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121

# GROUNDWATER MONITORING
# VALIDATED ANALYTICAL RESULTS FOR THE THIRD QUARTER 1995
# ASH LANDFILL, SENECA ARMY DEPOT

**PREPARED FOR:**
U.S. Army Corps of Engineers
Hunstville, Alabama

**PREPARED BY:**

Parsons Engineering Science, Inc.
Boston, Massachusetts

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D#14

## TABLES

TABLE 1

SENECA ARMY DEPOT ACTIVITY
1995 GROUNDWATER MONITORING PROGRAM
GROUNDWATER ELEVATION DATA

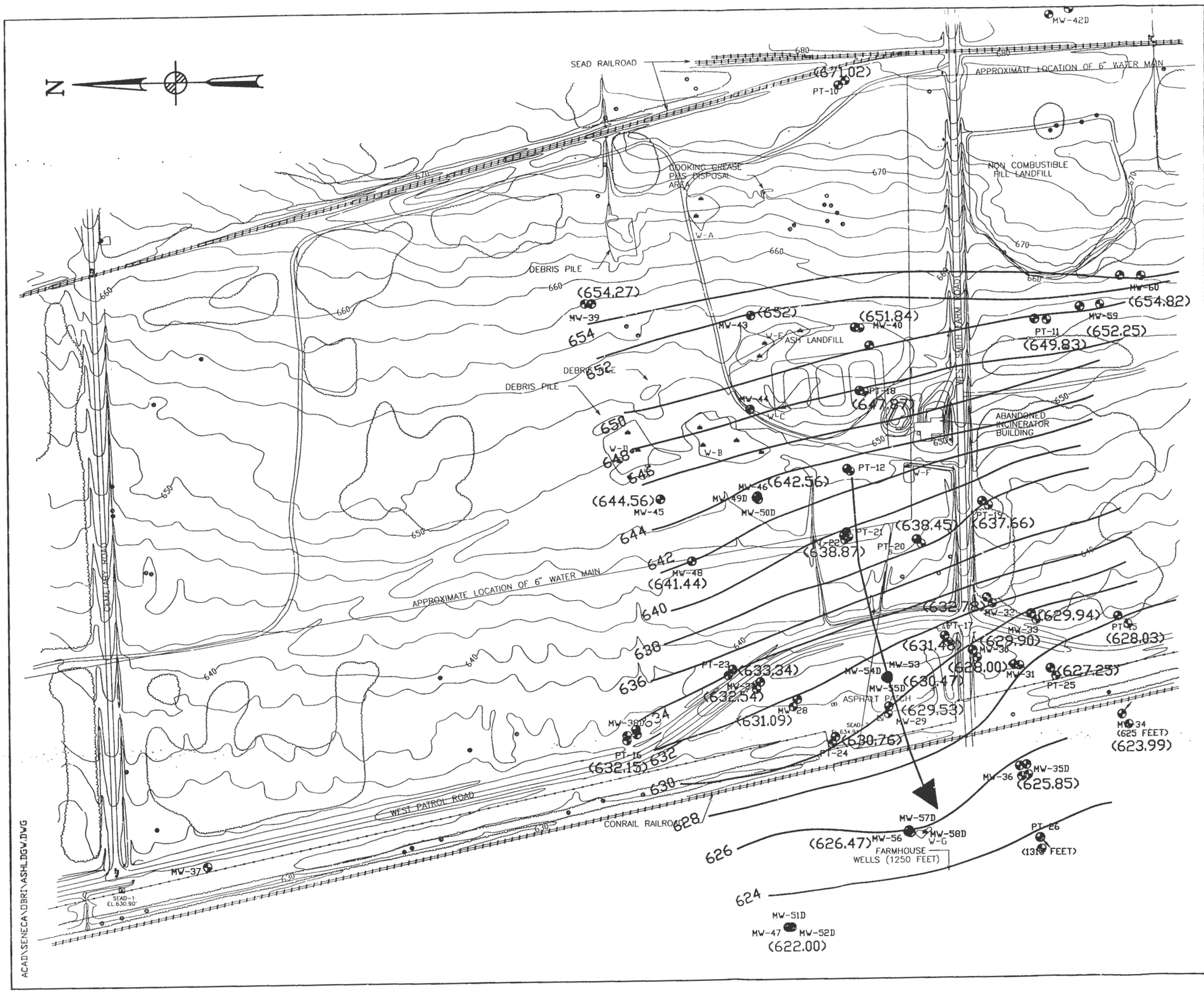
| Monitoring Well | Elevation at Top of Riser (MSL) | First Quarter 1995 | | | Second Quarter 1995 | | | Third Quarter 1995 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Date | Depth from Top of Riser (ft.) | Elevation of Water Level (ft.) | Date | Depth from Top of Riser (ft.) | Elevation of Water Level (ft.) | Date | Depth from Top of Riser (ft.) | Elevation of Water Level (ft.) |
| Ash Landfill | | | | | | | | | | |
| PT-10 | 681.52 | | | | 06/05/95 | 10.4 | 671.12 | 09/12/95 | 10.5 | 671.02 |
| PT-11 | 658.22 | 03/16/95 | 4.28 | 653.94 | 06/05/95 | 7.2 | 651.02 | 09/12/95 | 8.39 | 649.83 |
| PT-12 | 652.15 | | | | 06/05/95 | Destroyed | | | | |
| PT-15 | 637.76 | | | | 06/05/95 | 8.2 | 629.56 | 09/12/95 | 9.73 | 628.03 |
| PT-16 | 637.51 | | | | 06/05/95 | 4.68 | 632.83 | 09/12/95 | 5.36 | 632.15 |
| PT-17 | 640.14 | | | | 06/05/95 | 7.87 | 632.27 | 09/12/95 | 8.66 | 631.48 |
| PT-18 | 656.68 | | | | 06/05/95 | 8.24 | 648.44 | 09/12/95 | 8.81 | 647.87 |
| PT-19 | 645.26 | 03/17/95 | 3.1 | 642.16 | 06/05/95 | 6.33 | 638.93 | 09/12/95 | 7.57 | 637.69 |
| PT-20 | 647.28 | | | | 06/05/95 | 7.69 | 639.59 | 09/12/95 | 8.83 | 638.45 |
| PT-21 | 647.73 | | | | 06/05/95 | Destroyed | | | | |
| PT-22 | 648.61 | | | | 06/05/95 | 8.92 | 639.69 | 09/12/95 | 9.74 | 638.87 |
| PT-23 | 641.58 | | | | 06/05/95 | 6.95 | 634.63 | 09/12/95 | 7.94 | 633.64 |
| PT-24 | 636.4 | | | | 06/05/95 | 5.41 | 630.99 | 09/12/95 | 5.64 | 630.76 |
| PT-25 | 637.09 | | | | 06/05/95 | 7.2 | 629.89 | 09/12/95 | 9.84 | 627.25 |
| PT-26 | 614.64 | | | | 06/05/95 | 7.02 | 607.62 | 09/12/95 | N/A | 614.64 |
| MW-27 | 639.32 | 03/16/95 | 5.13 | 634.19 | 06/05/95 | 6.85 | 632.47 | 09/12/95 | 6.74 | 632.58 |
| MW-28 | 637.21 | | | | 06/05/95 | 5.93 | 631.28 | 09/12/95 | 6.12 | 631.09 |
| MW-29 | 637.31 | | | | 06/05/95 | 7.38 | 629.93 | 09/12/95 | 7.78 | 629.53 |
| MW-30 | 640.32 | 03/17/95 | 4.1 | 636.22 | 06/05/95 | Dry | | 09/12/95 | 10.42 | 629.9 |
| MW-31 | 636.7 | | | | 06/05/95 | 6.49 | 630.21 | 09/12/95 | 8.7 | 628.00 |
| MW-32 | 641.68 | | | | 06/05/95 | 8 | 633.68 | 09/12/95 | 8.9 | 632.78 |
| MW-33 | 639.56 | | | | 06/05/95 | 8.76 | 630.8 | 09/12/95 | 9.62 | 629.94 |
| MW-34 | 632.89 | | | | 06/05/95 | 5.93 | 626.96 | 09/12/95 | 8.9 | 623.99 |
| MW-35D | 631.82 | | | | 06/05/95 | 4.15 | 627.67 | 09/12/95 | 5.43 | 626.39 |
| MW-36 | 631.79 | 03/16/95 | 2.34 | 629.45 | 06/05/95 | 4.36 | 627.43 | 09/12/95 | 5.94 | 625.85 |
| MW-37 | 632.89 | 09/23/01 | | | 06/05/95 | 4.58 | 628.31 | 09/12/95 | 5.96 | 626.93 |
| MW-38D | 637.9 | 09/28/01 | | | 06/05/95 | 5.23 | 632.67 | 09/12/95 | 8.91 | 628.99 |
| MW-39 | 659.54 | 10/20/01 | | | 06/05/95 | 3.96 | 655.58 | 09/12/95 | 5.27 | 654.27 |
| MW-40 | 659.3 | 10/20/01 | 3.61 | 655.69 | 06/05/95 | 6.48 | 652.82 | 09/12/95 | 7.46 | 651.84 |
| MW-41D | 694.02 | 11/24/01 | | | 06/05/95 | 8.48 | 685.54 | 09/12/95 | 8.76 | 685.26 |
| MW-42D | 683.04 | | | | 06/05/95 | 5.97 | 677.07 | 09/12/95 | 8.34 | 674.70 |
| MW-43 | 657.73 | | | | 06/05/95 | 4.72 | 653.01 | 09/12/95 | 5.73 | 652.00 |
| MW-44 | 653.85 | | | | 06/05/95 | Destroyed | | | | |
| MW-45 | 650.9 | 03/17/95 | 3.05 | 647.85 | 06/05/95 | 5.26 | 645.64 | 09/12/95 | 6.34 | 644.56 |
| MW-46 | 650.41 | | | | 06/05/95 | 7.06 | 643.35 | 09/12/95 | 7.96 | 642.45 |
| MW-47 | 628.06 | 03/16/95 | 2.84 | 625.22 | 06/05/95 | 6.48 | 621.58 | 09/12/95 | 5.96 | 622.10 |
| MW-48 | 648.32 | 03/17/95 | 3.1 | 645.22 | 06/05/95 | 6.13 | 642.19 | 09/12/95 | 6.86 | 641.46 |
| MW-49D | 650.5 | | | | 06/05/95 | 7.1 | 643.4 | 09/12/95 | 7.88 | 642.62 |
| MW-50D | 649.88 | | | | 06/05/95 | 6.88 | 643 | 09/12/95 | 7.69 | 642.19 |
| MW-51D | 628.24 | | | | 06/05/95 | 6.63 | 621.61 | 09/12/95 | 6.12 | 622.12 |
| MW-52D | 626.35 | | | | 06/05/95 | 6.12 | 620.23 | 09/12/95 | 5.68 | 620.67 |
| MW-53 | 639.41 | | | | 06/05/95 | 8.45 | 630.96 | 09/12/95 | 8.94 | 630.47 |
| MW-54D | 639.11 | | | | 06/05/95 | 8.3 | 630.81 | 09/12/95 | 8.76 | 630.35 |
| MW-55D | 639.16 | | | | 06/05/95 | 8.18 | 630.98 | 09/12/95 | 8.62 | 630.54 |
| MW-56 | 630.51 | 03/16/95 | 2.95 | 627.56 | 06/05/95 | 4.14 | 626.37 | 09/12/95 | 4.31 | 626.20 |
| MW-57D | 629.82 | | | | 06/05/95 | 3.79 | 626.03 | 09/12/95 | 3.7 | 626.12 |
| MW-58D | 629.69 | | | | 06/05/95 | 3.6 | 626.09 | 09/12/95 | 3.52 | 626.17 |
| MW-59 | 656.83 | 03/17/95 | 1.9 | 654.93 | 06/05/95 | 3.26 | 653.57 | 09/12/95 | 4.58 | 652.25 |
| MW-60 | 660.15 | 03/17/95 | 2.02 | 658.13 | 06/05/95 | 3.83 | 656.32 | 09/12/95 | 5.33 | 654.82 |

## Table 2
## ASH Landfill 1995 Third Quarter Groundwater Monitoring
## Validated Volatile Organic Analyses Results (Method 524.2)

| CAS No. | COMPOUND<br>VOLATILE ORGANICS | MATRIX<br>LOCATION<br>SAMPLE DATE<br>ES ID<br>LAB ID<br>SDG NUMBER<br>UNITS | WATER<br>ASH<br>09/14/95<br>BRNS<br>270971<br>53766 | WATER<br>ASH<br>09/14/95<br>BRNSRE<br>270971<br>53766 | WATER<br>ASH<br>09/14/95<br>FHD<br>270969<br>53766 | WATER<br>ASH<br>09/14/95<br>FHS<br>270970<br>53766 | WATER<br>ASH<br>09/14/95<br>MW27<br>271006<br>53766 | WATER<br>ASH<br>09/14/95<br>MW27RE<br>271006<br>53766 | WATER<br>ASH<br>09/14/95<br>MW36<br>270977<br>53766 | WATER<br>ASH<br>09/13/95<br>MW40<br>270978<br>53766 | WATER<br>ASH<br>09/13/95<br>MW44B<br>270966<br>53766<br>Duplicate | WATER<br>ASH<br>09/13/95<br>MW45<br>270979<br>53766 | WATER<br>ASH<br>09/14/95<br>MW47<br>270981<br>53766 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 74-87-3 | Chloromethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 75-01-4 | Vinyl Chloride | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 74-83-9 | Bromomethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 75-00-3 | Chloroethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 75-69-4 | Trichlorofluoromethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 67-64-1 | Acetone | ug/l | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U |
| 75-35-4 | 1,1-Dichloroethene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 156-60-5 | trans-1,2-Dichloroethene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 75-09-2 | Methylene Chloride | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 1634-04-4 | Methyl-t-Butyl Ether | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 75-34-3 | 1,1-Dichloroethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 156-59-2 | cis-1,2-Dichloroethene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 78-93-3 | 2-Butanone | ug/l | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U |
| 590-20-7 | 2,2-Dichloropropane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 67-66-3 | Chloroform | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 74-97-5 | Bromochloromethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 71-55-6 | 1,1,1-Trichloroethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 563-58-6 | 1,1-Dichloropropene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 56-23-5 | Carbon Tetrachloride | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 107-06-2 | 1,2-Dichloroethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 71-43-2 | Benzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 79-01-6 | Trichloroethene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 78-87-5 | 1,2-Dichloropropane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 75-27-4 | Bromodichloromethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 74-95-3 | Dibromomethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 108-10-1 | 4-Methyl-2-Pentanone | ug/l | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U |
| 10061-01-5 | cis-1,3-Dichloropropene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 108-88-3 | Toluene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 10061-02-6 | trans-1,3-Dichloropropene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 79-00-5 | 1,1,2-Trichloroethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 591-78-6 | 2-Hexanone | ug/l | 3 U | 0.5 U | 0.5 U | 3 U | 3 U | 0.5 U | 3 U | 3 U | 3 U | 0.5 U | 3 U |
| 142-28-9 | 1,3-Dichloropropane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 127-18-4 | Tetrachloroethene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 124-48-1 | Dibromochloromethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 106-93-4 | 1,2-Dibromoethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 108-90-7 | Chlorobenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 100-41-4 | Ethylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 1330-20-7 | Xylene (Total) | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 100-42-5 | Styrene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 75-25-2 | Bromoform | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 98-82-8 | Isopropylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 96-18-4 | 1,2,3-Trichloropropane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 108-86-1 | Bromobenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 103-65-1 | n-Propylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 95-49-8 | 2-Chlorotoluene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 106-43-4 | 4-Chlorotoluene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 98-06-6 | tert-Butylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 95-63-6 | 1,2,4-Trimethylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 135-98-8 | sec-Butylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 99-87-6 | p-Isopropyltoluene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 541-73-1 | 1,3-Dichlorobenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 106-46-7 | 1,4-Dichlorobenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 104-51-8 | n-Butylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 95-50-1 | 1,2-Dichlorobenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 87-68-3 | Hexachlorobutadiene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 91-20-3 | Naphthalene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 87-61-6 | 1,2,3-Trichlorobenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |

## Table 2
## ASH Landfill 1995 Third Quarter Groundwater Monitoring
## Validated Volatile Organic Analyses Results (Method 524.2)

| CAS No. | COMPOUND | MATRIX | WATER | WATER | WATER | WATER | WATER | WATER | WATER | WATER | WATER | WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LOCATION | ASH | ASH | ASH | ASH | ASH | ASH | ASH | ASH | ASH | ASH |
| | | SAMPLE DATE | 09/13/95 | 09/13/95 | 09/14/95 | 09/19/95 | 09/19/95 | 09/14/95 | 09/14/95 | 09/13/95 | 09/13/95 | 09/14/95 |
| | | ES ID | MW48 | MW48R | MW56 | MW59 | MW60 | PT11 | PT11RE | PT19 | TB913 | TB914 |
| | | LAB ID | 270982 | 270983 | 270984 | 271849 | 271850 | 270987 | 270987 | 270988 | 270989 | 270990 |
| | | SDG NUMBER | 53766 | 53766 | 53766 | 53766 | 53766 | 53766 | 53766 | 53766 | 53766 | 53768 |
| | | UNITS | | Rinsate | | | | | | | Trip Blank | Trip Blank |
| | **VOLATILE ORGANICS** | | | | | | | | | | | |
| 75-71-8 | Dichlorodifluoromethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 74-87-3 | Chloromethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 75-01-4 | Vinyl Chloride | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 74-83-9 | Bromomethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 75-00-3 | Chloroethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 75-69-4 | Trichlorofluoromethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 67-64-1 | Acetone | ug/l | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U |
| 75-35-4 | 1,1-Dichloroethene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 156-60-5 | trans-1,2-Dichloroethene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 75-09-2 | Methylene Chloride | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 1634-04-4 | Methyl-t-Butyl Ether | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 75-34-3 | 1,1-Dichloroethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 156-59-2 | cis-1,2-Dichloroethene | ug/l | 0.5 U | 0.5 U | 0.9 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 78-93-3 | 2-Butanone | ug/l | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U |
| 590-20-7 | 2,2-Dichloropropane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 67-66-3 | Chloroform | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 2 |
| 74-97-5 | Bromochloromethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 71-55-6 | 1,1,1-Trichloroethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 563-58-6 | 1,1-Dichloropropene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 56-23-5 | Carbon Tetrachloride | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 107-06-2 | 1,2-Dichloroethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 71-43-2 | Benzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 79-01-6 | Trichloroethene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 78-87-5 | 1,2-Dichloropropane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 75-27-4 | Bromodichloromethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 1 |
| 74-95-3 | Dibromomethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 108-10-1 | 4-Methyl-2-Pentanone | ug/l | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U | 3 U |
| 10061-01-5 | cis-1,3-Dichloropropene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 108-88-3 | Toluene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 10061-02-6 | trans-1,3-Dichloropropene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 79-00-5 | 1,1,2-Trichloroethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 591-78-6 | 2-Hexanone | ug/l | 3 U | 3 U | 3 U | 0.5 U | 0.5 U | 3 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 142-28-9 | 1,3-Dichloropropane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 127-18-4 | Tetrachloroethene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 124-48-1 | Dibromochloromethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 106-93-4 | 1,2-Dibromoethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 108-90-7 | Chlorobenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 100-41-4 | Ethylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 1330-20-7 | Xylene (Total) | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 100-42-5 | Styrene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 75-25-2 | Bromoform | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 96-82-8 | Isopropylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 98-18-4 | 1,2,3-Trichloropropane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 108-86-1 | Bromobenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 103-65-1 | n-Propylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 95-49-8 | 2-Chlorotoluene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 106-43-4 | 4-Chlorotoluene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 98-06-6 | tert-Butylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 95-63-6 | 1,2,4-Trimethylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 135-98-8 | sec-Butylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 99-87-6 | p-Isopropyltoluene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 541-73-1 | 1,3-Dichlorobenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 106-46-7 | 1,4-Dichlorobenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 104-51-8 | n-Butylbenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 95-50-1 | 1,2-Dichlorobenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 120-82-1 | 1,2,4-Trichlorobenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 87-68-3 | Hexachlorobutadiene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 91-20-3 | Naphthalene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| 87-61-6 | 1,2,3-Trichlorobenzene | ug/l | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |




LEGEND:

- BURNING PAD DESIGNATION
- PAD OR GRID BORING
- GROUND CONTOUR AND ELEVATION
- W-1 WETLAND & DESIGNATION
- (625.85) MW-35D MONITORING WELL & DESIGNATION AND MSL ELEVATION DATUM
- UTILITY POLE
- TREE
- BRUSH
- 640 GROUNDWATER ELEVATION CONTOUR MSL DATUM
- GENERAL GROUNDWATER FLOW DIRECTION

125 0 125 250

1" = 250'

PARSONS

PARSONS ENGINEERING SCIENCE, INC.

CLIENT/PROJECT TITLE

SENECA ARMY DEPOT ACTIVITY
ASH LANDFILL
GROUNDWATER MONITORING PROGRAM

| DEPT | Dwg. No. |
|---|---|
| ENVIRONMENTAL ENGINEERING | 725980-01007 |

FIGURE 1
GROUNDWATER ELEVATION CONTOUR PLAN
SEPTEMBER 1995

| SCALE | DATE | REV |
|---|---|---|
| 1" = 250' | NOVEMBER 1995 | A |

ACAD\SENECA\DBRI\ASHLDGW.DWG

# APPENDIX A

## FIELD DATA

### Ash Landfill Third Quarter 1995 Groundwater Monitoring Program

1. Groundwater Sampling Forms
2. Chain-of-Custody Forms
3. pH Meter Calibration Forms
4. Groundwater Elevation Report

# 1. Groundwater Sampling Forms

# SAMPLING RECORD – GROUNDWATER

| | | |
|---|---|---|
| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: 9-13-95 |

PROJECT: SEAD - 3rd Quarterly Monitoring '95

LOCATION: Ash Landfill

INSPECTOR: KCS/BH

LABORATORY:

CHAIN OF CUSTODY #:

WELL NUMBER: PT-11

SCREENED INTERVAL (TOC):

MONITORING

| INSTRUMENT | DETECTOR |
|---|---|
| OVM 580 | PID |

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.163 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

STATIC DEPTH TO WATER (TOC): 8.39

WELL DEPTH (TOC): 19.52 14.0

FEET OF WATER IN WELL: 11.13

STANDING WATER VOLUME IN WELL (gallons): 1.8

THREE WELL VOLUMES (gallons):

ONE: 1.8 TWO: 3.6 THREE: 5.4

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

TIME BEGIN PURGING: 1453 TIME END PURGING:

| TIME: | 1456 | 1459 | 1505 | 1530 | | |
|---|---|---|---|---|---|---|
| DEPTH TO WATER (ft) | ~~14.5~~ 14.0 KCS | 15.1 | 15.2 | 16.0 | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | 19.5 | 15.5 | 15.5 | 16.5 | | |
| FLOW RATE (ml/min.) or VOL. OF BAILER (gal.) | 1500/250 | 125 | 125 | 100 ml | | |
| VOLUME OF WATER REMOVED (gals) | 1L | 0.1 L | 0.1 L | .6 | Slow well | |
| TEMPERATURE (deg. C) | 17.5 | 16.5 | 18.0 | Air temp 17.0 | 80° F | |
| SPEC. COND (umhos) | 875 | 875 | 875 | 850 | | |
| PH | 7.08 | 7.10 | 7.15 | 7.32 | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| | | | | | | |
|---|---|---|---|---|---|---|
| DATE | 9-14-95 | | | | | |
| TIME | 0840 | | | | | |
| DEPTH TO WATER (ft) | 14.54 | | | | | |
| "AFTER PURGE" WATER COLUMN (ft) | 4.98 | | | | | |
| "STATIC" WATER COLUMN (ft) | 11.13 | | | | | |
| % RECOVERY | 45% | | | | | |

Notes:

(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.

(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

## SAMPLING INFORMATION

SAMPLING DEVICE:

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| VOC 524.2 | 0840 | 40 ml. | clear | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

**QA\QC:**

**QA/QC DUPLICATE SAMPLE COLLECTED:** YES or NO

**Duplicate Sample Name:**

**MRD Sample Name:**

**QA\QC RINSATE SAMPLE NAME:**

**MATRIX SPIKE SAMPLE COLLECTED:** YES or NO

**INVESTIGATION DERIVED WASTE (IDW):**

| | | | | |
|---|---|---|---|---|
| Date: | | | | |
| Volume Transfered to Drum: | | | | |
| Drum Number: | | | | |

**COMMENTS:**

PAGE OF

# SAMPLING RECORD – GROUNDWATER

| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: 9-13-95 |
|---|---|---|

PROJECT: SEAD - 3rd Quarterly Monitoring '95

LOCATION: Ash Landfill

INSPECTOR: KKS / BH

LABORATORY:

CHAIN OF CUSTODY #:

WELL NUMBER: PT-19

SCREENED INTERVAL (TOC):

| MONITORING | |
|---|---|
| INSTRUMENT | DETECTOR |
| OVM | PID |

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.167 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

STATIC DEPTH TO WATER (TOC): 7.60

WELL DEPTH (TOC): 11.7

FEET OF WATER IN WELL: 4.1

STANDING WATER VOLUME IN WELL (gallons): .67

THREE WELL VOLUMES (gallons):

ONE: .67 TWO: 1.34 THREE: 2.68

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

9.7

TIME BEGIN PURGING: 1347 TIME END PURGING: 1410

| TIME: | 1352 | 1400 | 1408 | | | |
|---|---|---|---|---|---|---|
| DEPTH TO WATER (ft) | 9.02 | KKS ~~10.00~~ 9.7 | 9.8 | | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | 11.7 | 10.7 | 10.5 | Slow | well | |
| FLOW RATE (ml/min.) or VOL. OF BAILER (gal.) | 550 | 550/~~300~~ ~~500~~ 200 | 100 ml | | | |
| VOLUME OF WATER REMOVED (gals) | .67 | 0.67 | .10 | | | |
| TEMPERATURE (deg. C) | 15.5 | 16.0 | 17.0 | | | |
| SPEC. COND (umhos) | 700 | 700 | 700 | | | |
| PH | 7.09 | 7.00 | 7.01 | | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| DATE | 9-13-95 | 9-13-95 | | | | |
|---|---|---|---|---|---|---|
| TIME | 1635 | 1820 | | | | |
| DEPTH TO WATER (ft) | 8.70 | 8.2 | | | | |
| "AFTER PURGE" WATER COLUMN (ft) | 3.0 | 3.5 | | | | |
| "STATIC" WATER COLUMN (ft) | 4.1 | 4.1 | | | | |
| % RECOVERY | 73% | 85% | | | | |

Notes:

(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.

(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

## SAMPLING INFORMATION

SAMPLING DEVICE:

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| VOC 524.2 | 1725 | 40 ml | clear | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

**QA\QC:**

**QA/QC DUPLICATE SAMPLE COLLECTED:** YES or NO

**Duplicate Sample Name:**

**MRD Sample Name:**

**QA\QC RINSATE SAMPLE NAME:**

**MATRIX SPIKE SAMPLE COLLECTED:** YES or NO

**INVESTIGATION DERIVED WASTE (IDW):**

| | | | | |
|---|---|---|---|---|
| Date: | | | | |
| Volume Transfered to Drum: | | | | |
| Drum Number: | | | | |

**COMMENTS:**

Silty on bottom - organic material - fibrous

PAGE OF

# SAMPLING RECORD – GROUNDWATER

| | | |
|---|---|---|
| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: 9-13-95 |

| | |
|---|---|
| PROJECT: SEAD - 3rd Quarterly Monitoring '95 | INSPECTOR: KS/BH |
| LOCATION: | LABORATORY: |
| | CHAIN OF CUSTODY #: |
| WELL NUMBER: MW-27 | MONITORING |
| | INSTRUMENT: OVM 580 / DETECTOR: PID |
| SCREENED INTERVAL (TOC): | |

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.163 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

STATIC DEPTH TO WATER (TOC): 6.78
WELL DEPTH (TOC): 10.52
FEET OF WATER IN WELL: 3.74

STANDING WATER VOLUME IN WELL (gallons): .6
THREE WELL VOLUMES (gallons):
ONE: .6 TWO: 1.2 THREE: 1.8

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

TIME BEGIN PURGING: 1545 TIME END PURGING: 1624

| TIME | 1556 | 1610 | 1624 | | | |
|---|---|---|---|---|---|---|
| DEPTH TO WATER (ft) | 8.40 | [illegible] | 9.0 | | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | 10.5 / 9.0 | 9.0 | 9.0 | | | |
| FLOW RATE (ml/min.) or VOL. OF BAILER (gal.) | 400/100 | 100 | 100 | Slow | well | |
| VOLUME OF WATER REMOVED (gals) | .3 | .3 | .25 | | | |
| TEMPERATURE (deg. C) | 20 | 20 | 20 | | | |
| SPEC. COND (umhos) | 550 | 600 | 600 | | | |
| PH | 7.44 | 7.26 | 7.30 | | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| DATE | 9-13-95 | 9-14-95 | | | | |
|---|---|---|---|---|---|---|
| TIME | 1633 | 0821 | | | | |
| DEPTH TO WATER (ft) | 8.70 | 8.20 | | | | |
| "AFTER PURGE" WATER COLUMN (ft) | 1.82 | 2.32 | | | | |
| "STATIC" WATER COLUMN (ft) | 3.74 | 3.74 | | | | |
| % RECOVERY | | 62% | | | | |

Notes:
(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.
(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

## SAMPLING INFORMATION

SAMPLING DEVICE:

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| VOC 524-2 | 0830 | 40ml | clear | |
| | | | | |
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**QA\QC:**

**QA/QC DUPLICATE SAMPLE COLLECTED:** YES or NO
**Duplicate Sample Name:**
**MRD Sample Name:**

**QA\QC RINSATE SAMPLE NAME:**

**MATRIX SPIKE SAMPLE COLLECTED:** YES or NO

**INVESTIGATION DERIVED WASTE (IDW):**

| | | | | |
|---|---|---|---|---|
| Date: | | | | |
| Volume Transfered to Drum: | | | | |
| Drum Number: | | | | |

**COMMENTS:** ~~[illegible]~~ light brown silt - .20 gal
slurry-like thickness
.20 gal - still silty - clearing

# SAMPLING RECORD – GROUNDWATER

| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: 9-13-95 |
|---|---|---|

PROJECT: SEAD - 3rd Quarterly Monitoring '95

LOCATION: Ash Landfill

INSPECTOR:
LABORATORY:
CHAIN OF CUSTODY #:

WELL NUMBER: MW-30

SCREENED INTERVAL (TOC):

| MONITORING | |
|---|---|
| INSTRUMENT | DETECTOR |
| OVM | PID |

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.167 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

STATIC DEPTH TO WATER (TOC): 10.44
WELL DEPTH (TOC): 10.52
FEET OF WATER IN WELL: .12

STANDING WATER VOLUME IN WELL (gallons):
THREE WELL VOLUMES (gallons):
ONE: TWO: THREE:

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

TIME BEGIN PURGING: TIME END PURGING:

| TIME | | | | | | |
|---|---|---|---|---|---|---|
| DEPTH TO WATER (ft) | | | | | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | | DRY WELL | | | | |
| FLOW RATE (ml/min.) or VOL. OF BAILER (gal.) | | | | | | |
| VOLUME OF WATER REMOVED (gals) | | | | | | |
| TEMPERATURE (deg. C) | | | | | | |
| SPEC. COND (umhos) | | | | | | |
| PH | | | | | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| DATE | | | | | | |
|---|---|---|---|---|---|---|
| TIME | | | | | | |
| DEPTH TO WATER (ft) | | | | | | |
| "AFTER PURGE" WATER COLUMN (ft) | | | | | | |
| "STATIC" WATER COLUMN (ft) | | | | | | |
| % RECOVERY | | | | | | |

Notes:

(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.

(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

## SAMPLING INFORMATION

SAMPLING DEVICE:

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| | | | | |
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**QA\QC:**

**QA/QC DUPLICATE SAMPLE COLLECTED:** YES or NO
**Duplicate Sample Name:**
**MRD Sample Name:**

**QA\QC RINSATE SAMPLE NAME:**

**MATRIX SPIKE SAMPLE COLLECTED:** YES or NO

**INVESTIGATION DERIVED WASTE (IDW):**

| | | | | |
|---|---|---|---|---|
| Date: | | | | |
| Volume Transfered to Drum: | | | | |
| Drum Number: | | | | |

**COMMENTS:**

# SAMPLING RECORD – GROUNDWATER

| | | |
|---|---|---|
| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: 9-14-95 |

| | |
|---|---|
| PROJECT: SEAD - 3rd Quarterly Monitoring '95 | INSPECTOR: KRS |
| | LABORATORY: Aquatec |
| LOCATION: | CHAIN OF CUSTODY #: |
| WELL NUMBER: MW-36 | MONITORING |
| | INSTRUMENT: OVA / DETECTOR: PID |
| SCREENED INTERVAL (TOC): | |

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.163 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

11.33

STATIC DEPTH TO WATER (TOC): 6.08
WELL DEPTH (TOC): 16.58
FEET OF WATER IN WELL: 10.5

STANDING WATER VOLUME IN WELL (gallons): 1.7
THREE WELL VOLUMES (gallons):
ONE: 1.7 TWO: 3.4 THREE: 5.1

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

TIME BEGIN PURGING: 1037 TIME END PURGING:

| TIME | 1048 ~~1037~~ KRS | 1056 | 1102 | | | |
|---|---|---|---|---|---|---|
| DEPTH TO WATER (ft) | 6.64 | 7.20 | 7.42 | | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | 16.58 | 12.0 | 12.0 | | | |
| FLOW RATE (ml/min.) or VOL. OF BAILER (gal.) | 660 | 1560 ml/min / 1 HM | 1560 | | | |
| VOLUME OF WATER REMOVED (gals) | 1.7 | 1.7 | 1.7 | | | |
| TEMPERATURE (deg. C) | 15 | 15 | 15 | | | |
| SPEC. COND (umhos) | 650 | 700 | 700 | | | |
| PH | 7.08 | 7.21 | 7.28 | | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| | | | | | | |
|---|---|---|---|---|---|---|
| DATE | 9-14-95 | | | | | |
| TIME | 1115 | | | | | |
| DEPTH TO WATER (ft) | 6.09 | | | | | |
| "AFTER PURGE" WATER COLUMN (ft) | | | | | | |
| "STATIC" WATER COLUMN (ft) | | | | | | |
| % RECOVERY | 100% | | | | | |

Notes:

(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.

(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

## SAMPLING INFORMATION

SAMPLING DEVICE: Teflon Bailer

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| VOC 524.2 | 1115 | 40ml | clear | |
| | | | | |
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**QA\QC:**

**QA/QC DUPLICATE SAMPLE COLLECTED:** YES or NO

**Duplicate Sample Name:**

**MRD Sample Name:**

**QA\QC RINSATE SAMPLE NAME:**

**MATRIX SPIKE SAMPLE COLLECTED:** YES or NO

**INVESTIGATION DERIVED WASTE (IDW):**

| | | | | |
|---|---|---|---|---|
| Date: | | N/A | | |
| Volume Transfered to Drum: | | | | |
| Drum Number: | | | | |

**COMMENTS:**

# SAMPLING RECORD – GROUNDWATER

| | | |
|---|---|---|
| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: 9-13-95 |

PROJECT: SEAD - 3rd Quarterly Monitoring '95
LOCATION: Ash Landfill

INSPECTOR: KKS / BH
LABORATORY: Aquatec
CHAIN OF CUSTODY #:

WELL NUMBER: MW-40
SCREENED INTERVAL (TOC):

| MONITORING | |
|---|---|
| INSTRUMENT | DETECTOR |
| OVM | PID |

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.163 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

STATIC DEPTH TO WATER (TOC): 14.71
WELL DEPTH (TOC): 7.47
FEET OF WATER IN WELL: 7.24

STANDING WATER VOLUME IN WELL (gallons): 1.2
THREE WELL VOLUMES (gallons):
ONE: 1.2 TWO: 2.4 THREE: 3.6

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

TIME BEGIN PURGING: 1244 TIME END PURGING: 1300

11.09

| TIME: | 1248 | 1254 | 1300 | | | |
|---|---|---|---|---|---|---|
| DEPTH TO WATER (ft) | 8.58 | 9.60 | 10.40 | | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | 14.7 | 10.8 | 10.8 ~~10.40~~ | | | |
| FLOW RATE (ml/min.) or VOL. OF BAILER (gal.) | 1500 ml/min | 1500 ml/min | 1500/ml | | | |
| VOLUME OF WATER REMOVED (gals) | 1.2 | 1.2 | 1.2 | | | |
| TEMPERATURE (deg. C) | 16.0 | 16.0 | 15.0 | | | |
| SPEC. COND (umhos) | 500 | 500 | 500 | | | |
| PH | 7.07 | 7.21 | 7.28 | | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| DATE | 9-13-95 | 9-13-95 | 9-13-95 | | | |
|---|---|---|---|---|---|---|
| TIME | 1416 | 1430 | 1608 | | | |
| DEPTH TO WATER (ft) | 8.78 | 8.45 | 8.05 | | | |
| "AFTER PURGE" WATER COLUMN (ft) | 5.93 | 6.26 | 6.66 | | | |
| "STATIC" WATER COLUMN (ft) | 7.24 | 7.24 | 92% | | | |
| % RECOVERY | 82% | .86% | | | | |

Notes:
(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.
(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

## SAMPLING INFORMATION

SAMPLING DEVICE: Teflon Bailer

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| VOC 524.2 | 1610 | 40 ml VOA | clear | |
| | | | | |
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**QA\QC:**

**QA/QC DUPLICATE SAMPLE COLLECTED:** YES or (NO)
**Duplicate Sample Name:**
**MRD Sample Name:**

**QA\QC RINSATE SAMPLE NAME:**

**MATRIX SPIKE SAMPLE COLLECTED:** YES or (NO)

**INVESTIGATION DERIVED WASTE (IDW):**

| | | | | |
|---|---|---|---|---|
| Date: | | | | |
| Volume Transfered to Drum: | N/A | | | |
| Drum Number: | | | | |

**COMMENTS:**

# SAMPLING RECORD – GROUNDWATER

| | | |
|---|---|---|
| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: |

PROJECT: SEAD - 3rd Quarterly Monitoring '95
LOCATION: Ash Landfill
INSPECTOR: KRS / BA
LABORATORY: Aquatec
CHAIN OF CUSTODY #:

WELL NUMBER: MW-45
SCREENED INTERVAL (TOC):
MONITORING: 8

| INSTRUMENT | DETECTOR |
|---|---|
| OVM 580 | PID |

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.167 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

7.34

STATIC DEPTH TO WATER (TOC): 6.34
WELL DEPTH (TOC): 8.34
FEET OF WATER IN WELL: 2.0
STANDING WATER VOLUME IN WELL (gallons): .3
THREE WELL VOLUMES (gallons):
ONE: .3 TWO: .6 THREE: .9

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

TIME BEGIN PURGING: 1319 TIME END PURGING:

| TIME: | 1321 | 1326 | 1336 | | | |
|---|---|---|---|---|---|---|
| DEPTH TO WATER (ft) | 7.02 | 7.30 | 7.30 | | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | 8.3 | 7.5 | 7.5 | | | |
| FLOW RATE (ml/min.) or VOL. OF BAILER (gal.) | 480ml | 480/350 | 200ml | | | |
| VOLUME OF WATER REMOVED (gals) | .3 | .3 | .3 | | | |
| TEMPERATURE (deg. C) | 18 | 18 | 18 | | | |
| SPEC. COND (umhos) | 600 | 600 | 600 | | | |
| PH | 7.08 | 7.09 | 7.13 | | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| | | | | | | |
|---|---|---|---|---|---|---|
| DATE | 9-13-95 | | | | | |
| TIME | 1423 | | | | | |
| DEPTH TO WATER (ft) | 6.50 | | | | | |
| "AFTER PURGE" WATER COLUMN (ft) | 1.84 | | | | | |
| "STATIC" WATER COLUMN (ft) | 2.0 | | | | | |
| % RECOVERY | 92% | | | | | |

Notes:
(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.
(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

## SAMPLING INFORMATION

SAMPLING DEVICE:

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| VOC 524.2 | 1430 | 40-1 VOA | clear | |
| | | | | |
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| | | | | |

QA\QC:

QA/QC DUPLICATE SAMPLE COLLECTED: YES or NO

Duplicate Sample Name:

MRD Sample Name: ~~MW-85~~ KKS

QA\QC RINSATE SAMPLE NAME:

MATRIX SPIKE SAMPLE COLLECTED: YES or NO

INVESTIGATION DERIVED WASTE (IDW):

| | | | | |
|---|---|---|---|---|
| Date: | | | | |
| Volume Transfered to Drum: | N/A | | | |
| Drum Number: | | | | |

COMMENTS:

# SAMPLING RECORD – GROUNDWATER

| | | |
|---|---|---|
| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: 9-14-95 |

PROJECT: SEAD - 3rd Quarterly Monitoring '95

INSPECTOR: KKS/BH

LABORATORY:

LOCATION:

CHAIN OF CUSTODY #:

WELL NUMBER: MW-47

MONITORING

| INSTRUMENT | DETECTOR |
|---|---|
| OVM 580 | PID |

SCREENED INTERVAL (TOC):

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.163 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

STATIC DEPTH TO WATER (TOC): 6.06

WELL DEPTH (TOC): 8.56

FEET OF WATER IN WELL: 2.5

STANDING WATER VOLUME IN WELL (gallons): .4

THREE WELL VOLUMES (gallons):

ONE: .4 TWO: .8 THREE: 1.2

7.3

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

TIME BEGIN PURGING: 0947 TIME END PURGING:

| TIME: | 0950 | 0956 | 1003 | 1012 | | |
|---|---|---|---|---|---|---|
| DEPTH TO WATER (ft) | 6.48 | 6.62 | 7.18 | 7.10 | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | 6.06 | 6.06/7.5 | 7.5 | 7.5/7.9 | | |
| FLOW RATE (ml/min.) or VOL. OF BAILER (gal.) | 200/100 | 180/250 ~~250~~ KKS | 250/318 | 318 | | |
| VOLUME OF WATER REMOVED (gals) | .15 | .25 | .4 | .4 | | |
| TEMPERATURE (deg. C) | 18 | 18 | 18 | 18 | | |
| SPEC. COND (umhos) | 600 | 550 | 550 | 550 | | |
| PH | 7.23 | 7.14 | 7.09 | 7.08 | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| | | | | | | |
|---|---|---|---|---|---|---|
| DATE | 9-14-95 | | | | | |
| TIME | 1025 | | | | | |
| DEPTH TO WATER (ft) | 6.06 | | | | | |
| "AFTER PURGE" WATER COLUMN (ft) | | | | | | |
| "STATIC" WATER COLUMN (ft) | | | | | | |
| % RECOVERY | 100% | | | | | |

Notes:

(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.

(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

## SAMPLING INFORMATION

SAMPLING DEVICE:

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| VOC 524.2 | 1030 | 40ml | clear | |
| | | | | |
| | | | | |
| | | | | |
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| | | | | |

**QA\QC:**

**QA/QC DUPLICATE SAMPLE COLLECTED:** YES or NO

**Duplicate Sample Name:**

**MRD Sample Name:**

**QA\QC RINSATE SAMPLE NAME:**

**MATRIX SPIKE SAMPLE COLLECTED:** YES or NO

**INVESTIGATION DERIVED WASTE (IDW):**

| | | | | |
|---|---|---|---|---|
| Date: | | | | |
| Volume Transfered to Drum: | N/A | | | |
| Drum Number: | | | | |

**COMMENTS:** Thick light-brown silt on bottom - cleared in .2 gallons

# SAMPLING RECORD – GROUNDWATER

| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: 9-13-95 |
|---|---|---|

PROJECT: SEAD - 3rd Quarterly Monitoring '95

LOCATION: Ash Landfill

INSPECTOR: KKS / B

LABORATORY:

CHAIN OF CUSTODY #:

WELL NUMBER: MW-48

SCREENED INTERVAL (TOC):

MONITORING

| INSTRUMENT | DETECTOR |
|---|---|
| OVM | PID |

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.163 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

STATIC DEPTH TO WATER (TOC): 6.88

WELL DEPTH (TOC): 11.50

FEET OF WATER IN WELL: 4.62

STANDING WATER VOLUME IN WELL (gallons): .75

THREE WELL VOLUMES (gallons):

ONE: .75 TWO: 1.50 THREE: 2.25

9.2

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

TIME BEGIN PURGING: 1023 TIME END PURGING:

| TIME: | 1027 | 1030 | 1035 | 1040 | | |
|---|---|---|---|---|---|---|
| DEPTH TO WATER (ft) | 7.22 | 7.26 | 7.26 | 7.26 | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | 11.50 | 8.5 | 8.5 | 8.5 | | |
| FLOW RATE (ml/min.) or VOL. OF BAILER (gal.) | 1L | 1L | 1L | 1L | | |
| VOLUME OF WATER REMOVED (gals) | .75 | .75 | .75 | .75 | | |
| TEMPERATURE (deg. C) | 17.5 | 18.0 | 18.0 | 18.0 | | |
| SPEC. COND (umhos) | 600 | 600 | ~~600~~ 550 KKS | 600 | | |
| PH | 6.31 | 6.60 | 6.77 | 6.80 | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| | | | | | | |
|---|---|---|---|---|---|---|
| DATE | 9-13-95 | | | | | |
| TIME | 1050 | | | | | |
| DEPTH TO WATER (ft) | 6.88 | | | | | |
| "AFTER PURGE" WATER COLUMN (ft) | | | | | | |
| "STATIC" WATER COLUMN (ft) | | | | | | |
| % RECOVERY | 100% | | | | | |

Notes:

(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.

(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

## SAMPLING INFORMATION

SAMPLING DEVICE: Teflon Bailer

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| VOC 524.2 | 1055 | 40 ml VOA | clear | N/A |
| | | | | |
| | | | | |
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| | | | | |
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**QA\QC:**

QA/QC DUPLICATE SAMPLE COLLECTED: YES or NO

Duplicate Sample Name: MW-448

MRD Sample Name: MW-48MRD / MW-48MRD-R

QA\QC RINSATE SAMPLE NAME: MW-48-R

MATRIX SPIKE SAMPLE COLLECTED: YES or NO

Rinsate 1045

TB 1000

**INVESTIGATION DERIVED WASTE (IDW):**

| | | | | |
|---|---|---|---|---|
| Date: | N/A | | | |
| Volume Transfered to Drum: | | | | |
| Drum Number: | | | | |

**COMMENTS:**

# SAMPLING RECORD – GROUNDWATER

| | | |
|---|---|---|
| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: 9-14-95 |

PROJECT: SEAD - 3rd Quarterly Monitoring '95

LOCATION:

INSPECTOR: KKS/BH

LABORATORY: Aquatec

CHAIN OF CUSTODY #:

WELL NUMBER: MW-56

SCREENED INTERVAL (TOC):

MONITORING

| INSTRUMENT | DETECTOR |
|---|---|
| OVM 580 | PID |

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.163 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

STATIC DEPTH TO WATER (TOC): 4.04

WELL DEPTH (TOC): 6.88

FEET OF WATER IN WELL: 2.84

STANDING WATER VOLUME IN WELL (gallons): .46

THREE WELL VOLUMES (gallons):

ONE: .46 TWO: .93 THREE: 1.4

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

TIME BEGIN PURGING: 1132 TIME END PURGING: 1145

| TIME: | 1135 | 1141 | 1145 | | | |
|---|---|---|---|---|---|---|
| DEPTH TO WATER (ft) | 4.70 | 4.88 | 4.88 | | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | 6.88 | 4.00 | 4.00 | | | |
| FLOW RATE (ml/min.) or VOL. OF BAILER (gal.) | 480 | 870 | 870 | | | |
| VOLUME OF WATER REMOVED (gals) | .5 | .5 | .5 | | | |
| TEMPERATURE (deg. C) | 17 | 17 | 17 | | | |
| SPEC. COND (umhos) | 700 | 700 | 700 | | | |
| PH | 7.25 | 7.16 | 7.15 | | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| | | | | | | |
|---|---|---|---|---|---|---|
| DATE | 9-14-95 | | | | | |
| TIME | 1200 | | | | | |
| DEPTH TO WATER (ft) | 4.04 | | | | | |
| "AFTER PURGE" WATER COLUMN (ft) | | | | | | |
| "STATIC" WATER COLUMN (ft) | | | | | | |
| % RECOVERY | 100% | | | | | |

Notes:

(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.

(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

## SAMPLING INFORMATION

SAMPLING DEVICE: Teflon Bailer

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| VOC 524.2 | 1200 | 40 ml | clear | |
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**QA\QC:**

**QA/QC DUPLICATE SAMPLE COLLECTED:** YES or NO

**Duplicate Sample Name:**

**MRD Sample Name:**

QA\QC RINSATE SAMPLE NAME:

MATRIX SPIKE SAMPLE COLLECTED: YES or NO

**INVESTIGATION DERIVED WASTE (IDW):**

| | | | | |
|---|---|---|---|---|
| Date: | N/A | | | |
| Volume Transfered to Drum: | | | | |
| Drum Number: | | | | |

**COMMENTS:**

# SAMPLING RECORD – GROUNDWATER

| | | |
|---|---|---|
| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: Sept. 19, 1995 |

PROJECT: SEAD - 3rd Quarterly Monitoring '95
LOCATION: Ash Landfill

INSPECTOR: KKS, AMW
LABORATORY: Aquatec
CHAIN OF CUSTODY #:

WELL NUMBER: MW-59
SCREENED INTERVAL (TOC):

MONITORING

| INSTRUMENT | DETECTOR |
|---|---|
| NA | NA |

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.167 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

STATIC DEPTH TO WATER (TOC): 4.87
WELL DEPTH (TOC): 9.99
FEET OF WATER IN WELL: 5.12

STANDING WATER VOLUME IN WELL (gallons): 0.835 gal
THREE WELL VOLUMES (gallons): 2.5
ONE: 0.835 TWO: 1.67 THREE: 2.5

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

½ H2O column 7.43' TOC

TIME BEGIN PURGING: 10:55 TIME END PURGING: 1113

| TIME | 1103 | 1108 | 1112 | | | |
|---|---|---|---|---|---|---|
| DEPTH TO WATER (ft) | 6.20 | 6.82 | 7.24 | | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | 9.99 | 6.99 | 6.99 | | | |
| FLOW RATE (ml/min.) or VOL. OF BAILER (gal.) | ~~870~~ 480 | 870 | 870 | | | |
| VOLUME OF WATER REMOVED (gals) | 0.84 | 1.67 | 2.5 | | | |
| TEMPERATURE (deg. C) | 16 | 16 | 16 | | | |
| SPEC. COND (umhos) | 1200 | 1200 | 1200 | | | |
| PH – Model SA 230 S.N. 1752 | 6.42 | 6.62 | 6.68 | | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| | | | | | | |
|---|---|---|---|---|---|---|
| DATE | 9-19-95 | | | | | |
| TIME | 1300 | | | | | |
| DEPTH TO WATER (ft) | 4.90 | | | | | |
| "AFTER PURGE" WATER COLUMN (ft) | 5.09 | | | | | |
| "STATIC" WATER COLUMN (ft) | 5.12 | | | | | |
| % RECOVERY | 99% | | | | | |

Notes:
(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.
(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

Ash MW-59 pg 2 of 2

## SAMPLING INFORMATION

SAMPLING DEVICE: bailers

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| 3x VOA 524.2 | 1300 | HCl 40 ml Amber | clear | NA |
| | | | | |
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| | | | | |
| | | | | |

QA\QC:

QA/QC DUPLICATE SAMPLE COLLECTED: YES or NO

Duplicate Sample Name:

MRD Sample Name:

QA\QC RINSATE SAMPLE NAME:

MATRIX SPIKE SAMPLE COLLECTED: YES or NO

INVESTIGATION DERIVED WASTE (IDW): NA: Well sampled clean already.

| | | | | |
|---|---|---|---|---|
| Date: | | | | |
| Volume Transfered to Drum: | | | | |
| Drum Number: | | | | |

COMMENTS:

Black silt ~~on~~ pumped up from well bottom. Smell of sulfur. Bugs

Pad & protective riser is loose

# SAMPLING RECORD – GROUNDWATER

| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: Sept. 19, 1995 |
|---|---|---|

PROJECT: SEAD - 3rd Quarterly Monitoring '95
LOCATION: Ash Landfill
INSPECTOR: KKS, AMW
LABORATORY: Aquatec
CHAIN OF CUSTODY #:

WELL NUMBER: MW-60
SCREENED INTERVAL (TOC):

| MONITORING INSTRUMENT | DETECTOR |
|---|---|
| NA | NA |

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.163 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

STATIC DEPTH TO WATER (TOC): 5.62
WELL DEPTH (TOC): 10.29
FEET OF WATER IN WELL: 4.67
STANDING WATER VOLUME IN WELL (gallons): 0.76
THREE WELL VOLUMES (gallons): 2.28
ONE: 0.76 TWO: 1.5 THREE: 2.3

1/- $H_2O$ column = 1.95' (TOC)

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

TIME BEGIN PURGING: 1124 TIME END PURGING: 1140

| TIME: | 1127 | 1133 | 1140 | | | |
|---|---|---|---|---|---|---|
| DEPTH TO WATER (ft) | 6.85 | 7.80 | 7.95 | | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | 10.29 | 8.29 | 8.29 | | | |
| FLOW RATE (~~ml/min.~~) or VOL. OF BAILER (gal.) | 660 | 660 | 200/<100 | | | |
| VOLUME OF WATER REMOVED (gals) | 0.76 | ~~1.5~~ AMW 0.76 | ~~2.3~~ AMW 0.3 | | | |
| TEMPERATURE (deg. C) | 16 | 16 | 16 | | | |
| SPEC. COND (umhos) | 900 | 900 | 900 | | | |
| PH – Model SA 230 SN 1752 | 6.85 | 6.91 | 6.90 | | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| DATE | 9-19-95 | | | | | |
|---|---|---|---|---|---|---|
| TIME | 1305 | | | | | |
| DEPTH TO WATER (ft) | 5.75 | | | | | |
| "AFTER PURGE" WATER COLUMN (ft) | 4.54 | | | | | |
| "STATIC" WATER COLUMN (ft) | 4.67 | | | | | |
| % RECOVERY | 98% | | | | | |

Notes:
(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.
(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

Ash



MW-60

## SAMPLING INFORMATION

SAMPLING DEVICE: bailers

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| 3x VOC 524.2 | 1310 | HCl 40m Amber | clear | NA |
| | | | | |
| | | | | |
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| | | | | |
| | | | | |

QA\QC:

QA/QC DUPLICATE SAMPLE COLLECTED: YES or NO

Duplicate Sample Name:

MRD Sample Name:

QA\QC RINSATE SAMPLE NAME:

MATRIX SPIKE SAMPLE COLLECTED: YES or NO

INVESTIGATION DERIVED WASTE (IDW): NA: well already sampled clean.

| | | | | |
|---|---|---|---|---|
| Date: | | | | |
| Volume Transfered to Drum: | | | | |
| Drum Number: | | | | |

COMMENTS:

Slow well.

# SAMPLING RECORD – GROUNDWATER

| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: 1-14-95 |
|---|---|---|

| | |
|---|---|
| PROJECT: SEAD - 3rd Quarterly Monitoring '95 | INSPECTOR: KKS/BW |
| LOCATION: | LABORATORY: |
| | CHAIN OF CUSTODY #: |
| WELL NUMBER: FH-5 | MONITORING INSTRUMENT / DETECTOR |
| SCREENED INTERVAL (TOC): | |

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.163 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

STATIC DEPTH TO WATER (TOC): STANDING WATER VOLUME IN WELL (gallons):

WELL DEPTH (TOC): THREE WELL VOLUMES (gallons):

FEET OF WATER IN WELL: ONE: TWO: THREE:

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

TIME BEGIN PURGING: TIME END PURGING:

| TIME | 1135 | 1140 | 1145 | | | |
|---|---|---|---|---|---|---|
| DEPTH TO WATER (ft) | | | | | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | | Ran water until temp stabilized | | | | |
| FLOW RATE (ml/min.) or VOL. OF BAILER (gal.) | | Tried to minimize running water | | | | |
| VOLUME OF WATER REMOVED (gals) | 10 gal/min | because of drought. | | | | |
| TEMPERATURE (deg. C) | 18.0 | 17.5 | 17.5 | | | |
| SPEC. COND (umhos) | | | | | | |
| PH | | | | | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| | | | | | | |
|---|---|---|---|---|---|---|
| DATE | | | | | | |
| TIME | | | | | | |
| DEPTH TO WATER (ft) | | | | | | |
| "AFTER PURGE" WATER COLUMN (ft) | | | | | | |
| "STATIC" WATER COLUMN (ft) | | | | | | |
| % RECOVERY | | | | | | |

Notes:

(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.

(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

## SAMPLING INFORMATION

SAMPLING DEVICE:

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| VOC 524.6 | 1155 | 40 ml | clear | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
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| | | | | |
| | | | | |

QA\QC:

QA/QC DUPLICATE SAMPLE COLLECTED: YES or NO

Duplicate Sample Name:

MRD Sample Name:

QA\QC RINSATE SAMPLE NAME:

MATRIX SPIKE SAMPLE COLLECTED: YES or NO

INVESTIGATION DERIVED WASTE (IDW):

| | | | | |
|---|---|---|---|---|
| Date: | N/A | | | |
| Volume Transfered to Drum: | | | | |
| Drum Number: | | | | |

COMMENTS:

Took sample from holding tank spigot

# SAMPLING RECORD – GROUNDWATER

| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: 9-14-95 |
|---|---|---|

| | |
|---|---|
| PROJECT: SEAD - 3rd Quarterly Monitoring '95 | INSPECTOR: KKS/BH |
| LOCATION: | LABORATORY: |
| | CHAIN OF CUSTODY #: |
| WELL NUMBER: FH-D | MONITORING |
| | INSTRUMENT / DETECTOR |
| SCREENED INTERVAL (TOC): | |

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.167 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

STATIC DEPTH TO WATER (TOC): STANDING WATER VOLUME IN WELL (gallons):

WELL DEPTH (TOC): THREE WELL VOLUMES (gallons):

FEET OF WATER IN WELL: ONE: TWO: THREE:

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

TIME BEGIN PURGING: TIME END PURGING:

| | | | | | | |
|---|---|---|---|---|---|---|
| TIME: | 1135 | 1150 | | | | |
| DEPTH TO WATER (ft) | | | | | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | | | | | | |
| FLOW RATE (ml/min.) or VOL. OF BAILER (gal.) | | | | | | |
| VOLUME OF WATER REMOVED (gals) | 10 gal/min | | | | | |
| TEMPERATURE (deg. C) | 18.5 | 15.5 | | | | |
| SPEC. COND (umhos) | | | | | | |
| PH | | | | | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| | | | | | | |
|---|---|---|---|---|---|---|
| DATE | | | | | | |
| TIME | | | | | | |
| DEPTH TO WATER (ft) | | | | | | |
| "AFTER PURGE" WATER COLUMN (ft) | | | | | | |
| "STATIC" WATER COLUMN (ft) | | | | | | |
| % RECOVERY | | | | | | |

Notes:

(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.

(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

## SAMPLING INFORMATION

SAMPLING DEVICE:

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| VOC 524.6 | 1155 | 40 ml | clear | |
| | | | | |
| | | | | |
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**QA\QC:**

QA/QC DUPLICATE SAMPLE COLLECTED: YES or NO

Duplicate Sample Name:

MRD Sample Name:

QA\QC RINSATE SAMPLE NAME:

MATRIX SPIKE SAMPLE COLLECTED: YES or NO

**INVESTIGATION DERIVED WASTE (IDW):**

| | | | | |
|---|---|---|---|---|
| Date: | | | | |
| Volume Transfered to Drum: | | | | |
| Drum Number: | | | | |

**COMMENTS:**

Water bubbly - Sulfur smell

# SAMPLING RECORD – GROUNDWATER

| ENGINEERING–SCIENCE, INC. | CLIENT: USACOE | DATE: 9-14-95 |
|---|---|---|

PROJECT: SEAD - 3rd Quarterly Monitoring '95

LOCATION:

INSPECTOR:
LABORATORY:
CHAIN OF CUSTODY #:

WELL NUMBER: BRN-S

SCREENED INTERVAL (TOC):

MONITORING

| INSTRUMENT | DETECTOR |
|---|---|
| | |

**WELL DIAMETER FACTORS**

| DIAMETER (INCHES): | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLONS/FOOT: | 0.041 | 0.092 | 0.163 | 0.367 | 0.654 | 1.02 | 1.47 | 2.00 | 2.61 | 3.30 | 5.87 |

**PURGE INFORMATION:**

STATIC DEPTH TO WATER (TOC):
WELL DEPTH (TOC):
FEET OF WATER IN WELL:

STANDING WATER VOLUME IN WELL (gallons):
THREE WELL VOLUMES (gallons):
ONE: TWO: THREE:

## PURGING WITH A PERISTALTIC PUMP OR BAILER

(measure indicator parameters at one, two and three well volumes)

TIME BEGIN PURGING: TIME END PURGING:

| | | | | | | |
|---|---|---|---|---|---|---|
| TIME | | | | | | |
| DEPTH TO WATER (ft) | | | | | | |
| DEPTH TO BOTTOM OPENING OF TEFLON TUBE (TOC) | | N/A | | | | |
| FLOW RATE (ml/min.) or VOL. OF BAILER (gal.) | | | | | | |
| VOLUME OF WATER REMOVED (gals) | | | | | | |
| TEMPERATURE (deg. C) | | | | | | |
| SPEC. COND (umhos) | | | | | | |
| PH | | | | | | |

## DEPTH TO WATER MEASUREMENTS AFTER PURGING

| | | | | | | |
|---|---|---|---|---|---|---|
| DATE | | | | | | |
| TIME | | | | | | |
| DEPTH TO WATER (ft) | | N/A | | | | |
| "AFTER PURGE" WATER COLUMN (ft) | | | | | | |
| "STATIC" WATER COLUMN (ft) | | | | | | |
| % RECOVERY | | | | | | |

Notes:

(1) Determine water column in the well (for both "after purge" and "static" conditions) by subtracting the measured water level from the well point.

(2) Divide the "after purge" water column by the "static" water column and multiply by 100 to determine the percent of recovery for the well.

## SAMPLING INFORMATION

SAMPLING DEVICE:

| SAMPLE PARAMETER | TIME | CONTAINER | COLOR | TURBIDITY SAMPLE TAKEN AFTER (CHECK ONE) |
|---|---|---|---|---|
| VOC 524.2 | 1050 | 40 ml | clear | |
| | | | | |
| | | | | |
| | | | | |
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| | | | | |

**QA\QC:**

**QA/QC DUPLICATE SAMPLE COLLECTED:** YES or NO

**Duplicate Sample Name:**

**MRD Sample Name:**

**QA\QC RINSATE SAMPLE NAME:**

**MATRIX SPIKE SAMPLE COLLECTED:** YES or NO

**INVESTIGATION DERIVED WASTE (IDW):**

| | | | | |
|---|---|---|---|---|
| Date: | | N/A | | |
| Volume Transfered to Drum: | | | | |
| Drum Number: | | | | |

**COMMENTS:**

## 2. Chain-of-Custody Forms

# CHAIN-OF-CUSTODY RECORD

PAGE 1 OF

SONS
NG-SCIENCE, INC.
Phone: 617-859-2000
99 Fax: 617-859-2043

JOB NO. 725980 - 01007
PROJECT SEAD - 3rd Quarterly Monitoring '95
CONTACT Mike Dubesneau

LABORATORY Aquatec
ADDRESS Colchester, VT
CONTACT Lori Arnold

| NO. | LABORATORY SAMPLE NO. | SAMPLING DATE | SAMPLING TIME | SAMPLE DEPTH | SAMPLE MATRIX | VOA 524.2 | SVOC | METALS | PESTICIDE | CN | HERB | TPH | | | Mercury | NO. OF CONTAINERS | COMMENTS (Special instructions, c |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | | 9-12-95 | 1040 | N/A | water | | | 1 | | 1 | | | | | 1 | 3 | ~~Rinsate~~ Rins |
| | | 9-12-95 | 1100 | | | | | 1 | | 1 | | | | | 1 | 3 | |
| | | 9-12-95 | 1100 | | | | | 1 | | 1 | | | | | 1 | 3 | |
| | | 9-14-95 | 0840 | | | | | | | | | | | | | | |
| 7 | | 9-14-95 | 0830 | | | | | | | | | | | | | | |
| | | 9-13-95 | 1725 | | | 3 | | | | | | | | | | 3 | |
| 0 | | 9-13-95 | 1610 | | | 3 | | | | | | | | | | 3 | |
| 5 | | 9-13-95 | 1430 | | | 6 | | | | | | | | | | 6 | Matrix Spik |
| 8 | | 9-13-95 | 1055 | | | 3 | | | | | | | | | | 3 | |
| 48 | | 9-13-95 | 1053 | | | 3 | | | | | | | | | | 3 | |
| 8-R | | 9-13-95 | 1045 | | | 3 | | | | | | | | | | 3 | Rinsate |
| 3 | | 9-13-95 | 1000 | | | 3 | | | | | | | | | | 3 | Trip Blank |

ANALYSES

Relinquished by
S...
s Engineering Science
95 Time 1100

Received by
Sign
Print
Firm
Date Time

y
Time

Received by
Sign
Print
Firm
Date Time

| | VOA | SVOC | METALS | PESTICIDE | CN | HERB | TPH | | | Mercury |
|---|---|---|---|---|---|---|---|---|---|---|
| VOA Vial | X | | 13 | | | | | | | |
| Glass Bottle | | | | | | | | | | |
| Plastic Bottle | | | X | | | | | | | |
| Preservative | A C | | A D | | A 12 | 10 | | | | A ~~C~~ |
| Container Volume | 40 ml | | 1 L | | 1 L | | | | | 500 ml |

PRESERVATION KEY:
A - Ice
B - Filtered
C - Acidified with HCl
D - Acidified with $HNO_3$
E - Acidified with $H_2SO_4$
F - NaOH + Ascorbic
G - Other

REMARKS: (Samp
nonstandard samp
Note: Meta
listed Do
require HN
preservatio
added.
Mercury sampl
$HNO_3$ to be

Cooler #: 894

mples tampered with? ☐ No ☐ Yes
in in remarks.

C1 White - return with data Yellow - lab copy Pink - Sampler copy

# CHAIN-OF-CUSTODY RECORD

PAGE 1 OF

SONS
ING-SCIENCE, INC.
Phone: 617-859-2000
99 Fax: 617-859-2043

JOB NO. 725980-01007
PROJECT SEAD-3rd Quarterly Monitoring-'95
CONTACT M. Duchesneau

LABORATORY Aquatec
ADDRESS Colchester VT
CONTACT Lori Arnold

| NO. | LABORATORY SAMPLE NO. | SAMPLING DATE | SAMPLING TIME | SAMPLE DEPTH | SAMPLE MATRIX | VOA 524.2 | SVOC | METALS | PEST/PCB | CN | HERB | TPH | | | | NO. OF CONTAINERS | COMMENTS (Special Instructions, c |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | | 9-14-95 | 0800 | N/A | water | 3 | | | | | | | | | | 3 | Trip Blank |
| | | | KKS ~~1140~~ 1155 | | | 3 | | | | | | | | | | 3 | |
| | | | 1155 | | | 3 | | | | | | | | | | 3 | |
| | | | 1050 | | | 3 | | | | | | | | | | 3 | |
| | | | 1115 | | | 3 | | | | | | | | | | 3 | |
| 7 | | | 1030 | | | 3 | | | | | | | | | | 3 | |
| 6 | | | 1200 | | | 3 | | | | | | | | | | 3 | |

KKS

KKS

Relinquished by
Smith
ons Engineering Science
-95 Time 1800

Received by
Sign
Print
Firm
Date Time

y
Time

Received by
Sign
Print
Firm
Date Time

mples tampered with? ☐ No ☐ Yes
in in remarks.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| VOA Vial | | | | | | | | | | |
| Glass Bottle | | | | | | | | | | |
| Plastic Bottle | | | | | | | | | | |
| Preservative | | | | | | | | | | |
| Container Volume | | | | | | | | | | |

PRESERVATION KEY:
A - Ice
B - Filtered
C - Acidified with HCl
D - Acidified with $HNO_3$
E - Acidified with $H_2SO_4$
F - NaOH + Ascorbic
G - Other

REMARKS: (Samp
nonstandard samp
~~SDG Comp~~
SDG Incom
sending MW-
next week

Cooler #: 08
MJ

C1 White - return with data Yellow - lab copy Pink - Sampler copy

LIMS # 3533

# CHAIN-OF-CUSTODY RECORD

PAGE 1 OF

SONS
NG-SCIENCE, INC.
Phone: 617-859-2000
Fax: 617-859-2043

JOB NO. ~~720~~ 725980-01007
PROJECT SEAD - 3rd Quarterly Monitoring '95
CONTACT Mike Duchesneau

LABORATORY MRD
ADDRESS Omaha, NB
CONTACT Sample Custodian

| NO. | LABORATORY SAMPLE NO. | SAMPLING DATE | SAMPLING TIME | SAMPLE DEPTH | SAMPLE MATRIX | VOA 524.2 | SVOC | METALS TAL | PEST/PCB | CN | HERB | TPH | | | | NO. OF CONTAINERS | COMMENTS (Special instructions, c |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RD | | 9-12-95 | 1100 | N/A | water | | | 1 | | 1 | | | | | | 2 | |
| D-R | | 9-12-95 | 1040 | ↓ | ↓ | | | 1 | | 1 | | | | | | 2 | Rinsate |
| 3MRD | | 9-13-95 | 1000 | | | 3 | KKS | | | | | | | | | 3 | Trip Blank |
| D-R | | 9-13-95 | 1045 | | | 3 | | | KKS | | | | | | | 3 | Rinsate |
| MRD | | 9-13-95 | 1055 | | | 3 | | | | | | | | | | 3 | |
| | | | | | | | | | | | | KKS | | | | | |
| | | KKS | | | | | | | | | | | | | | | |

Relinquished by
y Smith
ns Engineering Science
-95 Time 1245

Received by
Sign
Print
Firm
Date Time

y
Time

Received by
Sign
Print
Firm
Date Time

mples tampered with? ☐ No ☐ Yes
in in remarks.

| | VOA 524.2 | SVOC | METALS TAL | PEST/PCB | CN | HERB | TPH | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| VOA Vial | X | | | | | | | | | |
| Glass Bottle | | | | | | | | | | |
| Plastic Bottle | | | X | | | | | | | |
| Preservative | A C | | A D | | | | A F | | | |
| Container Volume | 40 ml | | 1 L | | | | 1 L | | | |

PRESERVATION KEY:
A - Ice
B - Filtered
C - Acidified with HCl
D - Acidified with $HNO_3$
E - Acidified with $H_2SO_4$
F - NaOH + Ascorbic
G - Other

REMARKS: (Samp
nonstandard samp
LIMS #3
Sampling co
For MRD
Return cooler
Parsons Engine

Cooler #: ES -

C1 White - return with data Yellow - lab copy Pink - Sampler copy

# CHAIN-OF-CUSTODY RECORD

PAGE 1 OF

SONS
ING-SCIENCE, INC.
Phone: 617-859-2000
99 Fax: 617-859-2043

JOB NO. 725980-01007
PROJECT 3rd Quarterly Monitoring 1995
CONTACT Mike Duchesneau

LABORATORY Aquatec Laborator
ADDRESS 55 South Park D
CONTACT Lori Arnold

| NO. | LABORATORY SAMPLE NO. | SAMPLING DATE | SAMPLING TIME | SAMPLE DEPTH | SAMPLE MATRIX | VOA 524.2 | SVOC | METALS | PEST/PCB | CN | HERB | TPH | NO. OF CONTAINERS | COMMEN (Special instructions, |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OB | | 9-19-95 | 1230 | NA | water | | | 3 | | 3 | | | 6 | |
| ASH | | 9-19-95 | 1300 | NA | water | 3 | | | | | | | 3 | |
| ASH | | 9-19-95 | 1310 | NA | water | 3 | | | | | | | 3 | |

Relinquished by
nika Wells
ka Willis
ons Engineering Sci.
9-95 Time

Received by
Sign
Print
Firm
Date Time

by
Time

Received by
Sign
Print
Firm
Date Time

amples tampered with? ☐ No ☐ Yes
ain in remarks.

| | VOA 524.2 | SVOC | METALS | PEST/PCB | CN | HERB | TPH |
|---|---|---|---|---|---|---|---|
| VOA Vial | X | | | | | | |
| Glass Bottle | | | | | | | |
| Plastic Bottle | | | X | | X | | |
| Preservative | A C | | A D | | A F | | |
| Container Volume | 40 ml | | 1 L | | 1 L | | |

PRESERVATION KEY:
A - Ice
B - Filtered
C - Acidified with HCl
D - Acidified with $HNO_3$
E - Acidified with $H_2SO_4$
F - NaOH + Ascorbic
G - Other

REMARKS: (Samp
nonstandard samp
Please r
bubble
and co

Cooler #: 36

XC1 White - return with data Yellow - lab copy Pink - Sampler copy

## 3. pH Meter Calibration Forms

pH Meter Calibration Form

Project: ~~RI/FS Field Investigation~~ 3rd Quarterly Monitoring Date: Sept. 19, 1995

Meter: Orion model SA 230
S.N. 1752

| | Time (24 hour system) | Meter Reading | Buffer Solution 7 | 10 | Buffer Temp. °C | % Slope | Operator |
|---|---|---|---|---|---|---|---|
| Initial Calibration | 0930 | Unadjusted | 7.12 | 10.08 | 15 | | AMW |
| | | Adjusted | 7.00 | 10.00 | 15 | | AMW |
| Intermediate Calibration | | Unadjusted | | | | | |
| | | Adjusted | | | | | |
| | | Unadjusted | | | | | |
| | | Adjusted | | | | | |
| | | Unadjusted | | | | | |
| | | Adjusted | | | | | |
| | | Unadjusted | | | | | |
| | | Adjusted | | | | | |
| | | Unadjusted | | | | | |
| | | Adjusted | | | | | |
| | | Unadjusted | | | | | |
| | | Adjusted | | | | | |
| | | Unadjusted | | | | | |
| | | Adjusted | | | | | |
| Final Calibration | | Unadjusted | | | | | |
| | | Adjusted | | | | | |

Intermediate checks may be made with one buffer (unadjusted reading), if readings are within one unit of the standard no calibration adjustment is made, if greater than 0.1 a complete calibration is necessary (adjusted readings), if greater than 0.2 increase frequency of intermediate checks.

Signature: _____

Field Team Leader

Figure 6.1-2
pH METER CALIBRATION FORM

SOURCE: ESE.

U.S. ARMY CORPS
OF ENGINEERS
HUNTSVILLE, ALABAMA

**PARSONS MAIN, INC.**

PARSONS

CLIENT _____ JOB NO. _____ SHEET ____ OF ____

SUBJECT Calibration BY _____ DATE 9-12

CKD. _____ REVISION _____

9/12/95 0800 pH Meter #1752 adjusted to 7.00 with buffer
9.83 with 10.00 buffer

Turbidimeter #930900003760

| Standard | Reading |
|---|---|
| 48.8 | 49.3 |
| 5.0 | ~~5.~~ 4.43 |

9/13/95 0830 pH Meter #1752 adjusted to 7.00 w/ 7.0 buffer
10.14 w/ 10.0 buffer

0835 OVM-580B #35383 calibrated w/ 100 span Isobut.
reading 97 ppm

9/14/95 0724 Turbidimeter #930900003760 Std. 48.8 / 49.1
5.0 / 4.49

0735 pH Meter #1752 7.0 Buffer 7.02 Reading
10.0 Buffer 10.14 Reading

0740 OVM-580B #35383 calibrated w/100 span Isobutylene
Reading 96 ppm

# 4. Groundwater Elevation Report

# GROUNDWATER ELEVATION REPORT

ERING–SCIENCE, INC. | CLIENT: ACOE | DATE: 9-12-95

SEAD - 3rd Quarterly Monitoring '95
Ash Landfill

PROJECT NO: 725980-01007
INSPECTOR: KRS / BH

EQUIPMENT:

| CTECTOR | BGD | TIME | REMARKS |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

WATER LEVEL INDICATOR:

| INSTRUMENT | CORRECTION FACTOR |
|---|---|
| | |
| | |
| | |

COMMENTS:

| TIME | DEPTH TO WATER | DEPTH TO PRODUCT | CORRECTED WATER LEVEL | MEASURED POW | INSTALLED POW | PRODUCT SPEC. GRAV. | WELL STATUS / COMMENTS (Lock?, Well #?, Surface Disturbance?, Riser marked?, Condition of: riser, concrete, protective casin |
|---|---|---|---|---|---|---|---|
| 150 | 10.50 | | | 46.36 | | | ~~OK~~ Well casing loose |
| 43 | 8.35 | | | 19.55 | | | No pad - protective casing + riser is ~~sh~~ 100 |
| 612 | N/A | | | 13.38 | | | Crushed by heavy equipment. I.T. attempted to straighten - ~~riser~~ is crushed |
| 528 | 9.73 | | | 19.50 | | | Good |
| 504 | 5.36 | | | 11.04 | | | Good |
| 555 | 8.66 | | | 11.65 | | | OK |
| 640 | 8.81 | | | 11.70 | | | Good |
| 536 | 7.57 | | | 11.70 | | | Riser separated or broken at coupling .5' below G.S. |
| 636 | 8.83 | | | 11.80 | | | Good |
| | N/A | | | 19.46 | | | Previously filled with dirt - IT cleared top of riser - dirt still deep in well - re-develop |
| 628 | 9.74 | | | 11.81 | | | OK |
| 500 | 7.94 | | | 12.08 | | | ~~Good~~ |
| 1600 | 5.64 | | | 11.88 | | | OK |
| 535 | 9.84 | | | 12.03 | | | OK |
| | N/A | | | 14.00 | | | Airpot well - not measured |

LL DEPTH MEASUREMENTS FROM MARKED LOCATION ON RISER)

# GROUNDWATER ELEVATION REPORT

EERING–SCIENCE, INC. | CLIENT: | DATE: 9-12-95

PROJECT NO:

Ash Land Fill

INSPECTOR: KKS / BH

G EQUIPMENT:

| ECTECTOR | BGD | TIME | REMARKS |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

WATER LEVEL INDICATOR:

| INSTRUMENT | CORRECTION FACTOR |
|---|---|
| | |
| | |
| | |

COMMENTS:

| TIME | DEPTH TO WATER | DEPTH TO PRODUCT | CORRECTED WATER LEVEL | MEASURED POW | INSTALLED POW | PRODUCT SPEC. GRAV. | WELL STATUS / COMMENTS (Lock?, Well #?, Surface Disturbance?, Riser marked?, Condition of: riser, concrete, protective c |
|---|---|---|---|---|---|---|---|
| 1512 | 6.74 | | | 10.54 | | | Good |
| | 6.12 | | | 10.39 | | | Good |
| 1605 | 7.78 | | | 10.54 | | | OK |
| 1545 | 10.42 | | | 10.52 | | | OK |
| 1548 | 8.70 | | | 10.34 | | | OK |
| 519 | 8.90 | | | 10.37 | | | Good - No tubing - |
| 525 | 9.62 | | | 10.39 | | | OK - No pad - casing slightly loose |
| 1525 | 8.90 | | | 18.15 | | | OK |
| 1815 | 5.43 | | | 56.64 | | | Pad heaved + cracked Roll #2 Exp |
| 1810 | 5.94 | | | 16.58 | | | OK |
| 1640 | 5.96 | | | 13.62 | | | Pad heaved Roll #2 Exp #1 |
| 1509 | 8.91 | | | 32.24 | | | Pad heaved .20 - Broken up around c Roll #1 - Exp #16 |
| 1700 ~~1600KKS~~ | 5.27 ~~7.46~~ | | | 11.89 | | | Pad heaved Roll #2 Exp #2 |
| 1600 | 7.46 | | | 14.71 | | | Pad heaved .40 |
| 1425 | 8.76 | | | 47.02 | | | OK |

(ALL DEPTH MEASUREMENTS FROM MARKED LOCATION ON RISER)

# GROUNDWATER ELEVATION REPORT

EERING–SCIENCE, INC. | CLIENT: | DATE: 9-12-95

PROJECT NO:

INSPECTOR:

| EQUIPMENT: ECTECTOR | BGD | TIME | REMARKS | WATER LEVEL INDICATOR: INSTRUMENT | CORRECTION FACTOR |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

COMMENTS:

| TIME | DEPTH TO WATER | DEPTH TO PRODUCT | CORRECTED WATER LEVEL | MEASURED POW | INSTALLED POW | PRODUCT SPEC. GRAV. | WELL STATUS / COMMENTS (Lock?, Well #?, Surface Disturbance?, Riser marked?, Condition of: riser, concrete, protective ca |
|---|---|---|---|---|---|---|---|
| 1648 | 8.34 | | | 47.38 | | | |
| 1607 | 5.73 | | | 7.47 | | | No Lock. Pad Leaved .3 and 1/3 broken off |
| | N/A | | | N/A | | | Destroyed during remedial activities |
| 450 | 6.34 | ~~1450~~ KKS | | 8.34 | | | Pad heaved .25' Roll #1 Exp # 13+14 |
| 436 | 7.96 | ~~1445~~ KKS | ~~7.96~~ KKS | 11.45 | | | Good |
| 1756 | 5.96 | | | 8.56 | | | 1/4 pad left - casing sturdy Roll #2 E |
| 1456 | 6.86 | ~~1456~~ KKS | | 11.50 | | | Pad heaved .20' Roll #1 Exp 15 |
| 446 | 7.88 | ~~1446~~ KKS | | 37.54 | | | Good |
| 447 | 7.69 | ~~1447~~ KKS | | 59.66 | | | Cracked/Split Pad Roll #1 Exp # 12 |
| 1753 | 6.12 | | | 36.87 | | | Pad heaved + cracked Roll #2 Exp #4 |
| 1750 | 5.68 | | | 59.36 | | | 1/2 pad left - crumbling Roll #2 Exp # 3 |
| 1610 | 8.94 | | | 10.35 | | | OK |
| 1615 | 8.76 | | | 34.99 | | | OK |
| 1612 | 8.62 | | | 58.18 | | | OK |
| 757 | 4.31 | | | 6.88 | | | Pad heaved slightly - casing loose |

ALL DEPTH MEASUREMENTS FROM MARKED LOCATION ON RISER)

# GROUNDWATER ELEVATION REPORT

EERING–SCIENCE, INC. | CLIENT: | DATE: 9-12-95

PROJECT NO:

INSPECTOR:

G EQUIPMENT:

| ECTECTOR | BGD | TIME | REMARKS |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

WATER LEVEL INDICATOR:

| INSTRUMENT | CORRECTION FACTOR |
|---|---|
| | |
| | |
| | |

COMMENTS:

| TIME | DEPTH TO WATER | DEPTH TO PRODUCT | CORRECTED WATER LEVEL | MEASURED POW | INSTALLED POW | PRODUCT SPEC. GRAV. | WELL STATUS / COMMENTS (Lock?, Well #?, Surface Disturbance?, Riser marked?, Condition of: riser, concrete, protective c |
|---|---|---|---|---|---|---|---|
| 755 | 3.70 | | | 35.09 | | | Pad badly cracked - separated from casing |
| 1800 | 3.52 | | | 57.29 | | | No Lock - Pad totally fragmented |
| 546 | 4.58 | | | 9.99 | | | Good - Water Drum # ASH 2 |
| 1548 | 5.33 | | | 10.29 | | | Good - Soils Drum 3-21-94 No # FU |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
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| | | | | | | | |

(ALL DEPTH MEASUREMENTS FROM MARKED LOCATION ON RISER)

# APPENDIX B

1. Sample Delivery Group No. 53766

   A. Volatile Organics QA/QC Data

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: AQUATEC, INC. Contract: 93206

Lab Code: AQUAI Case No.: 93206 SAS No.: SDG No.: 53766

| | EPA SAMPLE NO. | SMC1 (DCE)# | SMC2 (BFB)# | SMC3 (DCB)# | OTHER | TOT OUT |
|---|---|---|---|---|---|---|
| 01 | LFBLDUJ | 99 | 97 | 97 | | 0 |
| 02 | VBLKM7 | 92 | 92 | 86 | | 0 |
| 03 | MW59 | 98 | 92 | 90 | | 0 |
| 04 | MW60 | 92 | 91 | 87 | | 0 |
| 05 | | | | | | |
| 06 | | | | | | |
| 07 | | | | | | |
| 08 | | | | | | |
| 09 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
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| 18 | | | | | | |
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| 23 | | | | | | |
| 24 | | | | | | |
| 25 | | | | | | |
| 26 | | | | | | |
| 27 | | | | | | |
| 28 | | | | | | |
| 29 | | | | | | |
| 30 | | | | | | |

| | | QC LIMITS |
|---|---|---|
| SMC1 (DCE) | = 1,2-Dichloroethane-d4 | (83-143) |
| SMC2 (BFB) | = Bromofluorobenzene | (86-115) |
| SMC3 (DCB) | = 1,2-Dichlorobenzene-d4 | (80-120) |

# Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: AQUATEC, INC. Contract: 93206

Lab Code: AQUAI Case No.: 93206 SAS No.: SDG No.: 53766

| | EPA SAMPLE NO. | SMC1 (DCE)# | SMC2 (BFB)# | SMC3 (DCB)# | OTHER | TOT OUT |
|---|---|---|---|---|---|---|
| 01 | LFBLDUA | 111 | 109 | 114 | | 0 |
| 02 | VBLKJ2 | 99 | 94 | 93 | | 0 |
| 03 | FHS | 91 | 94 | 89 | | 0 |
| 04 | BRNS | 85 | 84* | 81 | | 1 |
| 05 | MW27 | 76* | 79* | 75* | | 3 |
| 06 | MW36 | 97 | 97 | 97 | | 0 |
| 07 | MW40 | 91 | 94 | 89 | | 0 |
| 08 | MW47 | 93 | 96 | 90 | | 0 |
| 09 | MW48 | 99 | 97 | 90 | | 0 |
| 10 | MW48R | 97 | 100 | 93 | | 0 |
| 11 | MW56 | 104 | 110 | 96 | | 0 |
| 12 | PT11 | 106 | 116* | 96 | | 1 |
| 13 | MW448 | 102 | 96 | 93 | | 0 |
| 14 | MSB | 102 | 104 | 100 | | 0 |
| 15 | LFBLDUC | 94 | 93 | 93 | | 0 |
| 16 | VBLKJ8 | 102 | 100 | 98 | | 0 |
| 17 | BRNSRE | 103 | 99 | 103 | | 0 |
| 18 | MW27RE | 96 | 99 | 94 | | 0 |
| 19 | PT11RE | 100 | 99 | 100 | | 0 |
| 20 | MW45 | 100 | 104 | 100 | | 0 |
| 21 | MW45MS | 110 | 106 | 105 | | 0 |
| 22 | MW45MSD | 112 | 110 | 102 | | 0 |
| 23 | LFBLDUF | 88 | 96 | 95 | | 0 |
| 24 | VBLKK5 | 95 | 95 | 94 | | 0 |
| 25 | PT19 | 100 | 99 | 98 | | 0 |
| 26 | FHD | 92 | 92 | 91 | | 0 |
| 27 | LFBLDUG | 114 | 111 | 110 | | 0 |
| 28 | VBLKK6 | 109 | 105 | 102 | | 0 |
| 29 | TB913 | 111 | 111 | 107 | | 0 |
| 30 | TB914 | 102 | 98 | 99 | | 0 |

| | | QC LIMITS |
|---|---|---|
| SMC1 (DCE) | = 1,2-Dichloroethane-d4 | (83-143) |
| SMC2 (BFB) | = Bromofluorobenzene | (86-115) |
| SMC3 (DCB) | = 1,2-Dichlorobenzene-d4 | (80-120) |

# Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

# LFB RECOVERY REPORT

Client Name: ENGSC2
Sample Matrix: LIQUID
Lab Smp Id: LFBLDUJ
Level: LOW
Data Type: MS DATA
SpikeList File: lfbver3ketMTBE.spk

Client SDG: 53766
Fraction: VOA
Client Smp ID: LFBLDUJ
Operator: GWG
SampleType: MS
Quant Type: ISTD

| | SPIKE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|---|
| | 43 Chlorobenzene | 1 | 1.0 | 98.78 | 60-140 |
| | 44 1,1,1,2-Tetrachlor | 1 | 1.0 | 95.84 | 60-140 |
| | 45 Ethylbenzene | 1 | 1 | 100.76 | 60-140 |
| | 46 m- & p-Xylene | 2 | 2 | 101.61 | 60-140 |
| | 47 o-Xylene | 1 | 1.0 | 98.36 | 60-140 |
| M | 48 Xylene (total) | 3 | 3 | 103.82 | 60-140 |
| | 49 Styrene | 1 | 0.9 | 94.18 | 60-140 |
| | 50 Bromoform | 1 | 0.9 | 89.35 | 60-140 |
| | 51 Isopropylbenzene | 1 | 1.0 | 99.64 | 60-140 |
| | 53 Bromobenzene | 1 | 1.0 | 98.32 | 60-140 |
| | 54 1,1,2,2-Tetrachlor | 1 | 1 | 106.75 | 60-140 |
| | 55 1,2,3-Trichloropro | 1 | 1 | 104.30 | 60-140 |
| | 56 n-Propylbenzene | 1 | 1.0 | 99.51 | 60-140 |
| | 57 2-Chlorotoluene | 1 | 1 | 102.09 | 60-140 |
| | 58 4-Chlorotoluene | 1 | 1.0 | 96.36 | 60-140 |
| | 59 1,3,5-Trimethylben | 1 | 1 | 104.58 | 60-140 |
| | 60 tert-Butylbenzene | 1 | 1 | 102.84 | 60-140 |
| | 61 1,2,4-Trimethylben | 1 | 1 | 102.74 | 60-140 |
| | 62 sec-Butylbenzene | 1 | 1 | 103.76 | 60-140 |
| | 63 1,3-Dichlorobenzen | 1 | 1 | 106.18 | 60-140 |
| | 65 p-Isopropyltoluene | 1 | 1 | 101.02 | 60-140 |
| | 66 1,4-Dichlorobenzen | 1 | 1 | 105.11 | 60-140 |
| | 68 1,2-Dichlorobenzen | 1 | 1 | 101.17 | 60-140 |
| | 69 n-Butylbenzene | 1 | 1 | 109.36 | 60-140 |
| | 70 1,2-Dibromo-3-Chlo | 1 | 1 | 116.63 | 60-140 |
| | 71 1,2,4-Trichloroben | 1 | 1 | 111.91 | 60-140 |
| | 72 Hexachlorobutadien | 1 | 1 | 107.44 | 60-140 |
| | 73 Naphthalene | 1 | 1 | 118.49 | 60-140 |
| | 74 1,2,3-Trichloroben | 1 | 1 | 113.69 | 60-140 |

| | SURROGATE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|---|
| $ | 23 1,2-Dichloroethane | 2 | 2 | 98.77 | 83-143 |
| $ | 52 Bromofluorobenzene | 2 | 2 | 96.75 | 86-115 |
| $ | 67 1,2-Dichlorobenzen | 2 | 2 | 96.96 | 80-120 |

# LFB RECOVERY REPORT

Client Name: ENGSC2
Sample Matrix: LIQUID
Lab Smp Id: LFBLDUJ
Level: LOW
Data Type: MS DATA
SpikeList File: lfbver3ketMTBE.spk

Client SDG: 53766
Fraction: VOA
Client Smp ID: LFBLDUJ
Operator: GWG
SampleType: MS
Quant Type: ISTD

| SPIKE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| 1 Dichlorodifluorome | 1 | 0.8 | 83.02 | 60-140 |
| 2 Chloromethane | 1 | 0.9 | 94.51 | 60-140 |
| 3 Vinyl Chloride | 1 | 0.9 | 91.68 | 60-140 |
| 4 Bromomethane | 1 | 1 | 110.22 | 60-140 |
| 5 Chloroethane | 1 | 1 | 113.43 | 60-140 |
| 6 Trichlorofluoromet | 1 | 1.0 | 97.07 | 60-140 |
| 7 1,1-Dichloroethene | 1 | 0.9 | 89.99 | 60-140 |
| 8 Acetone | 5 | 6 | 113.92 | 60-140 |
| 10 Methylene Chloride | 1 | 1 | 102.28 | 60-140 |
| 11 trans-1,2-Dichloro | 1 | 0.9 | 89.77 | 60-140 |
| 12 Methyl-t-Butyl Eth | 1 | 1.0 | 98.43 | 60-140 |
| 13 1,1-Dichloroethane | 1 | 1.0 | 99.90 | 60-140 |
| 14 2,2-Dichloropropan | 1 | 1.0 | 95.42 | 60-140 |
| 15 cis-1,2-Dichloroet | 1 | 0.9 | 94.11 | 60-140 |
| 16 2-Butanone | 5 | 5 | 93.60 | 60-140 |
| 17 Bromochloromethane | 1 | 0.8 | 85.23 | 60-140 |
| 19 Chloroform | 1 | 1.0 | 97.49 | 60-140 |
| 20 1,1,1-Trichloroeth | 1 | 0.9 | 93.32 | 60-140 |
| 21 Carbon Tetrachlori | 1 | 0.9 | 87.32 | 60-140 |
| 22 1,1-Dichloropropen | 1 | 1.0 | 95.04 | 60-140 |
| 24 Benzene | 1 | 1 | 106.03 | 60-140 |
| 25 1,2-Dichloroethane | 1 | 0.9 | 93.67 | 60-140 |
| 27 Trichloroethene | 1 | 1.0 | 97.24 | 60-140 |
| 28 1,2-Dichloropropan | 1 | 1 | 102.81 | 60-140 |
| 29 Dibromomethane | 1 | 0.9 | 93.85 | 60-140 |
| 31 Bromodichlorometha | 1 | 1.0 | 95.85 | 60-140 |
| 32 cis-1,3-Dichloropr | 1 | 0.9 | 89.98 | 60-140 |
| 33 4-Methyl-2-Pentano | 5 | 5 | 100.81 | 60-140 |
| 34 Toluene | 1 | 1 | 109.54 | 60-140 |
| 35 trans-1,3-Dichloro | 1 | 0.9 | 88.36 | 60-140 |
| 36 1,1,2-Trichloroeth | 1 | 1 | 101.40 | 60-140 |
| 37 Tetrachloroethene | 1 | 1.0 | 95.18 | 60-140 |
| 38 1,3-Dichloropropan | 1 | 1.0 | 95.79 | 60-140 |
| 39 2-Hexanone | 5 | 5 | 103.69 | 60-140 |
| 40 Dibromochlorometha | 1 | 1.0 | 96.14 | 60-140 |
| 41 1,2-Dibromoethane | 1 | 1.0 | 99.23 | 60-140 |

# LFB RECOVERY REPORT

Client Name: ENGSC2
Sample Matrix: LIQUID
Lab Smp Id: LFBLDUG
Level: LOW
Data Type: MS DATA
SpikeList File: lfbver3ketMTBE.spk

Client SDG: 53766
Fraction: VOA
Client Smp ID: LFBLDUG
Operator: CMP
SampleType: MS
Quant Type: ISTD

| | SPIKE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|---|
| | 43 Chlorobenzene | 1 | 1.0 | 97.82 | 60-140 |
| | 44 1,1,1,2-Tetrachlor | 1 | 0.9 | 91.45 | 60-140 |
| | 45 Ethylbenzene | 1 | 1 | 102.59 | 60-140 |
| | 46 m- & p-Xylene | 2 | 2 | 98.75 | 60-140 |
| | 47 o-Xylene | 1 | 1.0 | 98.26 | 60-140 |
| M | 48 Xylene (total) | 3 | 3 | 101.17 | 60-140 |
| | 49 Styrene | 1 | 1.0 | 95.10 | 60-140 |
| | 50 Bromoform | 1 | 0.9 | 90.93 | 60-140 |
| | 51 Isopropylbenzene | 1 | 1.0 | 99.35 | 60-140 |
| | 53 Bromobenzene | 1 | 1 | 100.11 | 60-140 |
| | 54 1,1,2,2-Tetrachlor | 1 | 0.9 | 94.15 | 60-140 |
| | 55 1,2,3-Trichloropro | 1 | 1 | 113.93 | 60-140 |
| | 56 n-Propylbenzene | 1 | 1.0 | 96.73 | 60-140 |
| | 57 2-Chlorotoluene | 1 | 0.9 | 94.31 | 60-140 |
| | 58 4-Chlorotoluene | 1 | 1.0 | 98.06 | 60-140 |
| | 59 1,3,5-Trimethylben | 1 | 1 | 102.85 | 60-140 |
| | 60 tert-Butylbenzene | 1 | 1 | 100.57 | 60-140 |
| | 61 1,2,4-Trimethylben | 1 | 1.0 | 98.84 | 60-140 |
| | 62 sec-Butylbenzene | 1 | 1.0 | 97.66 | 60-140 |
| | 63 1,3-Dichlorobenzen | 1 | 1 | 102.20 | 60-140 |
| | 65 p-Isopropyltoluene | 1 | 1.0 | 98.21 | 60-140 |
| | 66 1,4-Dichlorobenzen | 1 | 1 | 101.69 | 60-140 |
| | 68 1,2-Dichlorobenzen | 1 | 1 | 102.04 | 60-140 |
| | 69 n-Butylbenzene | 1 | 1.0 | 98.66 | 60-140 |
| | 70 1,2-Dibromo-3-Chlo | 1 | 1 | 100.28 | 60-140 |
| | 71 1,2,4-Trichloroben | 1 | 1 | 107.98 | 60-140 |
| | 72 Hexachlorobutadien | 1 | 1 | 103.38 | 60-140 |
| | 73 Naphthalene | 1 | 1 | 107.66 | 60-140 |
| | 74 1,2,3-Trichloroben | 1 | 1 | 108.13 | 60-140 |

| | SURROGATE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|---|
| $ | 23 1,2-Dichloroethane | 2 | 2 | 113.96 | 83-143 |
| $ | 52 Bromofluorobenzene | 2 | 2 | 111.07 | 86-115 |
| $ | 67 1,2-Dichlorobenzen | 2 | 2 | 110.53 | 80-120 |

# LFB RECOVERY REPORT

Client Name: ENGSC2
Sample Matrix: LIQUID
Lab Smp Id: LFBLDUG
Level: LOW
Data Type: MS DATA
SpikeList File: lfbver3ketMTBE.spk

Client SDG: 53766
Fraction: VOA
Client Smp ID: LFBLDUG
Operator: CMP
SampleType: MS
Quant Type: ISTD

| SPIKE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| 1 Dichlorodifluorome | 1 | 0.9 | 88.57 | 60-140 |
| 2 Chloromethane | 1 | 0.9 | 94.78 | 60-140 |
| 3 Vinyl Chloride | 1 | 1.0 | 97.98 | 60-140 |
| 4 Bromomethane | 1 | 1 | 109.93 | 60-140 |
| 5 Chloroethane | 1 | 1 | 106.71 | 60-140 |
| 6 Trichlorofluoromet | 1 | 1 | 103.06 | 60-140 |
| 7 1,1-Dichloroethene | 1 | 1 | 101.94 | 60-140 |
| 8 Acetone | 5 | 5 | 101.55 | 60-140 |
| 10 Methylene Chloride | 1 | 1 | 110.21 | 60-140 |
| 11 trans-1,2-Dichloro | 1 | 1 | 100.45 | 60-140 |
| 12 Methyl-t-Butyl Eth | 1 | 1 | 104.18 | 60-140 |
| 13 1,1-Dichloroethane | 1 | 1 | 105.75 | 60-140 |
| 14 2,2-Dichloropropan | 1 | 1.0 | 99.36 | 60-140 |
| 15 cis-1,2-Dichloroet | 1 | 1.0 | 96.96 | 60-140 |
| 16 2-Butanone | 5 | 4 | 76.95 | 60-140 |
| 17 Bromochloromethane | 1 | 1.0 | 97.53 | 60-140 |
| 19 Chloroform | 1 | 1.0 | 99.12 | 60-140 |
| 20 1,1,1-Trichloroeth | 1 | 1.0 | 96.15 | 60-140 |
| 21 Carbon Tetrachlori | 1 | 0.9 | 93.25 | 60-140 |
| 22 1,1-Dichloropropen | 1 | 1 | 102.29 | 60-140 |
| 24 Benzene | 1 | 1 | 105.22 | 60-140 |
| 25 1,2-Dichloroethane | 1 | 1 | 101.88 | 60-140 |
| 27 Trichloroethene | 1 | 1.0 | 99.91 | 60-140 |
| 28 1,2-Dichloropropan | 1 | 1 | 101.43 | 60-140 |
| 29 Dibromomethane | 1 | 1 | 102.05 | 60-140 |
| 31 Bromodichlorometha | 1 | 1.0 | 97.57 | 60-140 |
| 32 cis-1,3-Dichloropr | 1 | 1.0 | 99.55 | 60-140 |
| 33 4-Methyl-2-Pentano | 5 | 4 | 91.66 | 60-140 |
| 34 Toluene | 1 | 1 | 101.91 | 60-140 |
| 35 trans-1,3-Dichloro | 1 | 1 | 101.01 | 60-140 |
| 36 1,1,2-Trichloroeth | 1 | 1 | 102.67 | 60-140 |
| 37 Tetrachloroethene | 1 | 1 | 102.55 | 60-140 |
| 38 1,3-Dichloropropan | 1 | 1 | 103.95 | 60-140 |
| 39 2-Hexanone | 5 | 5 | 94.52 | 60-140 |
| 40 Dibromochlorometha | 1 | 0.9 | 93.26 | 60-140 |
| 41 1,2-Dibromoethane | 1 | 1.0 | 99.18 | 60-140 |

# LFB RECOVERY REPORT

Client Name: ENGSC2
Sample Matrix: LIQUID
Lab Smp Id: LFBLDUF
Level: LOW
Data Type: MS DATA
SpikeList File: lfbver3ketMTBE.spk

Client SDG: 53766
Fraction: VOA
Client Smp ID: LFBLDUF
Operator: CMP
SampleType: MS
Quant Type: ISTD

| | SPIKE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|---|
| | 43 Chlorobenzene | 1 | 0.7 | 72.87 | 60-140 |
| | 44 1,1,1,2-Tetrachlor | 1 | 0.7 | 68.96 | 60-140 |
| | 45 Ethylbenzene | 1 | 0.8 | 77.39 | 60-140 |
| | 46 m- & p-Xylene | 2 | 2 | 80.80 | 60-140 |
| | 47 o-Xylene | 1 | 0.8 | 80.26 | 60-140 |
| M | 48 Xylene (total) | 3 | 2 | 83.46 | 60-140 |
| | 49 Styrene | 1 | 0.7 | 68.62 | 60-140 |
| | 50 Bromoform | 1 | 0.7 | 73.86 | 60-140 |
| | 51 Isopropylbenzene | 1 | 0.8 | 76.44 | 60-140 |
| | 53 Bromobenzene | 1 | 0.7 | 69.70 | 60-140 |
| | 54 1,1,2,2-Tetrachlor | 1 | 0.8 | 78.71 | 60-140 |
| | 55 1,2,3-Trichloropro | 1 | 0.8 | 77.38 | 60-140 |
| | 56 n-Propylbenzene | 1 | 0.7 | 68.88 | 60-140 |
| | 57 2-Chlorotoluene | 1 | 0.7 | 70.63 | 60-140 |
| | 58 4-Chlorotoluene | 1 | 0.7 | 71.33 | 60-140 |
| | 59 1,3,5-Trimethylben | 1 | 0.8 | 78.20 | 60-140 |
| | 60 tert-Butylbenzene | 1 | 0.7 | 74.47 | 60-140 |
| | 61 1,2,4-Trimethylben | 1 | 0.9 | 89.40 | 60-140 |
| | 62 sec-Butylbenzene | 1 | 0.7 | 74.43 | 60-140 |
| | 63 1,3-Dichlorobenzen | 1 | 0.7 | 71.10 | 60-140 |
| | 65 p-Isopropyltoluene | 1 | 0.7 | 72.36 | 60-140 |
| | 66 1,4-Dichlorobenzen | 1 | 0.7 | 72.42 | 60-140 |
| | 68 1,2-Dichlorobenzen | 1 | 0.7 | 70.01 | 60-140 |
| | 69 n-Butylbenzene | 1 | 0.7 | 73.58 | 60-140 |
| | 70 1,2-Dibromo-3-Chlo | 1 | 0.9 | 86.82 | 60-140 |
| | 71 1,2,4-Trichloroben | 1 | 0.8 | 75.45 | 60-140 |
| | 72 Hexachlorobutadien | 1 | 0.8 | 78.55 | 60-140 |
| | 73 Naphthalene | 1 | 0.8 | 81.74 | 60-140 |
| | 74 1,2,3-Trichloroben | 1 | 0.8 | 79.50 | 60-140 |

| | SURROGATE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|---|
| $ | 23 1,2-Dichloroethane | 2 | 2 | 88.51 | 83-143 |
| $ | 52 Bromofluorobenzene | 2 | 2 | 96.49 | 86-115 |
| $ | 67 1,2-Dichlorobenzen | 2 | 2 | 95.17 | 80-120 |

# LFB RECOVERY REPORT

Client Name: ENGSC2
Sample Matrix: LIQUID
Lab Smp Id: LFBLDUF
Level: LOW
Data Type: MS DATA
SpikeList File: lfbver3ketMTBE.spk

Client SDG: 53766
Fraction: VOA
Client Smp ID: LFBLDUF
Operator: CMP
SampleType: MS
Quant Type: ISTD

| SPIKE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| 1 Dichlorodifluorome | 1 | 1.0 | 97.17 | 60-140 |
| 2 Chloromethane | 1 | 0.9 | 90.59 | 60-140 |
| 3 Vinyl Chloride | 1 | 0.8 | 83.25 | 60-140 |
| 4 Bromomethane | 1 | 0.8 | 83.78 | 60-140 |
| 5 Chloroethane | 1 | 1 | 101.91 | 60-140 |
| 6 Trichlorofluoromet | 1 | 0.8 | 83.25 | 60-140 |
| 7 1,1-Dichloroethene | 1 | 0.7 | 71.37 | 60-140 |
| 8 Acetone | 5 | 7 | 134.93 | 60-140 |
| 10 Methylene Chloride | 1 | 1 | 112.31 | 60-140 |
| 11 trans-1,2-Dichloro | 1 | 0.7 | 73.61 | 60-140 |
| 12 Methyl-t-Butyl Eth | 1 | 0.8 | 76.10 | 60-140 |
| 13 1,1-Dichloroethane | 1 | 0.7 | 72.03 | 60-140 |
| 14 2,2-Dichloropropan | 1 | 0.8 | 79.55 | 60-140 |
| 15 cis-1,2-Dichloroet | 1 | 0.7 | 68.58 | 60-140 |
| 16 2-Butanone | 5 | 5 | 98.00 | 60-140 |
| 17 Bromochloromethane | 1 | 0.6 | 62.51 | 60-140 |
| 19 Chloroform | 1 | 0.8 | 77.30 | 60-140 |
| 20 1,1,1-Trichloroeth | 1 | 0.7 | 70.93 | 60-140 |
| 21 Carbon Tetrachlori | 1 | 0.7 | 70.65 | 60-140 |
| 22 1,1-Dichloropropen | 1 | 0.7 | 69.56 | 60-140 |
| 24 Benzene | 1 | 0.8 | 78.88 | 60-140 |
| 25 1,2-Dichloroethane | 1 | 0.7 | 67.79 | 60-140 |
| 27 Trichloroethene | 1 | 0.7 | 70.61 | 60-140 |
| 28 1,2-Dichloropropan | 1 | 0.7 | 67.14 | 60-140 |
| 29 Dibromomethane | 1 | 0.6 | 65.49 | 60-140 |
| 31 Bromodichlorometha | 1 | 0.7 | 67.49 | 60-140 |
| 32 cis-1,3-Dichloropr | 1 | 0.7 | 69.49 | 60-140 |
| 33 4-Methyl-2-Pentano | 5 | 6 | 113.14 | 60-140 |
| 34 Toluene | 1 | 0.8 | 77.94 | 60-140 |
| 35 trans-1,3-Dichloro | 1 | 0.7 | 71.70 | 60-140 |
| 36 1,1,2-Trichloroeth | 1 | 0.7 | 70.08 | 60-140 |
| 37 Tetrachloroethene | 1 | 0.8 | 79.78 | 60-140 |
| 38 1,3-Dichloropropan | 1 | 0.8 | 75.83 | 60-140 |
| 39 2-Hexanone | 5 | 6 | 115.46 | 60-140 |
| 40 Dibromochlorometha | 1 | 0.7 | 69.13 | 60-140 |
| 41 1,2-Dibromoethane | 1 | 0.7 | 68.74 | 60-140 |

# LFB RECOVERY REPORT

Client Name: ENGSC2
Sample Matrix: LIQUID
Lab Smp Id: LFBLDUC
Level: LOW
Data Type: MS DATA
SpikeList File: lfbver3ketMTBE.spk

Client SDG: 53766
Fraction: VOA
Client Smp ID: LFBLDUC
Operator: GWG
SampleType: MS
Quant Type: ISTD

| | SPIKE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|---|
| | 43 Chlorobenzene | 1 | 1 | 101.68 | 60-140 |
| | 44 1,1,1,2-Tetrachlor | 1 | 1.0 | 98.87 | 60-140 |
| | 45 Ethylbenzene | 1 | 1 | 109.98 | 60-140 |
| | 46 m- & p-Xylene | 2 | 2 | 110.45 | 60-140 |
| | 47 o-Xylene | 1 | 1 | 100.87 | 60-140 |
| M | 48 Xylene (total) | 3 | 3 | 111.67 | 60-140 |
| | 49 Styrene | 1 | 1 | 101.74 | 60-140 |
| | 50 Bromoform | 1 | 0.9 | 89.32 | 60-140 |
| | 51 Isopropylbenzene | 1 | 1 | 109.40 | 60-140 |
| | 53 Bromobenzene | 1 | 1 | 102.75 | 60-140 |
| | 54 1,1,2,2-Tetrachlor | 1 | 1.0 | 99.33 | 60-140 |
| | 55 1,2,3-Trichloropro | 1 | 1 | 109.08 | 60-140 |
| | 56 n-Propylbenzene | 1 | 1 | 106.24 | 60-140 |
| | 57 2-Chlorotoluene | 1 | 1 | 103.45 | 60-140 |
| | 58 4-Chlorotoluene | 1 | 1 | 108.52 | 60-140 |
| | 59 1,3,5-Trimethylben | 1 | 1 | 107.01 | 60-140 |
| | 60 tert-Butylbenzene | 1 | 1 | 106.95 | 60-140 |
| | 61 1,2,4-Trimethylben | 1 | 1 | 109.46 | 60-140 |
| | 62 sec-Butylbenzene | 1 | 1 | 108.67 | 60-140 |
| | 63 1,3-Dichlorobenzen | 1 | 1 | 110.85 | 60-140 |
| | 65 p-Isopropyltoluene | 1 | 1 | 108.16 | 60-140 |
| | 66 1,4-Dichlorobenzen | 1 | 1 | 111.27 | 60-140 |
| | 68 1,2-Dichlorobenzen | 1 | 1 | 105.91 | 60-140 |
| | 69 n-Butylbenzene | 1 | 1 | 115.31 | 60-140 |
| | 70 1,2-Dibromo-3-Chlo | 1 | 1 | 124.29 | 60-140 |
| | 71 1,2,4-Trichloroben | 1 | 1 | 123.57 | 60-140 |
| | 72 Hexachlorobutadien | 1 | 1 | 125.03 | 60-140 |
| | 73 Naphthalene | 1 | 1 | 117.73 | 60-140 |
| | 74 1,2,3-Trichloroben | 1 | 1 | 119.78 | 60-140 |

| | SURROGATE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|---|
| $ | 23 1,2-Dichloroethane | 2 | 2 | 94.47 | 83-143 |
| $ | 52 Bromofluorobenzene | 2 | 2 | 93.44 | 86-115 |
| $ | 67 1,2-Dichlorobenzen | 2 | 2 | 93.38 | 80-120 |

# LFB RECOVERY REPORT

Client Name: ENGSC2
Sample Matrix: LIQUID
Lab Smp Id: LFBLDUC
Level: LOW
Data Type: MS DATA
SpikeList File: lfbver3ketMTBE.spk

Client SDG: 53766
Fraction: VOA
Client Smp ID: LFBLDUC
Operator: GWG
SampleType: MS
Quant Type: ISTD

| SPIKE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| 1 Dichlorodifluorome | 1 | 1 | 104.77 | 60-140 |
| 2 Chloromethane | 1 | 1 | 110.41 | 60-140 |
| 3 Vinyl Chloride | 1 | 1.0 | 98.57 | 60-140 |
| 4 Bromomethane | 1 | 1 | 110.48 | 60-140 |
| 5 Chloroethane | 1 | 1 | 119.32 | 60-140 |
| 6 Trichlorofluoromet | 1 | 1 | 106.24 | 60-140 |
| 7 1,1-Dichloroethene | 1 | 1 | 108.02 | 60-140 |
| 8 Acetone | 5 | 6 | 111.22 | 60-140 |
| 10 Methylene Chloride | 1 | 1 | 104.27 | 60-140 |
| 11 trans-1,2-Dichloro | 1 | 1 | 106.97 | 60-140 |
| 12 Methyl-t-Butyl Eth | 1 | 1 | 116.83 | 60-140 |
| 13 1,1-Dichloroethane | 1 | 1 | 108.75 | 60-140 |
| 14 2,2-Dichloropropan | 1 | 1 | 116.60 | 60-140 |
| 15 cis-1,2-Dichloroet | 1 | 1 | 104.25 | 60-140 |
| 16 2-Butanone | 5 | 4 | 85.07 | 60-140 |
| 17 Bromochloromethane | 1 | 1.0 | 96.08 | 60-140 |
| 19 Chloroform | 1 | 1 | 111.47 | 60-140 |
| 20 1,1,1-Trichloroeth | 1 | 1 | 103.75 | 60-140 |
| 21 Carbon Tetrachlori | 1 | 1 | 100.52 | 60-140 |
| 22 1,1-Dichloropropen | 1 | 1 | 104.24 | 60-140 |
| 24 Benzene | 1 | 1 | 108.26 | 60-140 |
| 25 1,2-Dichloroethane | 1 | 1.0 | 97.00 | 60-140 |
| 27 Trichloroethene | 1 | 1.0 | 95.86 | 60-140 |
| 28 1,2-Dichloropropan | 1 | 1 | 107.41 | 60-140 |
| 29 Dibromomethane | 1 | 0.9 | 91.38 | 60-140 |
| 31 Bromodichlorometha | 1 | 1.0 | 96.45 | 60-140 |
| 32 cis-1,3-Dichloropr | 1 | 1 | 104.11 | 60-140 |
| 33 4-Methyl-2-Pentano | 5 | 5 | 100.99 | 60-140 |
| 34 Toluene | 1 | 1 | 107.47 | 60-140 |
| 35 trans-1,3-Dichloro | 1 | 1 | 101.19 | 60-140 |
| 36 1,1,2-Trichloroeth | 1 | 1 | 106.95 | 60-140 |
| 37 Tetrachloroethene | 1 | 1 | 103.36 | 60-140 |
| 38 1,3-Dichloropropan | 1 | 1 | 101.44 | 60-140 |
| 39 2-Hexanone | 5 | 5 | 97.02 | 60-140 |
| 40 Dibromochlorometha | 1 | 1 | 102.17 | 60-140 |
| 41 1,2-Dibromoethane | 1 | 1.0 | 95.76 | 60-140 |

# LFB RECOVERY REPORT

Client Name: ENGSC2
Sample Matrix: LIQUID
Lab Smp Id: LFBLDUA
Level: LOW
Data Type: MS DATA
SpikeList File: lfbver3ketMTBE.spk

Client SDG: 53766
Fraction: VOA
Client Smp ID: LFBLDUA
Operator: GWG
SampleType: MS
Quant Type: ISTD

| | SPIKE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|---|
| | 43 Chlorobenzene | 1 | 1.0 | 99.59 | 60-140 |
| | 44 1,1,1,2-Tetrachlor | 1 | 1.0 | 96.40 | 60-140 |
| | 45 Ethylbenzene | 1 | 1.0 | 98.70 | 60-140 |
| | 46 m- & p-Xylene | 2 | 2 | 101.04 | 60-140 |
| | 47 o-Xylene | 1 | 0.9 | 90.53 | 60-140 |
| M | 48 Xylene (total) | 3 | 3 | 100.18 | 60-140 |
| | 49 Styrene | 1 | 0.9 | 91.32 | 60-140 |
| | 50 Bromoform | 1 | 0.9 | 86.70 | 60-140 |
| | 51 Isopropylbenzene | 1 | 1.0 | 97.75 | 60-140 |
| | 53 Bromobenzene | 1 | 1.0 | 95.72 | 60-140 |
| | 54 1,1,2,2-Tetrachlor | 1 | 0.9 | 93.38 | 60-140 |
| | 55 1,2,3-Trichloropro | 1 | 1.0 | 98.77 | 60-140 |
| | 56 n-Propylbenzene | 1 | 0.9 | 89.94 | 60-140 |
| | 57 2-Chlorotoluene | 1 | 1 | 100.45 | 60-140 |
| | 58 4-Chlorotoluene | 1 | 1 | 106.93 | 60-140 |
| | 59 1,3,5-Trimethylben | 1 | 1.0 | 98.53 | 60-140 |
| | 60 tert-Butylbenzene | 1 | 1.0 | 99.06 | 60-140 |
| | 61 1,2,4-Trimethylben | 1 | 1.0 | 99.22 | 60-140 |
| | 62 sec-Butylbenzene | 1 | 1.0 | 99.88 | 60-140 |
| | 63 1,3-Dichlorobenzen | 1 | 1.0 | 99.08 | 60-140 |
| | 65 p-Isopropyltoluene | 1 | 1 | 104.65 | 60-140 |
| | 66 1,4-Dichlorobenzen | 1 | 1 | 105.65 | 60-140 |
| | 68 1,2-Dichlorobenzen | 1 | 0.9 | 94.40 | 60-140 |
| | 69 n-Butylbenzene | 1 | 1 | 102.07 | 60-140 |
| | 70 1,2-Dibromo-3-Chlo | 1 | 1 | 103.44 | 60-140 |
| | 71 1,2,4-Trichloroben | 1 | 1 | 108.90 | 60-140 |
| | 72 Hexachlorobutadien | 1 | 1 | 112.16 | 60-140 |
| | 73 Naphthalene | 1 | 1 | 102.37 | 60-140 |
| | 74 1,2,3-Trichloroben | 1 | 1 | 104.94 | 60-140 |

| SURROGATE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| $ 23 1,2-Dichloroethane | 2 | 2 | 111.19 | 83-143 |
| $ 52 Bromofluorobenzene | 2 | 2 | 109.41 | 86-115 |
| $ 67 1,2-Dichlorobenzen | 2 | 2 | 114.13 | 80-120 |

# LFB RECOVERY REPORT

Client Name: ENGSC2
Sample Matrix: LIQUID
Lab Smp Id: LFBLDUA
Level: LOW
Data Type: MS DATA
SpikeList File: lfbver3ketMTBE.spk

Client SDG: 53766
Fraction: VOA
Client Smp ID: LFBLDUA
Operator: GWG
SampleType: MS
Quant Type: ISTD

| SPIKE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| 1 Dichlorodifluorome | 1 | 0.9 | 94.46 | 60-140 |
| 2 Chloromethane | 1 | 1.0 | 98.53 | 60-140 |
| 3 Vinyl Chloride | 1 | 1.0 | 95.86 | 60-140 |
| 4 Bromomethane | 1 | 1 | 108.90 | 60-140 |
| 5 Chloroethane | 1 | 1 | 112.45 | 60-140 |
| 6 Trichlorofluoromet | 1 | 1 | 103.28 | 60-140 |
| 7 1,1-Dichloroethene | 1 | 1.0 | 97.25 | 60-140 |
| 8 Acetone | 5 | 6 | 111.74 | 60-140 |
| 10 Methylene Chloride | 1 | 1.0 | 99.66 | 60-140 |
| 11 trans-1,2-Dichloro | 1 | 1 | 102.83 | 60-140 |
| 12 Methyl-t-Butyl Eth | 1 | 1 | 101.60 | 60-140 |
| 13 1,1-Dichloroethane | 1 | 1 | 108.17 | 60-140 |
| 14 2,2-Dichloropropan | 1 | 1 | 109.95 | 60-140 |
| 15 cis-1,2-Dichloroet | 1 | 0.9 | 91.87 | 60-140 |
| 16 2-Butanone | 5 | 4 | 81.97 | 60-140 |
| 17 Bromochloromethane | 1 | 1.0 | 96.46 | 60-140 |
| 19 Chloroform | 1 | 1 | 101.77 | 60-140 |
| 20 1,1,1-Trichloroeth | 1 | 1.0 | 96.17 | 60-140 |
| 21 Carbon Tetrachlori | 1 | 1.0 | 97.79 | 60-140 |
| 22 1,1-Dichloropropen | 1 | 1 | 100.62 | 60-140 |
| 24 Benzene | 1 | 1 | 105.66 | 60-140 |
| 25 1,2-Dichloroethane | 1 | 1 | 105.98 | 60-140 |
| 27 Trichloroethene | 1 | 1 | 105.26 | 60-140 |
| 28 1,2-Dichloropropan | 1 | 1 | 101.85 | 60-140 |
| 29 Dibromomethane | 1 | 1.0 | 95.27 | 60-140 |
| 31 Bromodichlorometha | 1 | 1.0 | 98.09 | 60-140 |
| 32 cis-1,3-Dichloropr | 1 | 1 | 100.76 | 60-140 |
| 33 4-Methyl-2-Pentano | 5 | 5 | 101.40 | 60-140 |
| 34 Toluene | 1 | 1.0 | 98.59 | 60-140 |
| 35 trans-1,3-Dichloro | 1 | 1 | 100.19 | 60-140 |
| 36 1,1,2-Trichloroeth | 1 | 1 | 100.39 | 60-140 |
| 37 Tetrachloroethene | 1 | 1.0 | 99.20 | 60-140 |
| 38 1,3-Dichloropropan | 1 | 1 | 101.60 | 60-140 |
| 39 2-Hexanone | 5 | 5 | 98.24 | 60-140 |
| 40 Dibromochlorometha | 1 | 0.9 | 90.49 | 60-140 |
| 41 1,2-Dibromoethane | 1 | 1.0 | 96.61 | 60-140 |

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AQUATEC, INC. Contract: 93206

Lab Code: AQUAI Case No.: 93206 SAS No.: SDG No.: 53766

Matrix Spike - EPA Sample No.: MSB

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC # | QC. LIMITS REC. |
|---|---|---|---|---|---|
| Vinyl Chloride | 10 | | 10 | 101 | 80-120 |
| Carbon Tetrachloride | 10 | | 10 | 112 | 80-120 |
| 1,2-Dichloroethane | 10 | | 11 | 103 | 80-120 |
| Benzene | 10 | | 10 | 106 | 80-120 |
| Trichloroethene | 10 | | 10 | 104 | 80-120 |
| 1,2-Dichloropropane | 10 | | 11 | 108 | 80-120 |
| cis-1,3-Dichloropropene | 10 | | 10 | 102 | 80-120 |
| 1,1,2-Trichloroethane | 10 | | 11 | 101 | 80-120 |
| 2-Hexanone | 25 | | 25 | 97 | 80-120 |
| Tetrachloroethene | 10 | | 10 | 98 | 80-120 |
| 1,2-Dibromoethane | 10 | | 10 | 105 | 80-120 |
| Bromoform | 10 | | 10 | 99 | 80-120 |
| 1,4-Dichlorobenzene | 10 | | 10 | 102 | 80-120 |

| COMPOUND | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
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# Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 13 outside limits

COMMENTS: _____

3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AQUATEC, INC. Contract: 93206

Lab Code: AQUAI Case No.: 93206 SAS No.: SDG No.: 53766

Matrix Spike - EPA Sample No.: MW45

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC # | QC. LIMITS REC. |
|---|---|---|---|---|---|
| Vinyl Chloride | 10 | 0 | 10 | 100 | 80-120 |
| Carbon Tetrachloride | 10 | 0 | 10 | 100 | 80-120 |
| 1,2-Dichloroethane | 10 | 0 | 10 | 100 | 80-120 |
| Benzene | 10 | 0 | 10 | 100 | 80-120 |
| Trichloroethene | 10 | 0 | 10 | 100 | 80-120 |
| 1,2-Dichloropropane | 10 | 0 | 11 | 110 | 80-120 |
| cis-1,3-Dichloropropene | 10 | 0 | 10 | 100 | 80-120 |
| 1,1,2-Trichloroethane | 10 | 0 | 10 | 100 | 80-120 |
| 2-Hexanone | 25 | 0 | 23 | 92 | 80-120 |
| Tetrachloroethene | 10 | 0 | 10 | 100 | 80-120 |
| 1,2-Dibromoethane | 10 | 0 | 10 | 100 | 80-120 |
| Bromoform | 10 | 0 | 9 | 90 | 80-120 |
| 1,4-Dichlorobenzene | 10 | 0 | 10 | 100 | 80-120 |

| COMPOUND | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC # | % RPD # | QC LIMITS RPD | QC LIMITS REC. |
|---|---|---|---|---|---|---|
| Vinyl Chloride | 10 | 10 | 100 | 0 | 13 | 80-120 |
| Carbon Tetrachloride | 10 | 10 | 100 | 0 | 13 | 80-120 |
| 1,2-Dichloroethane | 10 | 10 | 100 | 0 | 13 | 80-120 |
| Benzene | 10 | 10 | 100 | 0 | 13 | 80-120 |
| Trichloroethene | 10 | 10 | 100 | 0 | 13 | 80-120 |
| 1,2-Dichloropropane | 10 | 10 | 100 | 10 | 13 | 80-120 |
| cis-1,3-Dichloropropene | 10 | 10 | 100 | 0 | 13 | 80-120 |
| 1,1,2-Trichloroethane | 10 | 10 | 100 | 0 | 13 | 80-120 |
| 2-Hexanone | 25 | 23 | 92 | 0 | 13 | 80-120 |
| Tetrachloroethene | 10 | 10 | 100 | 0 | 13 | 80-120 |
| 1,2-Dibromoethane | 10 | 10 | 100 | 0 | 13 | 80-120 |
| Bromoform | 10 | 9 | 90 | 0 | 13 | 80-120 |
| 1,4-Dichlorobenzene | 10 | 10 | 100 | 0 | 13 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 13 outside limits
Spike Recovery: 0 out of 26 outside limits

COMMENTS: _____

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKM7

Lab Name: AQUATEC, INC. Contract: 93206

Lab Code: AQUAI Case No.: 93206 SAS No.: SDG No.: 53766

Lab File ID: LDUB001JV.D Lab Sample ID: VBLKM7

Date Analyzed: 09/29/95 Time Analyzed: 1349

GC Column:CAP ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: L

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | TIME ANALYZED |
|---|---|---|---|---|
| 01 | LFBLDUJ | LFBLDUJ | LDU001J2QV.D | 1307 |
| 02 | MW59 | 271849 | L271849I2V.D | 1842 |
| 03 | MW60 | 271850 | L271850I2V.D | 1915 |
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKK6

Lab Name: AQUATEC, INC. Contract: 93206

Lab Code: AQUAI Case No.: 93206 SAS No.: SDG No.: 53766

Lab File ID: LDUB001GV.D Lab Sample ID: VBLKK6

Date Analyzed: 09/22/95 Time Analyzed: 1950

GC Column:CAP ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: L

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | TIME ANALYZED |
|---|---|---|---|---|
| 01 | LFBLDUG | LFBLDUG | LDU002GQV.D | 1918 |
| 02 | TB913 | 270989 | L270989I2V.D | 2129 |
| 03 | TB914 | 270990 | L270990I2V.D | 2202 |
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKK5

Lab Name: AQUATEC, INC. Contract: 93206

Lab Code: AQUAI Case No.: 93206 SAS No.: SDG No.: 53766

Lab File ID: LDUB002FV.D Lab Sample ID: VBLKK5

Date Analyzed: 09/22/95 Time Analyzed: 0958

GC Column:CAP ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: L

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | TIME ANALYZED |
|---|---|---|---|---|
| 01 | LFBLDUF | LFBLDUF | LDUB001FV.D | 0908 |
| 02 | PT19 | 270988 | L270988I2V.D | 1603 |
| 03 | FHD | 270969 | L270969I4V.D | 1630 |
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJ8

Lab Name: AQUATEC, INC. Contract: 93206

Lab Code: AQUAI Case No.: 93206 SAS No.: SDG No.: 53766

Lab File ID: LDUB001CV.D Lab Sample ID: VBLKJ8

Date Analyzed: 09/20/95 Time Analyzed: 2023

GC Column:CAP ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: L

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | TIME ANALYZED |
|---|---|---|---|---|
| 01 | LFBLDUC | LFBLDUC | LDU001CQV.D | 1941 |
| 02 | BRNSRE | 270971R1 | L270971I3V.D | 0056 |
| 03 | MW27RE | 271006R1 | L271006I3V.D | 0128 |
| 04 | PT11RE | 270987R1 | L270987I3V.D | 0200 |
| 05 | MW45 | 270979 | L270979I2V.D | 0409 |
| 06 | MW45MS | 270979MS | L270979MSI2V.D | 0441 |
| 07 | MW45MSD | 270979MD | L270979MDI2V.D | 0512 |
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJ2

Lab Name: AQUATEC, INC. Contract: 93206

Lab Code: AQUAI Case No.: 93206 SAS No.: SDG No.: 53766

Lab File ID: LDUB001AV.D Lab Sample ID: VBLKJ2

Date Analyzed: 09/20/95 Time Analyzed: 0035

GC Column:CAP ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: L

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | TIME ANALYZED |
|---|---|---|---|---|
| 01 | LFBLDUA | LFBLDUA | LDU004AQV.D | 2339 |
| 02 | FHS | 270970 | L270970I2V.D | 0140 |
| 03 | BRNS | 270971 | L270971I2V.D | 0213 |
| 04 | MW27 | 271006 | L271006I2V.D | 0245 |
| 05 | MW36 | 270977 | L270977I2V.D | 0317 |
| 06 | MW40 | 270978 | L270978I2V.D | 0349 |
| 07 | MW47 | 270981 | L270981I2V.D | 0422 |
| 08 | MW48 | 270982 | L270982I2V.D | 0454 |
| 09 | MW48R | 270983 | L270983I2V.D | 0526 |
| 10 | MW56 | 270984 | L270984I2V.D | 0557 |
| 11 | PT11 | 270987 | L270987I2V.D | 0629 |
| 12 | MW448 | 270986 | L270986I2V.D | 0702 |
| 13 | MSB | 270991 | L270991V.D | 0804 |
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COMMENTS: