefore, identified targets score is 0.
- Conservatively, could assume that a well could be installed in this shallow zone. Although poor water quality and yield available from this shallow unit limits its potential for use. If future use is assumed possible, target score factor would be 5.

If target score is zero, then pathway score is 0. If target score is 5, the final groundwater pathway score would be 0.1 to 1.07 depending upon whether you assume the quantity of contaminants released is less or more than 100 pounds, respectively.

**Ground Water Migration Pathway Scoresheet**

| Factor Categories and Factors | Maximum Value | Value assigned |
|-------------------------------|---------------|----------------|
|-------------------------------|---------------|----------------|

**Likelihood of Release to an Aquifer:**

|   |     |            |
|---|-----|------------|
| 1. Observed Release . . . . .                           | 550 | <u>550</u> |
| 2. Potential to Release                                 |     |            |
| 2a. Containment . . . . .                               | 10  | <u>NA</u>  |
| 2b. Net Precipitation . . . . .                         | 10  | <u>NA</u>  |
| 2c. Depth to Aquifer . . . . .                          | 5   | <u>NA</u>  |
| 2d. Travel Time . . . . .                               | 35  | <u>NA</u>  |
| 2e. Potential to Release . . . . .                      | 500 | <u>NA</u>  |
| 3. Likelihood of Release (higher of lines 1 and 2e) . . | 550 | <u>550</u> |

**Waste Characteristics**

|                                       |     |                |
|---------------------------------------|-----|----------------|
| 4. Toxicity/Mobility . . . . .        | (a) | <u>100</u>     |
| 5. Hazardous Waste Quantity . . . . . | (a) | <u>1</u>       |
| 6. Waste Characteristics . . . . .    | 100 | <u>3 or 32</u> |

**Targets:**

|  |     |               |
|--|-----|---------------|
| 7. Nearest Well . . . . .                      | 50  | <u>0</u>      |
| 8. Population:                                 |     |               |
| 8a. Level I Concentrations . . . . .           | (b) | <u>0</u>      |
| 8b. Level II Concentrations . . . . .          | (b) | <u>0</u>      |
| 8c. Potential Contamination . . . . .          | (b) | <u>0</u>      |
| 8d. Population (lines 8a + 8b + 8c) . . . . .  | (b) | <u>0</u>      |
| 9. Resources . . . . .                         | 5   | <u>0 or 5</u> |
| 10. Well Protection Area . . . . .             | 20  | <u>0</u>      |
| 11. Targets (lines 7 + 8d + 9 + 10c) . . . . . | (b) | <u>0 or 5</u> |

**Ground Water Migration Score for an Aquifer:**

|  |     |                  |
|--|-----|------------------|
| 12. Pathway Score (S) [(lines 3x6x11)/82.500] <sup>o</sup> . . . . . | 100 | <u>0 to 1.07</u> |
|--|-----|------------------|

**Ground Water Migration Pathway Score**

|   |     |                  |
|---|-----|------------------|
| 13. Pathway Score (S <sub>GW</sub> ), (highest value from line 12 for all aquifers evaluated) . . . . . | 100 | <u>0 to 1.07</u> |
|---|-----|------------------|

- 
- (a) Maximum value applies to waste characteristics category.
  - (b) Maximum value not applicable.
  - (c) Do not round to nearest integer.
- NA - Not Applicable (since an observed release is assumed to be present, calculations of a potential to release score is not necessary.)

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#### 4.0 SURFACE WATER PATHWAY

Key assumptions used to calculate HRS score for the surface water pathway are as follows:

- The downgradient receiving stream, River des Peres, does have permanent flow segments near its mouth at the Mississippi River. However, within the 2 mile target distance from the site (as established by the HRS scoring system) the River des Peres is an intermittent flow stream. Due to its lack of permanent flow, it would not classify as a surface water body under HRS system definition. No surface waters, as defined by the HRS scoring system, are present within the two mile overland flow target distance from the site.
  
- Potential for release from runoff and flood is 0.

Since no surface water bodies are located within the target distance, the surface pathway score becomes 0.

**Surface Water Overland/Flood Migration Component Scoresheet**

| Factor Categories and Factors   | Maximum Value | Value assigned |
|---|---------------|----------------|
| <b>Likelihood of Release:</b>   |               |                |
| 1. Observed Release . . . . .   | 550           | <u>0</u>       |
| 2. Potential to Release by Overflow   |               |                |
| 2a. Containment . . . . .   | 10            | <u>NA</u>      |
| 2b. Runoff . . . . .  | 25            | <u>NA</u>      |
| 2c. Distance to Surface Water . . . . .   | 25            | <u>NA</u>      |
| 2d. Potential to Release by Overland Flow<br>(lines 2a[2b + 2c]) . . . . .        | 500           | <u>0</u>       |
| 3. Potential to Release by Flood:   |               |                |
| 3a. Containment (Flood) . . . . .   | 10            | <u>0</u>       |
| 3b. Flood Frequency . . . . .   | 50            | <u>0</u>       |
| 3c. Potential to Release by Flood (lines 3a x 3b) . . . . .                       | 500           | <u>0</u>       |
| 4. Potential to Release (lines 2d + 3c, subject to<br>a maximum of 500) . . . . . | 500           | <u>0</u>       |
| 5. Likelihood of Release (higher of lines 1 and 4) . . . . .                      | 550           | <u>0</u>       |

**Waste Characteristics**

|                                       |     |           |
|---------------------------------------|-----|-----------|
| 6. Toxicity/Persistence . . . . .     | (a) | <u>NA</u> |
| 7. Hazardous Waste Quantity . . . . . | (a) | <u>NA</u> |
| 8. Waste Characteristics . . . . .    | 100 | <u>NA</u> |

**Targets:**

|   |     |           |
|---|-----|-----------|
| 9. Nearest Intake . . . . .                       | 50  | <u>NA</u> |
| 10. Population:                                   |     |           |
| 10a. Level I Concentrations . . . . .             | (b) | <u>NA</u> |
| 10b. Level II Concentrations . . . . .            | (b) | <u>NA</u> |
| 10c. Potential Contamination . . . . .            | (b) | <u>NA</u> |
| 10d. Population (lines 10a + 10b + 10c) . . . . . | (b) | <u>NA</u> |
| 11. Resources . . . . .                           | 5   | <u>NA</u> |
| 12. Targets (lines 9 + 10d + 11) . . . . .        | (b) | <u>NA</u> |

**Drinking Water Threat Score:**

|   |     |          |
|---|-----|----------|
| 13. Drinking Water Threat Score ([lines 5 x 8 x 12]/82,500,<br>subject to a maximum of 100) . . . . . | 100 | <u>0</u> |
|---|-----|----------|

**Human Food Chain Threat**

**Likelihood of Release:**

|  |     |          |
|--|-----|----------|
| 14. Likelihood of Release (same value as line 5) . . . . . | 550 | <u>0</u> |
|--|-----|----------|

**Waste Characteristics**

|  |       |           |
|--|-------|-----------|
| 15. Toxicity/Persistence/Bioaccumulation . . . . . | (a)   | <u>NA</u> |
| 16. Hazardous Waste Quantity . . . . .             | (a)   | <u>NA</u> |
| 17. Waste Characteristics . . . . .                | 1,000 | <u>NA</u> |



**Targets:**

|   |     |           |
|---|-----|-----------|
| 18. Food Chain Individual . . . . .               | 50  | <u>NA</u> |
| 19. Population:                                   |     |           |
| 19a. Level I Concentrations . . . . .             | (b) | <u>NA</u> |
| 19b. Level II Concentrations . . . . .            | (b) | <u>NA</u> |
| 19c. Potential Contamination . . . . .            | (b) | <u>NA</u> |
| 19d. Population (lines 19a + 19b + 19c) . . . . . | (b) | <u>NA</u> |
| 20. Targets (lines 18 + 19d) . . . . .            | (b) | <u>NA</u> |

**Human Food Chain Threat Score:**

|  |     |          |
|--|-----|----------|
| 21. Human Food Chain Threat Score ([lines 14x17x20]<br>/82,500, subject to a maximum of 100) . . . . . | 100 | <u>0</u> |
|--|-----|----------|

**Drinking Water Threat Score:**

|   |     |          |
|---|-----|----------|
| 13. Drinking Water Threat Score ([lines 5 x 8 x 12]/82,500,<br>subject to a maximum of 100) . . . . . | 100 | <u>0</u> |
|---|-----|----------|

**Environmental Threat**

**Likelihood of Release:**

|  |     |          |
|--|-----|----------|
| 22. Likelihood of Release (same value as line 5) . . . . . | 550 | <u>0</u> |
|--|-----|----------|

**Waste Characteristics**

|  |       |           |
|--|-------|-----------|
| 23. Ecosystem Toxicity/Persistence/Bioaccumulation . . . . . | (a)   | <u>NA</u> |
| 24. Hazardous Waste Quantity . . . . .                       | (a)   | <u>NA</u> |
| 25. Waste Characteristics . . . . .                          | 1,000 | <u>NA</u> |

**Targets:**

|   |     |           |
|---|-----|-----------|
| 26. Sensitive Environments                        |     |           |
| 26a. Level I Concentrations . . . . .             | (b) | <u>NA</u> |
| 26b. Level II Concentrations . . . . .            | (b) | <u>NA</u> |
| 26c. Potential Contamination . . . . .            | (b) | <u>NA</u> |
| 26d. Population (lines 26a + 26b + 26c) . . . . . | (b) | <u>NA</u> |
| 27. Targets (value from line 26d) . . . . .       | (b) | <u>NA</u> |

**Environmental Threat Score:**

|  |    |          |
|--|----|----------|
| 28. Environmental Threat Score ([lines 22x25x27]<br>/82,500, subject to a maximum of 60) . . . . . | 60 | <u>0</u> |
|--|----|----------|

**Surface Water Overland/Flood Migration Component Score for a Watershed**

|  |     |          |
|--|-----|----------|
| 29. Watershed Score (lines 13 + 21 + 28, subject to a<br>maximum of 100) . . . . . | 100 | <u>0</u> |
|--|-----|----------|

**Surface Water Overland/Flood Migration Component Score**

|  |     |          |
|--|-----|----------|
| 30. Component Score ( $S_{OF}$ ) <sup>C</sup> (highest score from line 20<br>for all watersheds evaluated, subject to a maximum<br>of 100) . . . . . | 100 | <u>0</u> |
|--|-----|----------|

---

(a) Maximum value applies to waste characteristics category.

(b) Maximum value not applicable.

(c) Do not round to nearest integer.

NA Not Applicable (Since no surface water bodies exists within the overland flow target distance, the release potential is zero. With no potential for release identified, the pathway score is also zero regardless of toxicity, mobility and potential target factor estimates.)

#### 4.1 GROUNDWATER TO SURFACE WATER MIGRATION

Key assumptions utilized to calculate a groundwater to surface water pathway score are as follows:

- Since the closest surface water body that flows constantly is more than 1 mile-away, there are no-eligible surface water bodies.

Due to the absence of a surface water body within the target distance to the site, the pathway score is 0.

**Drinking Water Threat**

| Factor Categories and Factors   | Maximum Value | Value assigned |
|---|---------------|----------------|
| <b>Likelihood of Release:</b>   |               |                |
| 1. Observed Release . . . . .   | 550           | <u>0</u>       |
| 2. Potential to Release by Overflow   |               |                |
| 2a. Containment . . . . .   | 10            | <u>NA</u>      |
| 2b. Net Precipitation . . . . .   | 10            | <u>NA</u>      |
| 2c. Depth to Aquifer . . . . .  | 5             | <u>NA</u>      |
| 2d. Travel Time . . . . .   | 500           | <u>NA</u>      |
| 2e. Potential to Release (lines 2a[2b + 2c + 2d]) . . . . .   | 500           | <u>0</u>       |
| 3. Likelihood of Release (higher of lines 1 and 2e) . . . . .                                       | 550           | <u>0</u>       |
| <b>Waste Characteristics</b>  |               |                |
| 4. Toxicity/Mobility/Persistence . . . . .  | (a)           | <u>NA</u>      |
| 5. Hazardous Waste Quantity . . . . .   | (a)           | <u>NA</u>      |
| 6. Waste Characteristics . . . . .  | 100           | <u>NA</u>      |
| <b>Targets:</b>   |               |                |
| 7. Nearest Intake . . . . .   | 50            | <u>NA</u>      |
| 8. Population:  |               |                |
| 10a. Level I Concentrations . . . . .   | (b)           | <u>NA</u>      |
| 10b. Level II Concentrations . . . . .  | (b)           | <u>NA</u>      |
| 10c. Potential Contamination . . . . .  | (b)           | <u>NA</u>      |
| 10d. Population (lines 8a + 8b + 8c) . . . . .  |               | <u>NA</u>      |
| 9. Resources . . . . .  | 5             | <u>NA</u>      |
| 10. Targets (lines 7 + 8d + 9) . . . . .  | (b)           | <u>NA</u>      |
| <b>Drinking Water Threat Score:</b>   |               |                |
| 11. Drinking Water Threat Score (([lines 3 x 6 x 10]/82,500, subject to a maximum of 100) . . . . . | 100           | <u>0</u>       |

**Human Food Chain Threat**

|  |       |           |
|--|-------|-----------|
| <b>Likelihood of Release:</b>                              |       |           |
| 12. Likelihood of Release (same value as line 3) . . . . . | 550   | <u>0</u>  |
| <b>Waste Characteristics</b>                               |       |           |
| 13. Toxicity/Persistence/Bioaccumulation . . . . .         | (a)   | <u>NA</u> |
| 14. Hazardous Waste Quantity . . . . .                     | (a)   | <u>NA</u> |
| 15. Waste Characteristics . . . . .                        | 1,000 | <u>NA</u> |
| <b>Targets:</b>  |       |           |
| 16. Food Chain Individual . . . . .                        | 50    | <u>NA</u> |
| 17. Population:  |       |           |
| 17a. Level I Concentrations . . . . .                      | (b)   | <u>NA</u> |
| 17b. Level II Concentrations . . . . .                     | (b)   | <u>NA</u> |

|   |     |           |
|---|-----|-----------|
| 17c. Potential Contamination . . . . .            | (b) | <u>NA</u> |
| 17d. Population (lines 17a + 17b + 17c) . . . . . | (b) | <u>NA</u> |
| 18. Targets (lines 16 + 17d) . . . . .            | (b) | <u>NA</u> |

**Human Food Chain Threat Score:**

|  |     |          |
|--|-----|----------|
| 19. Human Food Chain Threat Score ([lines 12x15x18]<br>/82,500, subject to a maximum of 100) . . . . . | 100 | <u>0</u> |
|--|-----|----------|

**Environmental Threat**

**Likelihood of Release:**

|  |     |          |
|--|-----|----------|
| 20. Likelihood of Release (same value as line 5) . . . . . | 550 | <u>0</u> |
|--|-----|----------|

**Waste Characteristics**

|  |       |           |
|--|-------|-----------|
| 21. Ecosystem Toxicity/Persistence/Bioaccumulation . . . . . | (a)   | <u>NA</u> |
| 22. Hazardous Waste Quantity . . . . .                       | (a)   | <u>NA</u> |
| 23. Waste Characteristics . . . . .                          | 1,000 | <u>NA</u> |

**Targets:**

|   |     |           |
|---|-----|-----------|
| 24. Sensitive Environments                        |     |           |
| 24a. Level I Concentrations . . . . .             | (b) | <u>NA</u> |
| 24b. Level II Concentrations . . . . .            | (b) | <u>NA</u> |
| 24c. Potential Contamination . . . . .            | (b) | <u>NA</u> |
| 24d. Population (lines 24a + 24b + 24c) . . . . . | (b) | <u>NA</u> |
| 25. Targets (value from line 24d) . . . . .       | (b) | <u>NA</u> |

**Environmental Threat Score:**

|  |    |          |
|--|----|----------|
| 26. Environmental Threat Score ([lines 20x23x25]<br>/82,500, subject to a maximum of 60) . . . . . | 60 | <u>0</u> |
|--|----|----------|

**Ground Water to Surface Water Migration Component Score for a Watershed**

|  |     |          |
|--|-----|----------|
| 27. Watershed Score (lines 11 + 19 + 26, subject to a<br>maximum of 100) . . . . .   | 100 | <u>0</u> |
| 29. Component Score ( $S_{GW}$ ) <sup>c</sup> (highest score from line 27<br>for all watersheds evaluated, subject to a maximum<br>of 100) . . . . . | 100 | <u>0</u> |

---

(a) Maximum value applies to waste characteristics category.

(b) Maximum value not applicable.

(c) Do not round to nearest integer.

NA Not Applicable (Since no surface water bodies exist within the groundwater to surface water target distance, the release potential is zero. With no potential for release identified, the pathway score is also zero regardless of toxicity, mobility, and potential target factor estimates.)

## 5.0 SOIL EXPOSURE PATHWAY

Key assumptions used to calculate an HRS score for the soil exposure pathway are as follows:

- Surface contamination for HRS scoring purposes consists of contaminant levels exceeding health-based limits located within two feet of the surface, which are covered by soil (gravel). The elevated VOC level detected in one sample from GMW-14 would fall into this category.
- The likelihood of exposure factor for soils in the degreasing pit area is 0 due to the asphalt surface which provides a barrier in that portion of the site.
- Likelihood of Exposure Factor = 550 (Based on a elevated detection at GMW-14)
- Waste quantity (assume 6' radius area of contamination, two feet deep) = 29.3 lb. Area of contamination would need to be 11-foot radius to increase waste quantity to above 100 pounds.
- The worker population is less than 100 workers resulting in a target factor of 5.
- A nearby population score factor was estimated to be 15 for the MMSC property. This estimate was based on aerial photographs and census information.

Based on these assumptions, a total soil exposure pathway score range of 0.07 to 0.2 was estimated for the soil exposure pathway.

Soil Exposure Pathway Scoresheet

| Factor Categories and Factors                                      | Maximum Value | Value assigned    |
|--|---------------|-------------------|
| <b>Likelihood of Release:</b>                                      |               |                   |
| 1. Likelihood of Exposure . . . . .                                | 550           | <u>550</u>        |
| <b>Waste Characteristics</b>                                       |               |                   |
| 2. Toxicity . . . . .  | (a)           | <u>10</u>         |
| 3. Hazardous Waste Quantity . . . . .                              | (a)           | <u>1</u>          |
| 4. Waste Characteristics . . . . .                                 | 100           | <u>2</u>          |
| <b>Targets:</b>  |               |                   |
| 5. Resident Individual . . . . .                                   | 50            | <u>0</u>          |
| 6. Resident Population:  |               |                   |
| 6a. Level I Concentrations . . . . .                               | (b)           | <u>0</u>          |
| 6b. Level II Concentrations . . . . .                              | (b)           | <u>0</u>          |
| 6c. Resident Population (lines 6a + 6b) . . . . .                  | (b)           | <u>0</u>          |
| 7. Workers . . . . .   | 5             | <u>5</u>          |
| 8. Resources . . . . .   | 5             | <u>0</u>          |
| 9. Terrestrial Sensitive Environment . . . . .                     | (c)           | <u>0</u>          |
| 10. Targets (lines 5 + 6c + 7 + 8 + 9) . . . . .                   | (b)           | <u>5</u>          |
| <b>Resident Population threat Score:</b>                           |               |                   |
| 11. Resident Population threat (lines 1 x 4 x 10) . . . . .        | (b)           | <u>5,500</u>      |
| <b>Nearby Population Threat</b>                                    |               |                   |
| 12. Acctractiveness/Accessibility . . . . .                        | 100           | <u>5</u>          |
| 13. Area of Contamination . . . . .                                | 100           | <u>5</u>          |
| 14. Likelihood of Exposure . . . . .                               | 500           | <u>5</u>          |
| <b>Waste Characteristics:</b>                                      |               |                   |
| 15. Toxicity . . . . .   | (a)           | <u>10</u>         |
| 16. Hazardous Waste Quantity . . . . .                             | (a)           | <u>1</u>          |
| 17. Waste Characteristics . . . . .                                | 100           | <u>2 or 6</u>     |
| <b>Targets:</b>  |               |                   |
| 18. Nearby Individual . . . . .                                    | 1             | <u>1</u>          |
| 19. Population Within 1 Mile . . . . .                             | (b)           | <u>14</u>         |
| 20. Targets (lines 18 + 19) . . . . .                              | (b)           | <u>15</u>         |
| <b>Nearby Population Threat Score:</b>                             |               |                   |
| 21. Nearby Population Threat Score ([lines 14 x 17 x 20) . . . . . | (b)           | <u>150 or 450</u> |

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Soil Exposure Pathway Score:

22. Soil Exposure Pathway Score<sup>d</sup> (S<sup>a</sup>), (lines [11 + 21] subject to a maximum of 100) . . . . . 100 0.07 or 0.2

- 
- (a) Maximum value applies to waste characteristics category.
  - (b) Maximum value not applicable.
  - (c) No specific maximum value applies to factor. However, pathway score based solely on terrestrial sensitive environments is limited to maximum of 60.
  - (d) Do not round to nearest integer.

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## 6.0 TOTAL HRS SCORE RANGE ESTIMATE

The total HRS score for site is calculated by taking the square root of the mean average of the squares of the individual pathway scores.

For example, for the MMSC property the minimum and maximum HRS scores are calculated as follows:

- Minimum HRS Score

$$\sqrt{\frac{(1.05)^2 + (0.0)^2 + (0)^2 + (0.07)^2}{4}} = 0.53$$

- Maximum HRS Score

$$\sqrt{\frac{(3.14)^2 + (1.07)^2 + (0)^2 + (0.2)^2}{4}} = 3.32$$

Where:

- Maximum and minimum Air Pathway Scores are 3.14 and 1.05, respectively.
- Maximum and minimum Groundwater Pathway Scores are 1.07 and 0, respectively.
- The maximum and minimum Surface Water Pathway score is 0.
- Maximum and minimum Soil Exposure Pathway scores are 0.2 and 0.07, respectively.

\* \* \* \* \*

**APPENDIX N**

**HISTORICAL GROUNDWATER MONITORING RESULTS**

## APPENDIX N

Appendix N includes 18 tables which summarize all groundwater analytical data obtained from each of the investigations conducted on the Missouri Metals Property. Each table summarizes the data obtained from analysis of groundwater samples from one monitoring well. Within each table, the data is organized chronologically, with the most recent data presented first in the table.

Data obtained in April 1992 was generated during the remedial investigation by Burns & McDonnell. Groundwater sampling by GTI was performed in May 1989, July 1990, October 1990 and January 1991. O'Brien and Gere groundwater sampling data was obtained in February 1988.

Laboratory data obtained from the Burns & McDonnell remedial investigation has been reviewed to assess its accuracy and precision, representativeness, completeness, and comparability. Based on this quality control evaluation, no quality control concerns related to this most recent data have been identified. The field and laboratory data quality control provided during previous investigations at the site has not been documented.

**Table N-1  
Monitoring Well GMW-1  
Historical Groundwater Monitoring Results**

EG&G KT Areofab/Missouri Metals Property

|                                       |                  |
|---------------------------------------|------------------|
| Monitoring Well: GMW-1                |                  |
| Total Depth: 16.5'                    | Fill Depth: 3.5' |
| Screen Length: 5.0'                   |                  |
| Sand Pack Depth Below Ground: 7.5'    |                  |
| Water Depth After Drilling: -         |                  |
| Water Depth 24 Hrs. After Drilling: - |                  |

| Analytical Results                      | Units       | MCL*  | Sampling Date: 4/2/92 |              | 1/17/91      |           | 7/20/90   | 5/18/89          | 2/26/88       |
|---|-------------|-------|-----------------------|--------------|--------------|-----------|-----------|------------------|---------------|
|   |             |       | NDRC                  | EAI          | IEA          | GTEL      | GTEL      | Meta Trace, Inc. |               |
| Acetone                                 | mg/L        |       |                       |              |              |           |           |                  |               |
| Vinyl Chloride                          | mg/L        | 0.002 |                       |              |              |           |           |                  |               |
| Methylene Chloride                      | mg/L        | 0.005 |                       | 0.075        |              |           |           |                  |               |
| 1,1-Dichloroethylene                    | mg/L        | 0.007 |                       |              |              |           |           |                  |               |
| 1,2 Dichloroethylene (total)            | mg/L        | 0.07  |                       | 0.05         |              |           |           |                  |               |
| Trans 1,2 Dichloroethylene              | mg/L        | 0.1   |                       |              |              |           |           |                  |               |
| Chloroform                              | mg/L        | 0.1   |                       | 0.006        |              |           |           |                  |               |
| Trichloroethylene                       | mg/L        | 0.005 |                       | 0.04         | 0.006        |           |           |                  |               |
| Tetrachloroethylene                     | mg/L        | 0.005 |                       |              |              |           |           |                  | 0.0006        |
| Toluene                                 | mg/L        | 1.0   |                       |              |              |           |           |                  |               |
| 1,1 Dichloroethane                      | mg/L        |       |                       |              |              |           |           |                  |               |
| 1,2 Dichloroethane                      | mg/L        | 0.005 |                       |              |              |           |           |                  |               |
| 1,1,2 Trichloroethane                   | mg/L        | 0.005 |                       |              |              |           |           |                  |               |
| 1,1,1 Trichloroethane                   | mg/L        | 0.2   |                       |              |              |           |           |                  |               |
| Benzene                                 | mg/L        | 0.005 |                       |              |              |           |           |                  |               |
| Chlorobenzene                           | mg/L        |       |                       |              |              |           |           |                  |               |
| 1,4 Dichlorobenzene                     | mg/L        | 0.075 |                       |              |              |           |           |                  |               |
| Carbon Tetrachloride                    | mg/L        | 0.005 |                       |              |              |           |           |                  | 0.0033        |
| <b>Total Volatile Organic Compounds</b> | <b>mg/L</b> |       | <b>ND</b>             | <b>0.171</b> | <b>0.006</b> | <b>ND</b> | <b>ND</b> | <b>ND</b>        | <b>0.0039</b> |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum Contaminant Level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water.  
Where blank, an MCL for that chemical has not been established.

**Table N-2**  
**Monitoring Well GMW-2\*\***  
**Historical Groundwater Monitoring Results**  
 EG&G KT Areofab/Missouri Metals Property

|                                       |                  |
|---------------------------------------|------------------|
| Monitoring Well: GMW-2**              |                  |
| Total Depth: 16.5'                    | Fill Depth: 7.0' |
| Screen Length: 5.0'                   |                  |
| Sand Pack Depth Below Ground: 7.0'    |                  |
| Water Depth After Drilling: -         |                  |
| Water Depth 24 Hrs. After Drilling: - |                  |

| Analytical Results                      | Sampling Date: |       | 1/17/91      |              | 7/20/90      | 5/18/89      | 2/26/88      |
|---|----------------|-------|--------------|--------------|--------------|--------------|--------------|
|   | Units          | MCL*  | EAI          | IEA          | GTEL         | GTEL         | Meta Trace   |
| Acetone                                 | mg/L           |       |              | 0.058        |              |              |              |
| Vinyl Chloride                          | mg/L           | 0.002 |              |              | 0.006        | 0.0045       |              |
| Methylene Chloride                      | mg/L           | 0.005 | 0.055        |              |              |              |              |
| 1,1 Dichloroethylene                    | mg/L           | 0.007 |              |              |              | 0.0006       | 0.0539       |
| 1,2 Dichloroethylene (total)            | mg/L           | 0.07  | 0.08         |              | 0.043        | 0.049        |              |
| Trans 1,2 Dichloroethylene              | mg/L           | 0.1   |              |              |              |              | 0.127        |
| Chloroform                              | mg/L           | 0.1   |              |              |              |              |              |
| Trichloroethylene                       | mg/L           | 0.005 | 0.017        | 0.025        | 0.032        | 0.049        | 0.32         |
| Tetrachloroethylene                     | mg/L           | 0.005 |              |              |              | 0.001        | 0.0157       |
| Toluene                                 | mg/L           | 1.0   |              | 0.011        |              |              |              |
| 1,1 Dichloroethane                      | mg/L           |       |              |              |              |              |              |
| 1,2 Dichloroethane                      | mg/L           | 0.005 |              |              |              |              |              |
| 1,1,2 Trichloroethane                   | mg/L           | 0.005 |              |              |              |              |              |
| 1,1,1 Trichloroethane                   | mg/L           | 0.2   |              |              |              |              | 0.0548       |
| Benzene                                 | mg/L           | 0.005 |              |              | 0.0003       |              |              |
| Chlorobenzene                           | mg/L           |       |              |              |              |              | 0.0027       |
| 1,4 Dichlorobenzene                     | mg/L           | 0.075 |              |              |              |              |              |
| <b>Total Volatile Organic Compounds</b> | <b>mg/L</b>    |       | <b>0.152</b> | <b>0.094</b> | <b>0.081</b> | <b>0.104</b> | <b>0.574</b> |

Note: Blanks indicate that the parameter was not detected.

- B: Analyte detected in blank as well as in sample.
- EAI: Environmental Analysis, Inc. provided laboratory analysis.
- GTEL: Groundwater Technologies provided laboratory analysis.
- IEA: IEA provided laboratory analysis.
- NDRC: NDRC Laboratories, Inc. provided laboratory analysis.
- J: Estimated value - parameter concentration is less than quantitation level but greater than zero.
- \*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.
- \*\* : Well abandoned in March 1992 due to well damage from vehicle traffic.



**Table N-3**  
**Monitoring Well GMW-3**  
**Historical Groundwater Monitoring Results**

EG&G KT Areofab/Missouri Metals Property

|                                       |                  |
|---------------------------------------|------------------|
| Monitoring Well: GMW-3                | Fill Depth: 4.0' |
| Total Depth: 16.5'                    |                  |
| Screen Length: 5.0'                   |                  |
| Sand Pack Depth Below Ground: 7.0'    |                  |
| Water Depth After Drilling: -         |                  |
| Water Depth 24 Hrs. After Drilling: - |                  |

| Analytical Results                      | Units       | MCL*  | Sampling Date: | 1/17/91      |              | 7/20/90      | 5/18/89      | 2/26/88      |
|---|-------------|-------|----------------|--------------|--------------|--------------|--------------|--------------|
|   |             |       | 4/2/92         | EAI          | IEA          | GTEL         | GTEL         | Meta Trace   |
| Acetone                                 | mg/L        |       |                |              |              |              |              |              |
| Vinyl Chloride                          | mg/L        | 0.002 | 0.0314         | 0.03         | 0.013        | 0.014        | 0.012        |              |
| Methylene Chloride                      | mg/L        | 0.005 |                | 0.075        |              |              |              |              |
| 1,1 Dichloroethylene                    | mg/L        | 0.007 |                |              |              | 0.0016       | 0.0026       | 0.044        |
| 1,2 Dichloroethylene (total)            | mg/L        | 0.07  | 1.43           | 0.1          |              |              | 0.27         |              |
| Trans 1,2 Dichloroethylene              | mg/L        | 0.1   |                |              | 0.004 J      | 0.1          |              | 0.132        |
| Chloroform                              | mg/L        | 0.1   |                | 0.01         |              |              |              |              |
| Trichloroethylene                       | mg/L        | 0.005 | 0.963          | 0.25         | 0.17         | 0.17         | 0.11         | 0.346        |
| Tetrachloroethylene                     | mg/L        | 0.005 | 0.062          | 0.008        | 0.004 J      |              | 0.0014       | 0.115        |
| Toluene                                 | mg/L        | 1.0   | 0.0093         |              |              | 0.0026       |              |              |
| 1,1 Dichloroethane                      | mg/L        |       |                |              |              |              |              |              |
| 1,2 Dichloroethane                      | mg/L        | 0.005 |                |              |              |              |              |              |
| 1,1,2 Trichloroethane                   | mg/L        | 0.005 |                |              |              |              |              |              |
| 1,1,1 Trichloroethane                   | mg/L        | 0.2   |                |              |              |              |              | 0.052        |
| Benzene                                 | mg/L        | 0.005 |                |              |              | 0.0003       |              |              |
| Chlorobenzene                           | mg/L        |       |                |              |              |              |              |              |
| 1,4 Dichlorobenzene                     | mg/L        | 0.075 |                |              |              |              |              |              |
| <b>Total Volatile Organic Compounds</b> | <b>mg/L</b> |       | <b>2.5</b>     | <b>0.473</b> | <b>0.191</b> | <b>0.289</b> | <b>0.396</b> | <b>0.689</b> |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies Environmental laboratory provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.

**Table N-4  
Monitoring Well GMW-4  
Historical Groundwater Monitoring Results**

EG&G KT Areofab/Missouri Metals Property

|                                       |                  |
|---------------------------------------|------------------|
| Monitoring Well: GMW-4                |                  |
| Total Depth: 16.5'                    | Fill Depth: 7.0' |
| Screen Length: 5.0'                   |                  |
| Sand Pack Depth Below Ground: 7.0'    |                  |
| Water Depth After Drilling: -         |                  |
| Water Depth 24 Hrs. After Drilling: - |                  |

| Analytical Results                      | Units       | MCL*  | Sampling Date: | 1/17/91      |              | 7/20/90      | 5/18/89      | 2/26/88      |
|---|-------------|-------|----------------|--------------|--------------|--------------|--------------|--------------|
|   |             |       | 4/2/92         | EAI          | IEA          | GTEL         | GTEL         | Meta Trace   |
| Acetone                                 | mg/L        |       | NDRC           |              |              |              |              |              |
| Vinyl Chloride                          | mg/L        | 0.002 |                |              |              | 0.011        |              |              |
| Methylene Chloride                      | mg/L        | 0.005 |                | 0.045        |              |              |              |              |
| 1,1 Dichloroethylene                    | mg/L        | 0.007 |                |              |              | 0.0018       |              |              |
| 1,2 Dichloroethylene (total)            | mg/L        | 0.07  |                |              |              |              |              |              |
| Trans 1,2 Dichloroethylene              | mg/L        | 0.1   |                |              |              | 0.11         | 0.0037       | 0.039        |
| Chloroform                              | mg/L        | 0.1   |                |              |              |              |              |              |
| Trichloroethylene                       | mg/L        | 0.005 |                | 0.006        | 0.004-J      | 0.18         | 0.0003       | 0.028        |
| Tetrachloroethylene                     | mg/L        | 0.005 |                |              |              |              |              |              |
| Toluene                                 | mg/L        | 1.0   |                |              |              | 0.0025       |              |              |
| 1,1 Dichloroethane                      | mg/L        |       |                |              |              |              |              |              |
| 1,2 Dichloroethane                      | mg/L        | 0.005 |                |              |              |              |              |              |
| 1,1,2 Trichloroethane                   | mg/L        | 0.005 |                |              |              |              |              |              |
| 1,1,1 Trichloroethane                   | mg/L        | 0.2   |                |              |              |              |              | 0.011        |
| Benzene                                 | mg/L        | 0.005 |                |              |              |              |              |              |
| Chlorobenzene                           | mg/L        |       |                |              |              |              |              |              |
| 1,4 Dichlorobenzene                     | mg/L        | 0.075 |                |              |              |              |              |              |
| <b>Total Volatile Organic Compounds</b> | <b>mg/L</b> |       | <b>ND</b>      | <b>0.051</b> | <b>0.004</b> | <b>0.305</b> | <b>0.004</b> | <b>0.078</b> |

Note: Blanks indicate that the parameter was not detected.

- B: Analyte detected in blank as well as in sample.
- EAI: Environmental Analysis, Inc. provided laboratory analysis.
- GTEL: Groundwater Technologies provided laboratory analysis.
- IEA: IEA provided laboratory analysis.
- NDRC: NDRC Laboratories, Inc. provided laboratory analysis.
- J: Estimated value - parameter concentration is less than quantitation level but greater than zero.
- \*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.

**Table N-5  
Monitoring Well GMW-5  
Historical Groundwater Monitoring Results**

EG&G KT Areofab/Missouri Metals Property

| Monitoring Well: GMW-5<br>Total Depth: 17.5'<br>Screen Length: 15.0'<br>Sand Pack Depth Below Ground: 2.0'<br>Water Depth After Drilling: 16.25'<br>Water Depth 24 Hrs. After Drilling: 15.06' |             |        |              |               |               |               |               |               |  |
|--|-------------|--------|--------------|---------------|---------------|---------------|---------------|---------------|--|
| Sampling Date:   |             | 4/2/92 | 1/17/91      |               |               | 10/25/90      |               | 7/20/90       |  |
| Analytical Results   | Units       | MCL*   | NDRC         | EAI           | IEA           | GTEL          | EAI           | GTEL          |  |
| Acetone  | mg/L        |        |              |               |               |               |               |               |  |
| Vinyl Chloride   | mg/L        | 0.002  | 2.32         | 2             | 2             | 2.1           | 1.5           | 0.76          |  |
| Methylene Chloride   | mg/L        | 0.005  |              | 0.055         |               |               |               |               |  |
| 1,1 Dichloroethylene   | mg/L        | 0.007  | 0.01         | 0.035         | 0.014         | 0.015         | 0.03          |               |  |
| 1,2 Dichloroethylene (total)   | mg/L        | 0.07   | 3.54         | 5.7           |               | 4.1           | 2.1           |               |  |
| Trans 1,2 Dichloroethylene   | mg/L        | 0.1    |              |               | 0.022         |               | 0.015         | 1.4           |  |
| Chloroform   | mg/L        | 0.1    |              | 0.01          |               |               |               |               |  |
| Trichloroethylene  | mg/L        | 0.005  | 2.61         | 1.1           | 2             | 2.7           | 1.7           | 2             |  |
| Tetrachloroethylene  | mg/L        | 0.005  | 24.4         | 8.8           | 15            | 22            | 9.2           | 6             |  |
| Toluene  | mg/L        | 1.0    | 0.0171       | 0.04          | 0.033         | 0.133         | 0.1           |               |  |
| 1,1 Dichloroethane   | mg/L        |        |              |               |               |               |               |               |  |
| 1,2 Dichloroethane   | mg/L        | 0.005  |              | 0.018         |               |               |               |               |  |
| 1,1,2 Trichloroethane  | mg/L        | 0.005  |              |               |               |               |               | 0.37          |  |
| 1,1,1 Trichloroethane  | mg/L        | 0.2    |              |               |               |               |               |               |  |
| Benzene  | mg/L        | 0.005  |              |               |               |               |               |               |  |
| Chlorobenzene  | mg/L        |        |              |               |               |               |               |               |  |
| 1,4 Dichlorobenzene  | mg/L        | 0.075  |              |               | 0.003 J       |               |               |               |  |
| Total Xylenes  | mg/L        |        |              |               |               |               |               |               |  |
| Tetrahydrofuran  | mg/L        |        | 0.024        |               |               |               |               |               |  |
| <b>Total Volatile Organic Compounds</b>  | <b>mg/L</b> |        | <b>33.12</b> | <b>17.758</b> | <b>19.072</b> | <b>31.048</b> | <b>14.645</b> | <b>10.530</b> |  |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.



**Table N-6**  
**Monitoring Well GMW-6**  
**Historical Groundwater Monitoring Results**  
 EG&G KT Areofab/Missouri Metals Property

|  |             |
|--|-------------|
| Monitoring Well: GMW-6                     | Fill Depth: |
| Total Depth: 15.0'                         |             |
| Screen Length: 10.0'                       |             |
| Sand Pack Depth Below Ground: 2.0'         |             |
| Water Depth After Drilling:                |             |
| Water Depth 24 Hrs. After Drilling: 13.31' |             |

| Analytical Results                      | Units       | MCL*  | Sampling Date: 4/2/92 |                | 1/17/91       |                | 10/25/90       |               | 7/20/89 |
|---|-------------|-------|-----------------------|----------------|---------------|----------------|----------------|---------------|---------|
|   |             |       | NDRC                  | EAI            | IEA           | GTEL           | EAI            | GTEL          |         |
| Acetone                                 | mg/L        |       |                       |                |               |                |                |               |         |
| Vinyl Chloride                          | mg/L        | 0.002 | 0.801                 | 1.2            | 1.2           | 0.86           | 1.2            | 0.83          |         |
| Methylene Chloride                      | mg/L        | 0.005 | 0.0798                | 0.58           | 0.082         | 0.026          | 0.1            | 0.12          |         |
| 1,1 Dichloroethylene                    | mg/L        | 0.007 | 0.266                 | 0.3            | 0.25          | 0.26 JB        |                | 0.18          |         |
| 1,2 Dichloroethylene (total)            | mg/L        | 0.07  | 35.7                  | 70             |               | 50             | 40.5           |               |         |
| Trans 1,2 Dichloroethylene              | mg/L        | 0.1   |                       |                | 0.1           |                | 0.5            | 9.3           |         |
| Chloroform                              | mg/L        | 0.1   |                       | 0.008          | 0.003 J       |                |                |               |         |
| Trichloroethylene                       | mg/L        | 0.005 | 54.6                  | 32             | 9.6           | 53             | 27             | 26            |         |
| Tetrachloroethylene                     | mg/L        | 0.005 | 88.7                  | 35             | 16            | 88             | 38.5           | 41            |         |
| Toluene                                 | mg/L        | 1.0   | 0.0275                | 0.045          | 0.044         |                | 0.065          |               |         |
| 1,1 Dichloroethane                      | mg/L        |       | 0.0922                | 0.25           | 0.11          | 0.067          | 0.12           | 0.082         |         |
| 1,2 Dichloroethane                      | mg/L        | 0.005 | 0.0051                | 0.007          |               |                |                |               |         |
| 1,1,2 Trichloroethane                   | mg/L        | 0.005 | 0.0292                |                | 0.019         |                |                |               |         |
| 1,1,1 Trichloroethane                   | mg/L        | 0.2   | 0.111                 | 0.055          | 0.14          | 0.17           | 0.1            | 0.13          |         |
| Benzene                                 | mg/L        | 0.005 | 0.0086                | 0.014          | 0.009         |                |                |               |         |
| Chlorobenzene                           | mg/L        |       |                       |                |               |                |                | 0.15          |         |
| 1,4 Dichlorobenzene                     | mg/L        | 0.075 |                       |                |               |                |                |               |         |
| Total Xylenes                           | mg/L        |       |                       |                |               |                |                |               |         |
| 1,1,1,2-Tetrachloroethane               | mg/L        |       | 0.022                 |                |               |                |                |               |         |
| Isopropanol                             | mg/L        |       | 0.023                 |                |               |                |                |               |         |
| <b>Total Volatile Organic Compounds</b> | <b>mg/L</b> |       | <b>180.47</b>         | <b>139.459</b> | <b>27.557</b> | <b>192.383</b> | <b>108.085</b> | <b>77.792</b> |         |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.

**Table N-7**  
**Monitoring Well GMW-7**  
**Historical Groundwater Monitoring Results**

EG&G KT Areofab/Missouri Metals Property

Monitoring Well: GMW-7  
 Total Depth: 14.0'  
 Screen Length: 10.0'  
 Sand Pack Depth Below Ground: 22.0'  
 Water Depth After Drilling: Dry  
 Water Depth 24 Hrs. After Drilling: 9.21'

| Analytical Results               | Units | MCL*  | Sampling Date: 4/2/92 |        | 1/17/91 |         | 10/25/90 |        | 7/20/89 |
|----------------------------------|-------|-------|-----------------------|--------|---------|---------|----------|--------|---------|
|                                  |       |       | ATAS                  | NDRC   | EAI     | IEA     | GTET     | EAI    | GTET    |
| Acetone                          | mg/L  |       | 0.160 J               |        |         | 0.015   |          |        |         |
| Vinyl Chloride                   | mg/L  | 0.002 | 0.041 J               | 0.0318 | 0.3     | 0.04    | 0.021    |        | 0.04    |
| Methylene Chloride               | mg/L  | 0.005 | 0.026 JB              |        | 0.06    |         |          |        |         |
| 1,1 Dichloroethylene             | mg/L  | 0.007 |                       |        |         |         | 0.0002 J |        | 0.0007  |
| 1,2 Dichloroethylene (total)     | mg/L  | 0.07  | 0.520                 | 0.573  | 0.88    |         | 1.5      | 75     |         |
| Trans 1,2 Dichloroethylene       | mg/L  | 0.1   |                       |        |         | 0.002 J |          |        | 0.2     |
| Chloroform                       | mg/L  | 0.1   |                       |        |         |         |          |        | 0.0063  |
| Trichloroethylene                | mg/L  | 0.005 | 3.10                  | 3.36   | 2.5     | 3.9     | 8.2      | 27     | 4.7     |
| Tetrachloroethylene              | mg/L  | 0.005 |                       | 0.0102 | 0.009   | 0.007   |          | 0.13   | 0.011   |
| Toluene                          | mg/L  | 1.0   |                       |        |         | 0.004 J |          |        | 0.0059  |
| 1,1 Dichloroethane               | mg/L  |       |                       |        |         |         |          |        |         |
| 1,2 Dichloroethane               | mg/L  | 0.005 |                       |        |         |         |          |        |         |
| 1,1,2 Trichloroethane            | mg/L  | 0.005 |                       |        |         |         |          |        | 0.0015  |
| 1,1,1 Trichloroethane            | mg/L  | 0.2   |                       |        |         |         |          |        |         |
| Benzene                          | mg/L  | 0.005 | 0.021 JB              |        |         |         |          |        | 0.0004  |
| Chlorobenzene                    | mg/L  |       |                       |        |         |         |          |        |         |
| 1,4 Dichlorobenzene              | mg/L  | 0.075 |                       |        |         |         |          |        |         |
| Total Xylenes                    | mg/L  |       |                       |        |         |         |          |        | 0.0011  |
| Total Volatile Organic Compounds | mg/L  |       | 3.868                 | 3.975  | 3.749   | 3.968   | 9.7212   | 102.13 | 4.967   |

Note: Blanks indicate that the parameter was not detected.

ATAS: American Technical & Analytical Services, Inc. provided laboratory analysis.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTET: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level, Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.

**Table N-8**  
**Monitoring Well GMW-8**  
**Historical Groundwater Monitoring Results**  
 EG&G KT Areofab/Missouri Metals Property

Monitoring Well: GMW-8  
 Total Depth: 14.0'  
 Screen Length: 10.0'  
 Sand Pack Depth Below Ground: 2.0'  
 Water Depth After Drilling: Trace  
 Water Depth 24 Hrs. After Drilling: 7.94'

| Analytical Results                      | Units       | MCL*  | Sampling Date: | 1/17/91       |     | 1/17/91       |                | 1/17/91       |                |
|---|-------------|-------|----------------|---------------|-----|---------------|----------------|---------------|----------------|
|   |             |       | 4/2/92         | NDRC          | EAI | IEA           | EAI            | IEA           | EAI            |
| Acetone                                 | mg/L        |       |                |               |     | 0.008 J       |                |               |                |
| Vinyl Chloride                          | mg/L        | 0.002 | 9.91           | 0.85          |     | 8.2           | 5              | 5.1           | 7              |
| Methylene Chloride                      | mg/L        | 0.005 |                | 0.05          |     |               | 0.5            |               | 0.1            |
| 1,1 Dichloroethylene                    | mg/L        | 0.007 | 0.0732         | 0.12          |     | 0.051         | 0.19           | 0.057         | 0.18           |
| 1,2 Dichloroethylene                    | mg/L        | 0.07  | 113.0          | 180           |     |               | 190            |               | 80             |
| Trans 1,2 Dichloroethylene              | mg/L        | 0.1   |                |               |     | 0.17          |                | 0.16          |                |
| Chloroform                              | mg/L        | 0.1   |                |               |     |               | 0.005          |               | 0.006          |
| Trichloroethylene                       | mg/L        | 0.005 | 111.0          | 32            |     | 39            | 45             | 61            | 30             |
| Tetrachloroethylene                     | mg/L        | 0.005 | 0.0133         | 0.01          |     | 0.008         | 0.02           | 0.031         | 0.12           |
| Toluene                                 | mg/L        | 1.0   | 0.0229         | 0.06          |     | 0.064         | 0.08           | 0.076         | 0.15           |
| 1,1 Dichloroethane                      | mg/L        |       |                |               |     |               |                |               | 0.053          |
| 1,2 Dichloroethane                      | mg/L        |       |                |               |     | 0.005         |                |               | 0.004 J        |
| 1,1,2 Trichloroethane                   | mg/L        | 0.005 | 0.136          | 0.05          |     | 0.069         | 0.035          | 0.061         |                |
| 1,1,1 Trichloroethane                   | mg/L        | 0.005 |                |               |     |               |                |               |                |
| Benzene                                 | mg/L        | 0.2   |                |               |     |               |                |               |                |
| Chlorobenzene                           | mg/L        | 0.005 |                |               |     |               |                |               |                |
| 1,4 Dichlorobenzene                     | mg/L        |       |                |               |     | 0.004 J       |                | 0.003         |                |
| Total Xylenes                           | mg/L        | 0.075 |                |               |     |               |                |               |                |
| 1,2 Dichloropropane                     | mg/L        |       | 0.0173         |               |     |               |                |               |                |
| <b>Total Volatile Organic Compounds</b> | <b>mg/L</b> |       | <b>234.17</b>  | <b>213.14</b> |     | <b>47.579</b> | <b>240.830</b> | <b>66.488</b> | <b>117.556</b> |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.



**Table N-8 (continued)**  
**Monitoring Well GMW-8**  
**Historical Groundwater Monitoring Results**  
**EG&G KT Areofab/Missouri Metals Property**

| Monitoring Well: GMW-8<br>Total Depth: 14.0'<br>Screen Length: 10.0'<br>Sand Pack Depth Below Ground: 2.0'<br>Water Depth After Drilling: TRACE<br>Water Depth 24 Hrs. After Drilling: 7.94' |             |       |                        |                |                         |
|--|-------------|-------|------------------------|----------------|-------------------------|
|  |             |       | Sampling Date: 7/20/89 |                | Sampling Date: 10/25/90 |
| Analytical Results   | Units       | MCL*  | GTEL                   | GTEL           | EAI                     |
| Acetone  | mg/L        |       |                        |                |                         |
| Vinyl Chloride   | mg/L        | 0.002 | 8.9                    | 14             | 21                      |
| Methylene Chloride   | mg/L        | 0.005 |                        | 0.002 JB       |                         |
| 1,1 Dichloroethylene   | mg/L        | 0.007 |                        | 0.17           | 0.12                    |
| 1,2 Dichloroethylene (total)   | mg/L        | 0.07  |                        | 100            | 95                      |
| Trans 1,2 Dichloroethylene   | mg/L        | 0.1   | 38                     |                | 0.16                    |
| Chloroform   | mg/L        | 0.1   |                        |                |                         |
| Trichloroethylene  | mg/L        | 0.005 | 58                     | 65             | 35                      |
| Tetrachloroethylene  | mg/L        | 0.005 |                        | 0.01           | 0.02                    |
| Toluene  | mg/L        | 1.0   |                        | 0.13           | 0.1                     |
| 1,1 Dichloroethane   | mg/L        |       |                        |                |                         |
| 1,2 Dichloroethane   | mg/L        | 0.005 |                        |                |                         |
| 1,1,2 Trichloroethane  | mg/L        | 0.005 |                        | 0.03           | 0.095                   |
| 1,1,1 Trichloroethane  | mg/L        | 0.2   |                        |                |                         |
| Benzene  | mg/L        | 0.005 |                        |                |                         |
| Chlorobenzene  | mg/L        |       |                        |                |                         |
| 1,4 Dichlorobenzene  | mg/L        | 0.075 |                        |                |                         |
| <b>Total Volatile Organic Compounds</b>  | <b>mg/L</b> |       | <b>104.9</b>           | <b>179.342</b> | <b>151.495</b>          |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.

**Table N-9  
Monitoring Well GMW-9  
Historical Groundwater Monitoring Results**

EG&G KT Areofab/Missouri Metals Property

| Monitoring Well: GMW-9<br>Total Depth: 20.0'<br>Screen Length: 10.0'<br>Sand Pack Depth Below Ground: 1.5' |             |                |              |              |               |
|--|-------------|----------------|--------------|--------------|---------------|
|  |             | Sampling Date: | 4/2/92       | 1/17/91      |               |
| Analytical Results   | Units       | MCL*           | NDRC         | EAI          | IEA           |
| Acetone  | mg/L        |                |              |              |               |
| Vinyl Chloride   | mg/L        | 0.002          |              | 0.05         | 0.052         |
| Methylene Chloride   | mg/L        | 0.005          |              | 0.065        |               |
| 1,1 Dichloroethylene   | mg/L        | 0.007          |              |              | 0.004 J       |
| 1,2 Dichloroethylene (total)   | mg/L        | 0.07           | 0.686        | 0.9          |               |
| Trans 1,2 Dichloroethylene   | mg/L        | 0.1            |              |              | 0.003 J       |
| Chloroform   | mg/L        | 0.1            |              | 0.007        |               |
| Trichloroethylene  | mg/L        | 0.005          | 9.25         | 4            | 9.9           |
| Tetrachloroethylene  | mg/L        | 0.005          | 1.23         | 0.68         | 1.4           |
| Toluene  | mg/L        | 1.0            |              |              |               |
| 1,1 Dichloroethane   | mg/L        |                |              |              |               |
| 1,2 Dichloroethane   | mg/L        | 0.005          |              |              |               |
| 1,1,2 Trichloroethane  | mg/L        | 0.005          |              | 0.013        |               |
| 1,1,1 Trichloroethane  | mg/L        | 0.2            |              |              |               |
| Benzene  | mg/L        | 0.005          |              |              |               |
| Chlorobenzene  | mg/L        |                |              |              |               |
| 1,4 Dichlorobenzene  | mg/L        | 0.075          |              |              |               |
| <b>Total Volatile Organic Compounds</b>  | <b>mg/L</b> |                | <b>11.16</b> | <b>5.715</b> | <b>11.359</b> |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.

**Table N-10  
Monitoring Well GMW-10  
Historical Groundwater Monitoring Results**

EG&G KT Areofab/Missouri Metals Property

|                                  |       |       | Monitoring Well: GMW-10<br>Total Depth: 15.0'<br>Screen Length: 10.0'<br>Sand Pack Depth Below Ground: 1.5' |         |       |
|----------------------------------|-------|-------|---|---------|-------|
|                                  |       |       | 4/2/92  | 1/16/91 |       |
| Analytical Results               | Units | MCL*  | NDRC  | EAI     | IEA   |
| Acetone                          | mg/L  |       |   |         |       |
| Vinyl Chloride                   | mg/L  | 0.002 |   | 0.06    | 0.011 |
| Methylene Chloride               | mg/L  | 0.005 |   | 0.07    |       |
| 1,1 Dichloroethylene             | mg/L  | 0.007 |   |         |       |
| 1,2 Dichloroethylene (total)     | mg/L  | 0.07  | 0.144   | 0.06    |       |
| Trans 1,2 Dichloroethylene       | mg/L  | 0.1   |   |         |       |
| Chloroform                       | mg/L  | 0.1   |   | 0.005   |       |
| Trichloroethylene                | mg/L  | 0.005 | 0.587   | 0.62    | 1.2   |
| Tetrachloroethylene              | mg/L  | 0.005 | 0.0994  | 0.055   | 0.11  |
| Toluene                          | mg/L  | 1.0   |   |         |       |
| 1,1 Dichloroethane               | mg/L  |       |   |         |       |
| 1,2 Dichloroethane               | mg/L  | 0.005 |   |         |       |
| 1,1,2 Trichloroethane            | mg/L  | 0.005 |   |         |       |
| 1,1,1 Trichloroethane            | mg/L  | 0.2   |   |         |       |
| Benzene                          | mg/L  | 0.005 |   |         |       |
| Chlorobenzene                    | mg/L  |       |   |         |       |
| 1,4 Dichlorobenzene              | mg/L  | 0.075 |   |         |       |
| Total Volatile Organic Compounds | mg/L  |       | 0.83  | 0.87    | 1.321 |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.



**Table N-11**  
**Monitoring Well GMW-11**  
**Historical Groundwater Monitoring Results**

EG&G KT Areofab/Missouri Metals Property

|   |             |       | Monitoring Well: GMW-11<br>Total Depth: 15.0'<br>Screen Length: 10.0'<br>Sand Pack Depth Below Ground: 1.5' |             |              |
|---|-------------|-------|---|-------------|--------------|
|   |             |       | 4/2/92  | 1/17/91     |              |
| Analytical Results                      | Units       | MCL*  | NDRC  | EAI         | IEA          |
| Acetone                                 | mg/L        |       |   |             | 1.0          |
| Vinyl Chloride                          | mg/L        | 0.002 |   | 0.05        | 0.041        |
| Methylene Chloride                      | mg/L        | 0.005 |   | 0.045       |              |
| 1,1 Dichloroethylene                    | mg/L        | 0.007 |   | 0.035       | 0.013        |
| 1,2 Dichloroethylene (total)            | mg/L        | 0.07  | 2.42  | 6.0         |              |
| Trans 1,2 Dichloroethylene              | mg/L        | 0.1   |   |             | 0.027        |
| Chloroform                              | mg/L        | 0.1   |   |             |              |
| Trichloroethylene                       | mg/L        | 0.005 | 0.465   | 0.2         | 0.17         |
| Tetrachloroethylene                     | mg/L        | 0.005 |   |             |              |
| Toluene                                 | mg/L        | 1.0   |   |             |              |
| 1,1 Dichloroethane                      | mg/L        |       |   |             |              |
| 1,2 Dichloroethane                      | mg/L        | 0.005 |   |             |              |
| 1,1,2 Trichloroethane                   | mg/L        | 0.005 |   |             |              |
| 1,1,1 Trichloroethane                   | mg/L        | 0.2   |   |             |              |
| Benzene                                 | mg/L        | 0.005 |   |             |              |
| Chlorobenzene                           | mg/L        |       |   |             |              |
| 1,4 Dichlorobenzene                     | mg/L        | 0.075 |   |             |              |
| Xylenes (total)                         | mg/L        |       |   |             |              |
| <b>Total Volatile Organic Compounds</b> | <b>mg/L</b> |       | <b>2.885</b>  | <b>6.33</b> | <b>1.251</b> |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTET: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.

**Table N-12**  
**Monitoring Well GMW-12\*\***  
**Historical Groundwater Monitoring Results**  
 EG&G KT Areofab/Missouri Metals Property

|                                  |       |       | Monitoring Well: GMW-12**           |         |
|----------------------------------|-------|-------|-------------------------------------|---------|
|                                  |       |       | Total Depth: 30'                    |         |
|                                  |       |       | Screen Length: 20'                  |         |
|                                  |       |       | Sand Pack Depth Below Ground: 1.5'  |         |
|                                  |       |       | Water Depth After Drilling:         |         |
|                                  |       |       | Water Depth 24 Hrs. After Drilling: |         |
|                                  |       |       | Sampling Date:                      | 1/17/91 |
| Analytical Results               | Units | MCL*  |                                     |         |
| Acetone                          | mg/L  |       |                                     |         |
| Vinyl Chloride                   | mg/L  | 0.002 | 1.8                                 | 1.9     |
| Methylene Chloride               | mg/L  | 0.005 | 0.14                                |         |
| 1,1 Dichloroethylene             | mg/L  | 0.007 | 0.016                               | 0.008   |
| 1,2 Dichloroethylene             | mg/L  | 0.07  | 7.8                                 |         |
| Trans 1,2 Dichloroethylene       | mg/L  | 0.1   |                                     | 0.024   |
| Chloroform                       | mg/L  | 0.1   | 0.008                               |         |
| Trichloroethylene                | mg/L  | 0.005 | 0.17                                | 0.26    |
| 1,2,2 Trichloroethane            | mg/L  | 0.005 |                                     |         |
| Tetrachloroethylene              | mg/L  | 0.005 | 0.14                                | 0.2     |
| Toluene                          | mg/L  | 1.0   |                                     |         |
| 1,1 Dichloroethane               | mg/L  |       |                                     |         |
| 1,2 Dichloroethane               | mg/L  | 0.005 | 0.018                               | 0.007   |
| 1,1,2 Trichloroethane            | mg/L  | 0.005 |                                     |         |
| 1,1,1 Trichloroethane            | mg/L  | 0.2   |                                     |         |
| Benzene                          | mg/L  | 0.005 |                                     |         |
| Chlorobenzene                    | mg/L  |       |                                     |         |
| 1,4 Dichlorobenzene              | mg/L  | 0.075 |                                     |         |
| 1,1,1,2 Tetrachloroethane        | mg/L  |       |                                     |         |
| Total Volatile Organic Compounds | mg/L  |       | 10.092                              | 2.399   |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.

\*\* : Monitoring Well GMW-12 abandoned in March 1992. GMW-12 was replaced by GMW-15 to provide an isolated, deep monitoring well.



**Table N-13**  
**Monitoring Well GMW-13**  
**Historical Groundwater Monitoring Results**  
 EG&G KT Areofab/Missouri Metals Property

| Monitoring Well: GMW-13**               |             |                |               |               |
|---|-------------|----------------|---------------|---------------|
| Total Depth: 50.0'                      |             |                |               |               |
| Screen Length: 40.0'                    |             |                |               |               |
| Sand Pack Depth Below Ground: 1.5'      |             |                |               |               |
| Water Depth After Drilling: -           |             |                |               |               |
| Water Depth 24 Hrs. After Drilling: -   |             |                |               |               |
|   |             | Sampling Date: | 1/17/91       |               |
| Analytical Results                      | Units       | MCL*           | EAI           | IEA           |
| Acetone                                 | mg/L        |                |               |               |
| Vinyl Chloride                          | mg/L        | 0.002          | 0.9           | 1.4           |
| Methylene Chloride                      | mg/L        | 0.005          | 0.155         |               |
| 1,1 Dichloroethylene                    | mg/L        | 0.007          | 0.085         | 0.037         |
| 1,2 Dichloroethylene (total)            | mg/L        | 0.07           | 120           |               |
| Trans 1,2 Dichloroethylene              | mg/L        | 0.1            |               | 0.14          |
| Chloroform                              | mg/L        | 0.1            |               |               |
| Trichloroethylene                       | mg/L        | 0.005          | 74            | 62            |
| Tetrachloroethylene                     | mg/L        | 0.005          | 6             | 3.5           |
| Toluene                                 | mg/L        | 1.0            |               | 0.006         |
| 1,1 Dichloroethane                      | mg/L        |                |               |               |
| 1,2 Dichloroethane                      | mg/L        | 0.005          |               |               |
| 1,1,2 Trichloroethane                   | mg/L        | 0.005          | 0.09          | 0.078         |
| 1,1,1 Trichloroethane                   | mg/L        | 0.2            |               |               |
| Benzene                                 | mg/L        | 0.005          |               |               |
| Chlorobenzene                           | mg/L        |                |               |               |
| 1,4 Dichlorobenzene                     | mg/L        | 0.075          |               |               |
| Xylenes (total)                         | mg/L        |                |               | 0.005         |
| <b>Total Volatile Organic Compounds</b> | <b>mg/L</b> |                | <b>201.23</b> | <b>67.166</b> |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.

\*\* : Monitoring Well GMW-13 abandoned in March 1992. GMW-13 was replaced by GMW-14 to provide an isolated, deep monitoring well.

**Table N-14**  
**Monitoring Well GMW-14**  
**Historical Groundwater Monitoring Results**

EG&G KT Areofab/Missouri Metals Property

Monitoring Well: GMW-14  
 Total Depth: 23'  
 Screen Length: 4.5'  
 Sand Pack Depth Below Ground: 16'  
 Water Depth After Drilling:  
 Water Depth 24 Hrs. After Drilling:

|   |             | Sampling Date: |              | 4/1/92 | 4/2/92       |
|---|-------------|----------------|--------------|--------|--------------|
| Analytical Results                      | Units       | MCL*           | NDRC         | NDRC   | NDRC         |
| Acetone                                 | mg/L        |                |              |        |              |
| Vinyl Chloride                          | mg/L        | 0.002          | 1.73         |        | 1.3          |
| Methylene Chloride                      | mg/L        | 0.005          |              |        |              |
| 1,1 Dichloroethylene                    | mg/L        | 0.007          | 0.021        |        | 0.0242       |
| 1,2 Dichloroethylene (total)            | mg/L        | 0.07           | 17.6         |        | 18.4         |
| Trans 1,2 Dichloroethylene              | mg/L        | 0.1            |              |        |              |
| Chloroform                              | mg/L        | 0.1            |              |        |              |
| Trichloroethylene                       | mg/L        | 0.005          | 42.5         |        | 46.5         |
| Tetrachloroethylene                     | mg/L        | 0.005          | 0.233        |        | 0.168        |
| Toluene                                 | mg/L        | 1.0            |              |        |              |
| 1,1 Dichloroethane                      | mg/L        |                |              |        |              |
| 1,2 Dichloroethane                      | mg/L        | 0.005          |              |        |              |
| 1,1,2 Trichloroethane                   | mg/L        | 0.005          | 0.0279       |        | 0.0289       |
| 1,1,1 Trichloroethane                   | mg/L        | 0.2            |              |        |              |
| Benzene                                 | mg/L        | 0.005          |              |        |              |
| Chlorobenzene                           | mg/L        |                |              |        |              |
| 1,4 Dichlorobenzene                     | mg/L        | 0.075          |              |        |              |
| Xylenes (total)                         | mg/L        |                |              |        |              |
| <b>Total Volatile Organic Compounds</b> | <b>mg/L</b> |                | <b>62.11</b> |        | <b>66.42</b> |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.

**Table N-15  
Monitoring Well GMW-15  
Historical Groundwater Monitoring Results**

EG&G KT Areofab/Missouri Metals Property

|                                  |       |       | Monitoring Well: GMW-15<br>Total Depth: 19.9'<br>Screen Length: 4.5'<br>Sand Pack Depth Below Ground: 13'<br>Water Depth After Drilling:<br>Water Depth 24 Hrs. After Drilling: |
|----------------------------------|-------|-------|---|
|                                  |       |       | 4/2/92  |
| Analytical Results               | Units | MCL*  | NDRC  |
| Acetone                          | mg/L  |       |   |
| Vinyl Chloride                   | mg/L  | 0.002 | 0.153   |
| Methylene Chloride               | mg/L  | 0.005 | 0.0289  |
| 1,1 Dichloroethylene             | mg/L  | 0.007 | 0.0809  |
| 1,2 Dichloroethylene             | mg/L  | 0.07  | 7.32  |
| Trans 1,2 Dichloroethylene       | mg/L  | 0.1   |   |
| Chloroform                       | mg/L  | 0.1   |   |
| Trichloroethylene                | mg/L  | 0.005 | 60.0  |
| 1,2,2 Trichloroethane            | mg/L  | 0.005 |   |
| Tetrachloroethylene              | mg/L  | 0.005 | 76.8  |
| Toluene                          | mg/L  | 1.0   | 0.01  |
| 1,1 Dichloroethane               | mg/L  |       | 0.009   |
| 1,2 Dichloroethane               | mg/L  | 0.005 |   |
| 1,1,2 Trichloroethane            | mg/L  | 0.005 |   |
| 1,1,1 Trichloroethane            | mg/L  | 0.2   | 0.128   |
| Benzene                          | mg/L  | 0.005 | 0.0154  |
| Chlorobenzene                    | mg/L  |       |   |
| 1,4 Dichlorobenzene              | mg/L  | 0.075 |   |
| 1,1,1,2 Tetrachloroethane        | mg/L  |       | 0.088   |
| Total Volatile Organic Compounds | mg/L  |       | 144.63  |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.



**Table N-16**  
**Monitoring Well GMW-16**  
**Historical Groundwater Monitoring Results**

EG&G KT Areofab/Missouri Metals Property

|   |             |                |             | Monitoring Well: GMW-16             |                  |
|---|-------------|----------------|-------------|-------------------------------------|------------------|
|   |             |                |             | Total Depth: 38.16'                 |                  |
|   |             |                |             | Screen Length: 5'                   |                  |
|   |             |                |             | Sand Pack Depth Below Ground: 28.6' | Fill Depth: 3.5' |
|   |             |                |             | Water Depth After Drilling: 6.3'    |                  |
|   |             | Sampling Date: | 4/8/92      |                                     | 4/9/92           |
| Analytical Results                      | Units       | MCL*           | NDRC        | NDRC                                |                  |
| Acetone                                 | mg/L        |                |             |                                     |                  |
| Vinyl Chloride                          | mg/L        | 0.002          |             |                                     |                  |
| Methylene Chloride                      | mg/L        | 0.005          |             |                                     |                  |
| 1,1 Dichloroethylene                    | mg/L        | 0.007          |             |                                     |                  |
| 1,2 Dichloroethylene (total)            | mg/L        | 0.07           | 0.282       |                                     | 0.286            |
| Trans 1,2 Dichloroethylene              | mg/L        | 0.1            |             |                                     |                  |
| Chloroform                              | mg/L        | 0.1            |             |                                     |                  |
| Trichloroethylene                       | mg/L        | 0.005          | 1.17        |                                     | 1.3              |
| Tetrachloroethylene                     | mg/L        | 0.005          |             |                                     | 0.0253           |
| Toluene                                 | mg/L        | 1.0            |             |                                     |                  |
| 1,1 Dichloroethane                      | mg/L        |                |             |                                     |                  |
| 1,2 Dichloroethane                      | mg/L        | 0.005          |             |                                     |                  |
| 1,1,2 Tetrachloroethane                 | mg/L        | 0.005          |             |                                     |                  |
| 1,1,1 Tetrachloroethane                 | mg/L        | 0.2            |             |                                     |                  |
| Benzene                                 | mg/L        | 0.005          |             |                                     |                  |
| Chlorobenzene                           | mg/L        |                |             |                                     |                  |
| 1,4 Dichlorobenzene                     | mg/L        | 0.075          |             |                                     |                  |
| Carbon Tetrachloride                    | mg/L        |                |             |                                     |                  |
| <b>Total Volatile Organic Compounds</b> | <b>mg/L</b> |                | <b>1.45</b> |                                     | <b>1.61</b>      |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.

**Table N-17  
Monitoring Well GMW-17  
Historical Groundwater Monitoring Results**

EG&G KT Areofab/Missouri Metals Property

| Monitoring Well: GMW-17<br>Total Depth: 48.8'<br>Screen Length: 10'<br>Sand Pack Depth Below Ground: 35.5' |             |                |             |              |              |
|--|-------------|----------------|-------------|--------------|--------------|
|  |             | Sampling Date: | 4/14/92     | 4/14/92**    |              |
| Analytical Results   | Units       | MCL*           | NDRC        | NDRC         | NDRC         |
| Acetone  | mg/L        |                |             |              |              |
| Vinyl Chloride   | mg/L        | 0.002          |             |              |              |
| Methylene Chloride   | mg/L        | 0.005          |             |              |              |
| 1,1 Dichloroethylene   | mg/L        | 0.007          |             |              |              |
| 1,2 Dichloroethylene (total)   | mg/L        | 0.07           | 0.0124      | 0.0264       | 0.034        |
| Trans 1,2 Dichloroethylene   | mg/L        | 0.1            |             |              |              |
| Chloroform   | mg/L        | 0.1            |             |              |              |
| Trichloroethylene  | mg/L        | 0.005          | 0.292       | 0.756        | 0.648        |
| Tetrachloroethylene  | mg/L        | 0.005          | 0.0842      | 0.162        | 0.149        |
| Toluene  | mg/L        | 1.0            |             |              |              |
| 1,1 Dichloroethane   | mg/L        |                |             |              |              |
| 1,2 Dichloroethane   | mg/L        | 0.005          |             |              |              |
| 1,1,2 Trichloroethane  | mg/L        | 0.005          |             |              |              |
| 1,1,1 Trichloroethane  | mg/L        | 0.2            |             |              |              |
| Benzene  | mg/L        | 0.005          |             |              |              |
| Chlorobenzene  | mg/L        |                |             |              |              |
| 1,4 Dichlorobenzene  | mg/L        | 0.075          |             |              |              |
| Carbon Tetrachloride   | mg/L        |                |             |              |              |
| <b>Total Volatile Organic Compounds</b>  | <b>mg/L</b> |                | <b>0.39</b> | <b>0.944</b> | <b>0.831</b> |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level, Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.

\*\* : Sample and sample duplicate collected after pump test.

**Table N-18**  
**Monitoring Well GMW-18**  
**Historical Groundwater Monitoring Results**

EG&G KT Areofab/Missouri Metals Property

|   |             | Monitoring Well: GMW-18<br>Total Depth: 33.4'<br>Screen Length: 10'<br>Sand Pack Depth Below Ground: 14' |             |             |
|---|-------------|--|-------------|-------------|
|   |             | Sampling Date:   | 4/14/92     | 4/16/92     |
| Analytical Results                      | Units       | MCL*   | NDRC        | NDRC        |
| Acetone                                 | mg/L        |  |             |             |
| Vinyl Chloride                          | mg/L        | 0.002  | 0.0902      | 0.141       |
| Methylene Chloride                      | mg/L        | 0.005  |             |             |
| 1,1 Dichloroethylene                    | mg/L        | 0.007  |             |             |
| 1,2 Dichloroethylene (total)            | mg/L        | 0.07   | 0.94        | 1.48        |
| Trans 1,2 Dichloroethylene              | mg/L        | 0.1  |             |             |
| Chloroform                              | mg/L        | 0.1  |             |             |
| Trichloroethylene                       | mg/L        | 0.005  | 1.51        | 1.64        |
| Tetrachloroethylene                     | mg/L        | 0.005  | 4.84        | 4.31        |
| Toluene                                 | mg/L        | 1.0  |             |             |
| 1,1 Dichloroethane                      | mg/L        |  |             |             |
| 1,2 Dichloroethane                      | mg/L        | 0.005  |             |             |
| 1,1,2 Trichloroethane                   | mg/L        | 0.005  |             |             |
| 1,1,1 Trichloroethane                   | mg/L        | 0.2  |             |             |
| Benzene                                 | mg/L        | 0.005  |             |             |
| Chlorobenzene                           | mg/L        |  |             |             |
| 1,4 Dichlorobenzene                     | mg/L        | 0.075  |             |             |
| Carbon Tetrachloride                    | mg/L        |  |             |             |
| <b>Total Volatile Organic Compounds</b> | <b>mg/L</b> |  | <b>7.38</b> | <b>7.57</b> |

Note: Blanks indicate that the parameter was not detected.

B: Analyte detected in blank as well as in sample.

EAI: Environmental Analysis, Inc. provided laboratory analysis.

GTEL: Groundwater Technologies provided laboratory analysis.

IEA: IEA provided laboratory analysis.

NDRC: NDRC Laboratories, Inc. provided laboratory analysis.

J: Estimated value - parameter concentration is less than quantitation level but greater than zero.

\*MCL: Maximum contaminant level - Safe Drinking Water Act (health-based) acceptable chemical limit for drinking water. Where blank, an MCL for that chemical has not been established.