Environmental Protection Department
CIBA-GEIGY Corporation
Ardsley, New York 10502-2699
Telephone 914 478 3131

CIBA–GEIGY file

114668

April 10, 1989

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
4/10/89

Mr. Eugene W. Pine
Hydrogeologist and Project Officer
Hazardous Sites Cleanup Program
Bureau of Waste Management
Department of Environmental Resources
P. O. Box 2063
Harrisburg, Pennsylvania 17120

Re: Kimberton RI/FS Quarterly Sampling
February 28 - March 2, 1989

Dear Gene:

Please find enclosed, Groundwater Technology Inc.'s (GTI) report of sampling and analysis results for the first Quarter of 1989, as defined in Section 6 of the Kimberton site's RI/FS work plan. The QA/QC validation reports for this sampling event will be sent to your attention upon receipt.

Should you have questions concerning the enclosed information, please give me a call at 914-478-3131, X-2028.

Yours truly,

J. Stewart Johnson

J. Stewart Johnson
Manager, Environmental Protection

SK16:gg:16
Enc.

P. Tan, USEPA
J. Doyle, Monsey

AR302110

GROUNDWATER TECHNOLOGY, INC.
Chadds Ford West, Rt. 1, Chadds Ford, PA 19317 (215) 388-1466
Fax: (215) 388-6298

April 4, 1989

Mr. Stewart Johnson
Ciba-Geigy Corporation
444 South Mill River Road
Ardsley, NY 10502

**RE: Kimberton, Pennsylvania Groundwater Quality Laboratory Analytical Data**

Dear Stewart:

Groundwater Technology, Inc. (GTI) field personnel conducted the fourth round of the quarterly groundwater quality sampling program during the period 28 February - 2 March 1989 in concurrence with the residential treatment system monitoring program for the Kimberton, PA site. Groundwater sampling points included wells 5, 8, 11, 13, 14, 18, 21, 23, 27, 32, and 34. The samples were collected and analyzed for Total Dissolved Solids, Chloride, and Volatiles (EPA Method 624).

Monitoring wells 5, 8, 14, 18, 21, 27, and 34 exhibited non-detectable levels of VOC's. Monitoring well 33 has been omitted from the quarterly groundwater quality sampling program with the confirmed absence of VOC's, in accordance with Table 6-2 (deep well sampling) of the PADER and USEPA approved Work Plan for the RIFS. Volatile organic compounds were detected in monitoring wells 11 (1985 ppb), 13 (1184 ppb), 23 (22 ppb), and 32 (440 ppb). These concentrations are consistent with previously reported total VOC concentrations for each of these wells.

Blind duplicate groundwater samples were taken from monitoring wells 8 and 32 during this sampling episode. The laboratory analytical data for these duplicate samples were consistent with the respective analytical results for each monitoring well (MW8 = non-detectable; MW8 duplicate = non-detectable; MW32 = 440 ppb; MW32 duplicate = 429 ppb). Matrix spike and matrix spike duplicate samples were taken from monitoring well 13. The laboratory analytical results for the spiked sample and duplicate spike sample are consistent with the exception of tetrachloroethene (PCE) concentrations. The PCE concentration reported for MW13 matrix spike was <50 ppb, with the detection limit at 50 ppb. The PCE concentration reported for MW13 matrix spike duplicate was 80 ppb. Total VOC concentrations for each of the field blank, trip blank, and laboratory method blank were non-detectable.

A summary tabulation of the laboratory analytical results is attached for your review. The laboratory analytical data have not been validated to date. QA/QC data validation reports will be forwarded to you upon completion.

The next round of the quarterly groundwater sampling program is tentatively scheduled to take place during the week of 15 May 1989, in concurrence with the residential treatment system monitoring program. Should you have any questions regarding the quarterly groundwater quality monitoring program, feel free to contact me at this office.

Sincerely,
GROUNDWATER TECHNOLOGY, INC.

David N. Scotti

David N. Scotti
Geologist

Enclosures

cc: J. Doyle
B. Whitman
B. Stonelake
T. Maguire
M. Wrigley
S. Baggett
Project File (300-703-8321)

GROUNDWATER TECHNOLOGY, INC.

CIBA - GEIGY
QUARTERLY GROUNDWATER QUALITY SAMPLING PROGRAM
KIMBERTON, PENNSYLVANIA
28 FEBRUARY - 2 MARCH 1989
4TH QUARTER

| MONITORING WELLS SAMPLED | MW5 | MW8 | MW11 | MW13 | MW14 | MW18 | MW21 | MW23 | MW27 | MW32 | MW33# | MW34 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 5.90 | 6.30 | 6.50 | 6.80 | 6.05 | 5.40 | 5.75 | 6.90 | 5.05 | 6.80 | NA | 5.50 |
| TDS(mg/l) | 140 | 100 | 290 | 240 | 450 | 80 | 350 | 630 | 130 | 200 | NA | 120 |
| Chloride (mg/l) | 12 | 6 | 42 | 29 | 125 | 5 | 74 | 130 | 17 | 15 | NA | 31 |
| VOLATILE ORGANICS (ppb) | | | | | | | | | | | | |
| Benzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| Toluene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| Ethylbenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| Chloromethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | NA | <10 |
| Bromomethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | NA | <10 |
| 2-Chloroethylvinyl Ether | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | NA | <10 |
| Vinyl Chloride | <10 | <10 | 160 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | NA | <10 |
| Chloroethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | NA | <10 |
| Methylene Chloride | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | |
| 1,1-Dichloroethene | <5 | <5 | 15 | 14 | <5 | <5 | <5 | <5 | <5 | <5 | NA | |
| 1,1-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| Trans-1,2-Dichloroethene | <5 | <5 | 980 | 590 | <5 | <5 | <5 | 12 | <5 | 360 | NA | <5 |
| Chloroform | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| 1,2-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| 1,1,1-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| Carbon Tetrachloride | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| Dichlorobromomethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| 1,2-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| Trans-1,3-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| Trichloroethene | <5 | <5 | 830 | 580 | <5 | <5 | <5 | 10 | <5 | 80 | NA | <5 |
| Dibromochloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| 1,1,2-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| cis-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| Bromoform | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| 1,1,2,2-Tetrachloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| Tetrachloroethene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| Acrolien | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | NA | <100 |
| Acrylonitrile | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | NA | <100 |
| Fluorotrichloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | <5 |
| TOTAL VOLATILES | ND | ND | 1985 | 1184 | ND | ND | ND | 22 | ND | 440 | NA | ND |

Volatile organic analyses per GC/MS (EPA Method 624)
ND - NON DETECTABLE
NA - NOT ANALYZED
# Monitoring well 33 omitted from the quarterly groundwater quality sampling program in accordance with the PADER and USEPA approved Work Plan for the RIFS.

GROUNDWATER TECHNOLOGY, INC.

CIBA - GEIGY
QUARTERLY GROUNDWATER QUALITY SAMPLING PROGRAM
KIMBERTON, PENNSYLVANIA
13-20 DECEMBER 1988
3RD QUARTER

| MONITORING WELLS SAMPLED | MW5 | MW8 | MW11 | MW13 | MW14 | MW18 | MW21 | MW23 | MW27 | MW32 | MW33 | MW34 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 7.25 | 6.45 | 6.80 | 7.20 | 6.00 | 6.50 | 6.75 | 5.70 | 6.05 | 5.95 | 10.35 | 5.45 |
| TDS(mg/l) | 170 | 130 | 260 | 250 | 460 | 70 | 320 | 340 | 150 | 200 | 630 | 110 |
| Chloride (mg/l) | 10 | 12 | 46 | 31 | 142 | 4 | 63 | 63 | 15 | 18 | 187 | 31 |
| VOLATILE ORGANICS (ppb) | | | | | | | | | | | | |
| Benzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Toluene | <5 | <5 | 36 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Ethylbenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Chloromethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Bromomethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 2-Chloroethylvinyl Ether | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Vinyl Chloride | <10 | <10 | 160 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Chloroethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Methylene Chloride | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethene | <5 | <5 | 13 | 13 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Trans-1,2-Dichloroethene | <5 | 45 | 1300 | 730 | <5 | <5 | <5 | 21 | <5 | 470 | <5 | <5 |
| Chloroform | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,1-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Carbon Tetrachloride | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Dichlorobromomethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Trans-1,3-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Trichloroethene | <5 | 160 | 760 | 620 | <5 | <5 | <5 | 15 | <5 | 29 | <5 | <5 |
| Dibromochloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| cis-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Bromoform | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2,2-Tetrachloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Tetrachloroethene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Acrolien | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 |
| Acrylonitrile | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 |
| Fluorotrichloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| TOTAL VOLATILES | ND | 205 | 2269 | 1363 | ND | ND | ND | 36 | ND | 499 | ND | ND |

Volatile organic analyses per GC/MS (EPA Method 624)
ND - NON DETECTABLE
* Monitoring well 33 is expected to be omitted from the quarterly groundwater quality sampling program with the confirmed absence of VOC's.

GROUNDWATER TECHNOLOGY, INC.

CIBA - GEIGY
QUARTERLY GROUNDWATER QUALITY SAMPLING PROGRAM
KIMBERTON, PENNSYLVANIA
20-27 SEPTEMBER 1988
2ND QUARTER

| MONITORING WELLS SAMPLED | MW5 | MW8 | MW11 | MW13 | MW14 | MW18 | MW21 | MW23 | MW27 | MW30# | MW32 | MW33* | MW34** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 6.05 | 5.73 | 6.28 | 6.02 | 6.17 | 5.90 | 6.62 | 6.48 | 5.77 | NA | 5.97 | 7.51 | 5.37 |
| TDS(mg/l) | 120 | 160 | 310 | 220 | 500 | 80 | 450 | 390 | 200 | NA | 200 | 750 | 110 |
| Chloride (mg/l) | 12 | 6 | 45 | 32 | 150 | 3 | 69 | 65 | 8 | NA | 19 | 186 | 10 |
| VOLATILE ORGANICS (ppb) | | | | | | | | | | | | | |
| Benzene | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| Toluene | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| Chlorobenzene | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| Ethylbenzene | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| Chloromethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | NA | <10 | <10 | <10 |
| Bromomethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | NA | <10 | <10 | <10 |
| 2-Chloroethylvinyl Ether | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | NA | <10 | <10 | <10 |
| Vinyl Chloride | <10 | <10 | 230 | <10 | <10 | <10 | <10 | <10 | <10 | NA | <10 | <10 | <10 |
| Chloroethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | NA | <10 | <10 | <10 |
| Methylene Chloride | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| 1,1-Dichloroethene | <5 | <10 | 20 | 11 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| 1 1-Dichloroethane | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | |
| ns-1,2-Dichloroethene | <5 | <10 | 1100 | 620 | <10 | <10 | <10 | 20 | <10 | NA | 380 | <5 | |
| Chloroform | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| 1,2-Dichloroethane | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| 1,1,1-Trichloroethane | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| Carbon Tetrachloride | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| Dichlorobromomethane | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| 1,2-Dichloropropane | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| Trans-1,3-Dichloropropane | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| Trichloroethene | <5 | <10 | 850 | 500 | <10 | <10 | <10 | 10 | <10 | NA | 230 | <5 | <10 |
| Dibromochloromethane | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| 1,1,2-Trichloroethane | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| cis-1,3-Dichloropropene | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| Bromoform | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| 1,1,2,2-Tetrachloroethane | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| Tetrachloroethene | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| Acrolien | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | NA | <100 | <100 | <100 |
| Acrylonitrile | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | NA | <100 | <100 | <100 |
| Fluorotrichloromethane | <5 | <10 | <10 | <5 | <10 | <10 | <10 | <10 | <10 | NA | <5 | <5 | <10 |
| TOTAL VOLATILES | ND | ND | 2200 | 1131 | ND | ND | ND | 30 | ND | NA | 610 | ND | ND |

Volatile organic analyses per GC/MS (EPA Method 624)

ND - NON DETECTABLE

NA - NOT ANALYZED

# Monitoring well 30 omitted from the quarterly groundwater quality sampling program as per the PADER and USEPA approved Work Plan for the RIFS.

- Monitoring well 33 was installed in July, 1988 and is expected to be omitted from the quarterly groundwater quality sampling program with the confirmed absence of VOC's.

** Monitoring well 34 was installed in July, 1988 and replaces well 28 in the quarterly groundwater quality sampling program to more accurately reflect an approximate perimeter of the established VOC plume.

GROUNDWATER TECHNOLOGY, INC.

CIBA - GEIGY
QUARTERLY GROUNDWATER QUALITY SAMPLING PROGRAM
KIMBERTON, PENNSYLVANIA
21 - 27 JUNE 1988
1ST QUARTER

| MONITORING WELLS SAMPLED | MW5 | MW8 | MW11 | MW13 | MW14 | MW16# | MW18 | MW21 | MW23 | MW27 | MW28* | MW30 | MW32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 6.9 | 5.88 | 6.51 | 7.52 | 6.30 | 6.37 | 5.75 | 6.35 | 6.79 | 5.7 | 5.84 | 8.13 | 7.54 |
| TDS(mg/l) | 210 | 110 | 280 | 240 | 520 | 320 | 90 | 390 | 350 | 170 | 130 | 200 | 210 |
| Chloride (mg/l) | 9 | 16 | 46 | 28 | 54 | 38 | 2 | 71 | 58 | 11 | 20 | 41 | 17 |
| VOLATILE ORGANICS (ppb) | | | | | | | | | | | | | |
| Benzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Toluene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Ethylbenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Chloromethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Bromomethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 2-Chloroethylvinyl Ether | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Vinyl Chloride | <10 | <10 | 230 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| [illegible]oethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| [illegible]lene Chloride | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | 5 | <5 | <5 | <5 | <5 |
| [illegible]Dichloroethene | <5 | <5 | 15 | 10 | <5 | 13 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Trans-1,2-Dichloroethene | <5 | <5 | 1000 | 590 | <5 | 600 | <5 | <5 | 23 | <5 | 130 | <5 | 390 |
| Chloroform | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,1-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Carbon Tetrachloride | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Dichlorobromomethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Trans-1,3-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Trichloroethene | <5 | <5 | 930 | 610 | <5 | 730 | <5 | <5 | 17 | <5 | 410 | <5 | 330 |
| Dibromochloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| cis-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Bromoform | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2,2-Tetrachloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Tetrachloroethene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Acrolien | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 |
| Acrylonitrile | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 |
| Fluorotrichloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| TOTAL VOLATILES | ND | ND | 2175 | 1210 | ND | 1343 | ND | ND | 40 | ND | 540 | ND | 720 |

Volatile organic analyses per GC/MS (EPA Method 624)

ND NON DETECTABLE

Monitoring well 16 is not part of the quarterly groundwater quality sampling program but was sampled for the analytical comparison with deep well 32.

* Monitoring well 28 is to be subsequently replaced in the quarterly groundwater quality sampling program by monitoring well 34 so that the approximate perimeter of the VOC plume is more accurately defined.