

**LETTER REPORT
DATA COMPARISON AND EVALUATION REPORT**

**TUTU WELLFIELD SITE
ST, THOMAS, U.S. VIRGIN ISLANDS**

Prepared for

**U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, D.C. 20460**

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Data Prepared	: June 8, 1993

CDM FEDERAL PROGRAMS CORPORATION
a subsidiary of Camp Dresser & McKee Inc.

June 8, 1993

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PROJECT: TES V, EPA Contract No. 68-W9-0002
Work Assignment: CO2048
Tutu Wellfield Site
St. Thomas, U.S. Virgin Islands

DOCUMENT NO. TES5-CO2048-LR-CXLH

SUBJECT: Data Comparison and Evaluation Report

Dear Ms. Kwan:

Per your request CDM FEDERAL PROGRAMS CORPORATION (CDM Federal) has prepared this data comparison report for the Tutu Wellfield site in St. Thomas, U.S. Virgin Islands. As we discussed, one package of data is still outstanding. We will update this report upon receipt of the data.

1.0 INTRODUCTION

CDM Federal received Work Assignment No. C02048 under TES V Contract No. 69-W9-0002 to provide enforcement support for EPA Region II during the Remedial Investigation/Feasibility Study (RI/FS) at the Tutu Wellfield Site in St. Thomas, U.S. Virgin Islands.

The purpose of this RI/FS is to delineate the potential sources, the horizontal and vertical extent, and potential migration pathways of petroleum hydrocarbon products and other organic and inorganic contamination in soil and groundwater at the Tutu Wellfield site.

This report presents a comparison of the analytical data results presented by CDM Federal and the PRP contractor, Geraghty and Miller (G&M) from split sampling events which occurred from July 1992 to October 1992.

2.0 SUMMARY OF SAMPLING ACTIVITIES

In order to investigate the sources and delineate the contamination, subsurface borings were drilled and sampled, shallow and deep monitoring wells were installed and sampled, and surface samples were collected. To corroborate G&M's analytical results, CDM Federal split seven subsurface soil samples from borings and monitoring wells, seven surface soil samples, and four groundwater samples.

Table 1 is a summary of those split samples taken on July 22, 24, and 30, 1992. Subsurface soil samples were split with G&M, from well borings for MW-8, MW-6D, and MW-9 and from soil borings B-6 and B-1. On August 11, CDM Federal personnel collected split subsurface soil samples from borings at locations MW-5 in the Tillet Garden Art Center area, and B-12 in the O'Henry Dry Cleaner area (Table 2).

On August 19, CDM Federal personnel split 100% of the surface soil samples taken by G&M at the Tutu site (Table 3).

Between September 29 and October 1, CDM Federal split 5 aqueous samples (4 groundwater and 1 field blank) with G&M (Table 4).

CDM Federal's samples were analyzed via Routine Analytical Services (RAS) for Target Compounds List (TCL) volatile organic compounds (VOC), TCL semivolatile organic compounds (SVOCs); and Target Analyte List (TAL) metals and cyanide. Subsurface soil and groundwater samples were also analyzed via Special Analytical Services (SAS) for methyl-tertiary-butyl-ether (MTBE), 1,2-dibromoethane, n-propylbenzene and total petroleum hydrocarbons (TPH).

3.0 DATA COMPARISON

In general, the data presented in Tables 5, 6, and 7 indicate that the analytical results of the CDM Federal split samples and the G&M samples are comparable. Two types of discrepancies were observed. These were cases where:

- 1) A G&M sample concentration was reported as not detected while the split sample concentration was above the contract required limit.
- 2) Both sample and split concentrations were detected but their concentrations differed by more than an order of magnitude.

In general these discrepancies constituted a small percentage of the total split samples compared. The following sections discuss the data, by contaminant group, where CDM Federal's and G&M's data differed.

Volatile Organic Compound (VOCs) Data

LABA (FRONT)
In sample B-6 (4-8 ft), acetone and 2-butanone were detected at 370 ug/kg and 59 ug/kg respectively by G&M but were undetected by CDM Federal. In sample SS-3, xylene was detected at 19 ug/kg by G&M but undetected by CDM Federal (Table 5).

Semi-Volatile Organic Compounds (SVOCs)

The discrepancies found were associated with common laboratory contaminants (Table 6).

Total Petroleum Hydrocarbons (TPHs)

- Behind (LABA)
In sample B-1 (4-8 ft) CDM Federal's data revealed a TPH concentration of 60.2 ug/kg while G&M's was undetected. (Table 5).

Inorganics

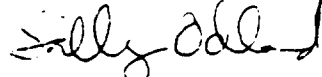
Split sample data revealed two inorganics, cadmium and mercury at concentrations of 2.0 ug/kg and 0.25 mg/kg in SS-6. Vanadium was detected in SS-1 and SS-4 at 151 ug/kg and 107 ug/kg respectively. All five of these concentrations were detected above the contract required detection limit in CDM Federal's samples but were undetected in G&M's samples. Cyanide was detected above the contract required limit in three of G&M's samples at concentrations of 1.1 ug/kg, 1.2, ug/kg, and 0.96 ug/kg and mercury was detected at 0.19 ug/kg in one of G&M's samples but were undetected in CDM Federal's samples (Table 7).

There were numerous discrepancies between sample and split sample data for field blank sample SS-7. Many of G&M's inorganic concentrations were at least two orders of magnitude higher than CDM Federal's.

In summary, the analytical results from split samples generally compare well with results obtained by the PRP laboratory. Except for the data from a surface soil field blank, the analytical discrepancies noted were minor. The Geraghty and Miller analytical results appear therefore to be reliable. Attachment 1 presents the data validation qualifers used in Tables 5, 6, and 7.

If you have any questions regarding this report, please do not hesitate to call me at (212) 393-9634.

Sincerely,
CDM Federal Programs Corporation



Sally Odland
Work Assignment Manager

TABLE 1
TUTU WELLFIELD SITE
SUMMARY OF SPLIT SAMPLE INFORMATION
July 22, 24 and 30, 1992 Shipments

Sample Location	Sample Matrix	Volatiles	BNA-Extractables	Metals	Cyanide	MTBE n-propylbenzene 1,2-dibromoethane	TPH	Date/Time of Sample Collection	Sample Remarks	QC Remarks
TU-MW-8	Soil	BHR65	BHR65	MBES58	MBE558	7382B-01-01	7382B-02-01	7/20/92 @ 1015	2-4' interval	---
TU-MW-6D	Soil	BHR64	BHR64	MBES57	MBE557	7382B-01-02	7382B-02-02	7/21/92 @ 1500	0-2' interval	MS/MSD
MW-9	Soil	BHR63	BHR63	MBES56	MBE556	7382B-01-03	7382B-02-03	7/24/92 @ 1030	0-4' interval	---
FB072992	Aqueous	BHR69	BHR69	105429	105429	7382B-01-04	7382B-02-04	7/29/92 @ 0830	---	Field Blank
B6	Soil	BHR67	BHR67	105426	105426	7382B-01-06	7382B-02-06	7/30/92 @ 0925	4-8' interval	---
B1	Soil	BHR66	BHR66	105427	105427	732B-01-07	7382B-02-07	7/30/92 @ 1300	4-8' interval	---

TABLE 2
TUTU WELLFIELD SITE
SUMMARY OF SPLIT SAMPLE INFORMATION
August 11, 1992 Shipments

Sample Location	Sample Matrix	Volatiles	BNA-Extractables	Metals	Cyanide	MTBE n-propylbenzene 1,2-dibromoethane	TPH	Date/Time of Sample Collection	Sample Remarks	QC Remarks
Field Blank	Rinse	BHR60	BHR60	MBES70	MBE558	7382B-01-60	7382B-02-60	8/11/92 @ 1400	---	Field Blank
B-12	Soil	BHR61	BHR61	MBES71	MBE571	7382B-01-61	7382B-02-61	8/11/92 @ 1100	6-8' interval	MS/MSD
MW-5	Soil	BHR62	BHR62	MBES72	MBE572	7382B-01-62	7382B-02-62	8/11/92 @ 1700	1-4' interval	---

TABLE 3
TUTU WELLFIELD SITE
SUMMARY OF SURFACE SOIL SPLIT SAMPLES
August 19, 1992 Shipments

Sample Location	Sampling Date/Time	Sample Matrix	VOA Sample No.	BNAs Sample No.	Inorganic Sample No.
SS-1	8/19/92 @ 0930	Soil	NA	BFY-NS	MBXS-33
SS-2	8/19/92 @ 0945	Soil	NA	BFY-NS	MBXS-34
SS-3	8/19/92 @ 1030	Soil	BFY-35	BFY-35	MBXS-35
SS-4	8/19/92 @ 1945	Soil	BFY-36	BFY-36	MBXS-36
SS-5	8/19/92 @ 1130	Soil	BFY-37	BFY-37	MBXS-37
SS-6	8/19/92 @ 1200	Soil	BFY-38	BFY-38	MBXS-38
SS-7	8/19/92 @ 1330	Rinsate	BFY-39	BFY-39	MBXS-39
SS-8	8/19/92 @ 1345	Soil	BFY-40	BFY-40	MBXS-40

NA - Not Analyzed

TABLE 4
TUTU WELLFIELD SITE
SUMMARY OF SPLIT SAMPLE INFORMATION
August 11, 1992 Shipments

Sample Location	Sample Matrix	Volatiles	BNA-Extractables	Metals	Cyanide	MTBE n-propylbenzene 1,2-dibromoethane	TPH	Date/Time of Sample Collection	Sample Remarks	QC Remarks
FB0929	Rinset	BHB52	BHB52	MBQG61	MBQG61	7511B-02-02	7511B-01-01	9/29/92 @ 1040	---	Field Blank
RTB-01	Aqueous	BHB51	NA	NA	NA	7511B-02-01	NA	9/29/92 @ 0730	---	Trip Blank
MW6R	Aqueous	BHB53	BHB53	MBQG60	MBQG60	7511B-02-03	7511B-01-02	9/29/92 @ 1315	---	---
RTB-02	Aqueous	BHB54	NA	NA	NA	7511B-02-04	NA	9/30/92 @ 1200	---	Trip Blank
MW4	Aqueous	BHB55	BHB55	MBQG59	MBQG59	7511B-02-05	7511B-01-03	9/30/92 @ 1330	---	MS/MSD
MW5	Aqueous	BHB56	BHB56	MBQG58	MBQG58	7511B-02-06	7511B-01-04	10/1/92 @ 1000	---	---
MW14	Aqueous	BHB57	BHB57	MBQG57	MBQG57	7511B-02-07	7511B-0-05	10/1/92 @ 1300	---	---

NA - Not Analyzed

TABLE 5

TUTU WELLFIELD
WATER (ug/L), SOIL (ug/kg)
CASE NO. 18503 AND 73828-01 VOLATILE

DATE COLLECTED:	7/24/92	7/24/92	7/21/92	7/21/92	7/20/92	7/20/92
CASE/SAS NO:	18503		18503		18503	
SAMPLE LOCATION:	MW-9 (0-4 ft)	MW-9 (0-4 ft)	MW-60	MW-60	MW-8 (2-4 ft)	MW-8 (2-4 ft)
SAMPLE NO:	BHR-63	MW-9 PRP	BHR-64	MW-60 PRP	BHR-65	ME-8 PRP
MATRIX:	SOIL	SOIL	SOIL	SOIL **	SOIL	SOIL
Chloromethane	10 U	11 U	11 U		11 U	11 U
Bromomethane	10 U	11 U	11 U		11 U	11 U
Vinyl Chloride	10 U	11 U	11 U		11 U	11 U
Chloroethane	10 U	11 U	11 U		11 U	11 U
Methylene Chloride	25 UJ	18 U	26 UJ		25 UJ	25
Acetone	70 UJ	11 U	55 UJ		53 UJ	27 U
Carbon Disulfide	10 U	11 U	11 U		11 U	11 U
1,1-Dichloroethene	10 U	11 U	11 U		11 U	11 U
1,1-Dichloroethane	10 U	11 U	11 U		11 U	11 U
1,2-Dichloroethene (total)	10 U	11 U	11 U		11 U	11 U
Chloroform	10 U	11 U	11 U		11 U	11 U
1,2-Dichloroethane	10 U	11 U	11 U		11 U	11 U
2-Butanone	10 U	11 U	11 U		11 U	11 U
1,1,1-Trichloroethane	10 U	11 U	11 U		11 U	11 U
Carbon Tetrachloride	10 U	11 U	11 U		11 U	11 U
Bromodichloromethane	10 U	11 U	11 U		11 U	11 U
1,2-Dichloropropane	10 U	11 U	11 U		11 U	11 U
cis-1,3-Dichloropropene	10 U	11 U	11 U		11 U	11 U
Trichloroethene	10 J	11 U	11 U		11 U	11 U
Dibromochloromethane	10 U	11 U	11 U		11 U	11 U
1,1,2-Trichloroethane	10 U	11 U	11 U		11 U	11 U
Benzene	10 U	11 U	11 U		11 U	11 U
trans-1,3-Dichloropropene	10 U	11 U	11 U		11 U	11 U
Bromoform	10 UJ	11 U	11 UJ		11 UJ	11 U
4-Methyl-2-Pentanone	10 U	11 U	11 U		11 U	11 U
2-Hexanone	10 U	11 U	11 U		11 U	11 U
Tetrachloroethene	10 U	11 U	11 U		11 U	2 J
1,1,2,2-Tetrachloroethane	10 U	11 U	11 U		11 U	11 U
Toluene	10 U	11 U	11 U		11 U	1 J
Chlorobenzene	10 U	11 U	11 U		11 U	11 U
Ethylbenzene	10 U	11 U	11 U		11 U	11 U
Styrene	10 U	11 U	11 U		11 U	11 U
Xylene (total)	10 U	11 U	11 U		11 U	11 U
1,2-Dibromoethane(EDB)	11 U	5 U	11 U		11 U	5.6 U
Methyl Tertiary Butyl Ether	11 U	10 U	11 U		11 U	11 UJ
N-Propylbenzene	11 U	5 U	11 U		11 U	5.6 UJ
TOTAL PETROLEUM HYDROCARBONS	163.0	230.0 D	194.0		69.3	22.0 U

NOTE: ** - Location MW-60 was later abandoned and Geraghty and Miller did not provide the data.

TABLE 5 Continued

TUTU WELLFIELD
 WATER (ug/L), SOIL (ug/kg)
 CASE NO. 18544, 73828-01 AND 73828-02 VOLATILE

DATE COLLECTED: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	7/30/92 18544 B-1 (4-8 ft) BHR-66 SOIL	7/30/92 B-1 (4-8 ft) B-1 PRP SOIL	7/30/92 18544 B-6 (4-8 ft) BHR-67 SOIL	7/30/92 B-6 (4-8 ft) B-6 PRP SOIL	7/29/92 18544 FB 7/29 BHR-69 WATER	7/29/92 FB 7/29 FB 7/29 PRP WATER
Chloromethane	11 U	38 U	11 U	29 U	10 U	10 U
Bromomethane	11 U	38 U	11 U	29 U	10 U	10 U
Vinyl Chloride	11 U	38 U	11 U	29 U	10 U	10 U
Chloroethane	11 U	38 UJ	11 U	29 U	10 U	10 U
Methylene Chloride	18 UJ	38 U	17 UJ	29 U	2 BJ	1 J
Acetone	11 U	16 J	11 U	370	10 UJ	10 UJ
Carbon Disulfide	11 U	38 U	11 U	29 U	10 U	5 J
1,1-Dichloroethene	11 U	38 U	11 U	29 U	10 U	10 U
1,1-Dichloroethane	11 U	38 U	11 U	29 U	10 U	10 U
1,2-Dichloroethene (total)	11 U	38 U	11 U	29 U	10 U	10 U
Chloroform	11 U	38 U	11 U	29 U	10 U	10 U
1,2-Dichloroethane	11 U	38 U	11 U	29 U	10 U	10 U
2-Butanone	11 UJ	38 U	11 UJ	59	10 U	10 UJ
1,1,1-Trichloroethane	11 U	38 U	11 U	29 U	10 U	10 U
Carbon Tetrachloride	11 U	38 U	11 U	29 U	10 U	10 U
Bromodichloromethane	11 U	38 U	11 U	29 U	10 U	10 U
1,2-Dichloropropane	11 U	38 U	11 U	29 U	10 U	10 U
cis-1,3-Dichloropropene	11 U	38 U	11 U	29 U	10 U	10 U
Trichloroethene	1 J	38 U	11 U	29 U	10 U	10 U
Dibromochloromethane	11 U	38 U	11 U	29 U	10 U	10 U
1,1,2-Trichloroethane	11 U	38 U	11 U	29 U	10 U	10 U
Benzene	11 U	38 U	11 U	29 U	10 U	10 U
trans-1,3-Dichloropropene	11 U	38 U	11 U	29 U	10 U	10 U
Bromoform	11 U	38 U	11 U	29 U	10 U	10 U
4-Methyl-2-Pentanone	11 U	38 U	11 U	29 U	10 U	10 U
2-Hexanone	11 U	38 U	11 U	29 U	10 U	10 U
Tetrachloroethene	11 U	38 U	11 U	29 U	10 U	10 U
1,1,2,2-Tetrachloroethane	11 U	38 U	11 U	29 U	10 U	10 U
Toluene	11 U	38 U	11 U	29 U	10 U	10 U
Chlorobenzene	11 U	38 U	11 U	29 U	10 U	10 U
Ethylbenzene	11 U	38 U	11 U	29 U	10 U	10 U
Styrene	11 U	38 U	11 U	29 U	10 U	10 U
Xylene (total)	11 U	38 U	11 U	29 U	10 U	10 U
1,2-Dibromoethane(EDB)	11 U	19 U	11 U	15 U	10 U	5 U
Methyl Tertiary Butyl Ether	11 U	38 UJ	11 U	30 UJ	10 U	10 U
N-Propylbenzene	11 U	19 UJ	11 U	15 UJ	10 U	5 UJ
TOTAL PETROLEUM HYDROCARBONS	60.2	77.0 U	69.6	170.0	3.0 U	0.5 U

TABLE 5 Continued

TUTU WELLFIELD
WATER (ug/L), SOIL (ug/kg)
CASE 18559 Volatile

DATE: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	8/11/92 18559 FB 8/11 BHR60 WATER	8/11/92 FB 8/11 FB 8/11 PRP WATER	8/11/92 18559 B-12(6-8 ft) BHR61 SOIL	8/11/92 B-12(6-8ft) B-12 PRP SOIL	8/11/92 18559 MW-5(0-4ft) BHR62 SOIL	8/11/92 MW-5(0-4ft) MW-5 PRP SOIL
Chloromethane	10 UJ	10 U	12 U	11 U	10 U	11 U
Bromomethane	10 U	10 U	12 U	11 U	10 U	11 U
Vinyl Chloride	10 U	10 U	12 U	11 U	10 U	11 U
Chloroethane	10 U	10 U	12 U	11 U	10 U	11 U
Methylene Chloride	2 BJ	10 U	28 UJ	11 UJ	27 UJ	11 UJ
Acetone	10 U	10 U	25 UJ	13 UJ	31 UJ	11 UJ
Carbon Disulfide	10 U	10 U	12 U	11 U	10 U	11 U
1,1-Dichloroethene	10 U	10 U	12 U	11 U	10 U	11 U
1,1-Dichloroethane	10 U	10 U	12 U	11 U	10 U	11 U
1,2-Dichloroethene (total)	10 U	10 U	12 U	11 U	10 U	11 U
Chloroform	10 U	10 U	12 U	11 U	10 U	11 U
1,2-Dichloroethane	10 U	10 U	12 U	11 U	10 U	11 U
2-Butanone	10 U	10 U	12 U	11 UJ	10 U	11 UJ
1,1,1-Trichloroethane	10 U	10 U	12 U	11 U	10 U	11 U
Carbon Tetrachloride	10 U	10 U	12 U	11 U	10 U	11 U
Bromodichloromethane	10 U	10 U	12 U	11 U	10 U	11 U
1,2-Dichloropropane	10 U	10 U	12 U	11 U	10 U	11 U
cis-1,3-Dichloropropene	10 U	10 U	12 U	11 U	10 U	11 U
Trichloroethene	10 U	10 U	12 U	11 U	10 U	11 U
Dibromochloromethane	10 U	10 U	12 U	11 U	10 U	11 U
1,1,2-Trichloroethane	10 U	10 U	12 U	11 U	10 U	11 U
Benzene	10 U	10 U	12 U	11 U	10 U	11 U
trans-1,3-Dichloropropene	10 U	10 U	12 U	11 U	10 U	11 U
Bromoform	10 U	10 U	12 U	11 U	10 U	11 U
4-Methyl-2-Pentanone	10 U	10 U	12 U	11 UJ	10 U	11 UJ
2-Hexanone	10 U	10 U	12 U	11 UJ	10 U	11 UJ
Tetrachloroethene	10 U	10 U	12 U	11 U	10 U	11 U
1,1,2,2-Tetrachloroethane	10 U	10 U	12 U	11 U	10 U	11 U
Toluene	10 U	10 U	12 U	11 U	10 U	11 U
Chlorobenzene	10 U	10 U	12 U	11 U	10 U	11 U
Ethylbenzene	10 U	10 U	12 U	11 U	10 U	11 U
Styrene	10 U	10 U	12 U	11 U	10 U	11 U
Xylene (total)	10 U	10 U	12 U	11 U	10 U	11 U
1,2-Dibromoethane (EDB)	10 U	5 U	11 U	5.7 U	11 U	5.3 U
tert-Butyl methyl ether	10 U	10 UJ	11 U	11 UJ	11 U	11 UJ
N-Propylbenzene	10 U	5 UJ	11 U	5.7 UJ	11 U	5.3 UJ
TOTAL PETROLEUM HYDROCARBONS	3.2	0.5 U	26.4	25.0	1210.0	590.0 U

TABLE 5 Continued

TUTU WELLFIELD
VOLATILE ORGANIC DATA
WATER (ug/L), SOIL (ug/kg)
CASE NO. 18648 VOLATILE

DATE COLLECTED: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	8/19/92 18648 SS-3 BFY35 SOIL	8/19/92 SS-3 SS-3 PRP SOIL	8/19/92 18648 SS-4 BFY36 SOIL	8/19/92 SS-4 SS-4 PRP SOIL	8/19/92 18648 SS-5 BFY37 SOIL	8/19/92 SS-5 SS-5 PRP SOIL	8/19/92 18648 SS-6 BFY38 SOIL	8/19/92 SS-6 SS-6 PRP SOIL	8/19/92 18648 SS-7 FB BFY-39 WATER	8/19/92 SS-7 FB SS-7 PRP WATER
Chloromethane	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 UJ	12 U
Bromomethane	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
Vinyl Chloride	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
Chloroethane	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
Methylene Chloride	84 UJ	22	22 UJ	8 J	16 UJ	10 J	26 UJ	22	2 BJ	20
Acetone	91 UJ	13 U	14 UJ	11 U	11 UJ	11 U	12 UJ	11 U	10 UJ	12 U
Carbon Disulfide	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
1,1-Dichloroethene	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
1,1-Dichloroethane	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
1,2-Dichloroethene (total)	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
Chloroform	7 J	13 U	2 J	11 U	2 J	11 U	12 U	11 U	10 U	12 U
1,2-Dichloroethane	65 UJ	13 U	11 UJ	11 U	11 UJ	11 U	12 UJ	11 U	10 U	12 U
2-Butanone	54 J	35	11 U	11 U	11 U	11 U	12 U	11 U	10 UJ	12 U
1,1,1-Trichloroethane	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
Carbon Tetrachloride	65 U	13 U	11 U	11 UJ	11 U	11 UJ	12 U	11 U	10 U	12 U
Bromodichloromethane	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
1,2-Dichloropropane	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
cis-1,3-Dichloropropene	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
Trichloroethene	65 J	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
Dibromochloromethane	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
1,1,2-Trichloroethane	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
Benzene	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
trans-1,3-Dichloropropene	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
Bromoform	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
4-Methyl-2-Pentanone	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 UJ	12 U
2-Hexanone	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 UJ	12 U
Tetrachloroethene	65 U	13 U	11 U	11 U	11 U	11 U	12 U	1 J	10 U	12 U
1,1,2,2-Tetrachloroethane	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
Toluene	65 U	4 J	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
Chlorobenzene	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
Ethylbenzene	65 U	3 J	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
Styrene	65 U	13 U	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
Xylene (total)	65 U	19	11 U	11 U	11 U	11 U	12 U	11 U	10 U	12 U
1,2-Dibromoethane(EDB)		6.4U		5.5 U		5.5 U		5.7 U		5.8 U
Methyl Tertiary Butyl Ether		13 UJ		11 UJ		11 UJ		11 UJ		12 UJ
N-Propylbenzene		6.4UJ		5.5 UJ		5.5 UJ		5.7 UJ		5.8 UJ

TUTU WELLFIELD
WATER (ug/L), SOIL (ug/kg)
CASE NO. 18810 VOLATILE

TABLE 5 Continued

DATE COLLECTED: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	9/29/92 18810 RTB-01 BHB-51 WATER	9/29/92 RTB-01 RTB-01 PRP WATER	9/29/92 18810 FB-09/29 BHB-52 WATER	9/29/92 FB-09/29 FB-09/29 PRP WATER	9/29/92 18810 MW-6R BHB-53 WATER	9/29/92 MW-6R MW-6R PRP WATER	9/30/92 18810 RTB-02 BHB-54 WATER	9/30/92 RTB-02 RTB-02 PRP WATER
Chloromethane	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
Bromomethane	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
Chloroethane	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U	0 R	10 U
Methylene Chloride	5 J	3 BJ	10 U	4 BJ	10 U	10 U	1 J	4 BJ
Acetone	10 U	7 J	10 U	6 J	10 U	10 UJ	0 R	7 J
Carbon Disulfide	10 U	10 U	10 U	10 U	10 U	10 U	0 R	1 J
1,1-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	10 U	34	39	0 R	10 U
Chloroform	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
2-Butanone	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	0 R	10 UJ
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
1,2-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
Trichloroethene	10 J	10 U	10 U	10 U	4 J	3 J	0 R	10 U
Dibromochloromethane	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
Benzene	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
Bromoform	10 UJ	10 UJ	10 U	10 UJ	10 U	10 UJ	0 R	10 UJ
4-Methyl-2-Pentanone	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
2-Hexanone	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
Tetrachloroethene	10 U	10 U	10 U	10 U	14	13	0 R	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
Toluene	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
Chlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
Ethylbenzene	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
Styrene	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
Xylene (total)	10 U	10 U	10 U	10 U	10 U	10 U	0 R	10 U
1,2-Dibromoethane(EDB)	10 U	5 U	10 U	5 U	10 U	5 U	10 U	5 U
Methyl Tertiary Butyl Ether	10 U	10 U	10 U	10 U	2 J	10 U	10 U	10 U
N-Propylbenzene	10 U	5 UJ	10 U	5 UJ	10 U	5 UJ	10 U	5 UJ

TUTU WELLFIELD
WATER (ug/L), SOIL (ug/kg)
CASE NO. 18810 VOLATILE

TABLE 5 Continued

DATE COLLECTED: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	9/30/92 18810 MW-4 BHB-55 WATER	9/30/92 MW-4 MW-4 PRP WATER	10/1/92 18810 MW-5 BHB-56 WATER	10/1/92 MW-5 MW-5 PRP WATER	10/1/92 18810 MW-14 BHB-57 WATER	10/1/92 MW-14 MW-14 PRP WATER
Chloromethane	0 R	10 U	0 R	500 UJ	0 R	10 U
Bromomethane	0 R	10 U	0 R	500 U	0 R	10 U
Vinyl Chloride	0 R	10 U	0 R	500 U	18 J	17
Chloroethane	0 R	10 U	0 R	500 U	0 R	10 U
Methylene Chloride	0 R	10 U	64 J	500 U	1 J	10 U
Acetone	0 R	10 UJ	0 R	500 UJ	0 R	10 UJ
Carbon Disulfide	0 R	10 U	0 R	500 U	0 R	3 J
1,1-Dichloroethene	0 R	10 U	0 R	500 U	0 R	10 U
1,1-Dichloroethane	0 R	10 U	0 R	500 U	0 R	10 U
1,2-Dichloroethene (total)	78 J	86	30 J	500 U	38 J	44
Chloroform	0 R	10 U	0 R	500 U	0 R	10 U
1,2-Dichloroethane	0 R	10 U	0 R	500 U	0 R	10 U
2-Butanone	0 R	10 UJ	0 R	500 UJ	0 R	10 UJ
1,1,1-Trichloroethane	0 R	10 U	0 R	500 U	0 R	10 U
Carbon Tetrachloride	0 R	10 U	0 R	500 U	0 R	10 U
Bromodichloromethane	0 R	10 U	0 R	500 U	0 R	10 U
1,2-Dichloropropane	0 R	10 U	0 R	500 U	0 R	10 U
cis-1,3-Dichloropropene	0 R	10 U	0 R	500 U	0 R	10 U
Trichloroethene	7 J	8 J	0 R	500 U	0 R	10 U
Dibromochloromethane	0 R	10 U	0 R	500 U	0 R	10 U
1,1,2-Trichloroethane	0 R	10 U	0 R	500 U	0 R	10 U
Benzene	0 R	10 U	1200 J	1000 U	0 R	10 U
trans-1,3-Dichloropropene	0 R	10 U	0 R	500 U	0 R	10 U
Bromoform	0 R	10 UJ	0 R	500 UJ	0 R	10 UJ
4-Methyl-2-Pentanone	0 R	10 U	0 R	500 U	0 R	10 U
2-Hexanone	0 R	10 U	0 R	500 U	0 R	10 U
Tetrachloroethene	27 J	25	0 R	500 U	1 J	1 J
1,1,2,2-Tetrachloroethane	0 R	10 U	0 R	500 U	0 R	10 U
Toluene	0 R	10 U	180 J	180 J	0 R	10 U
Chlorobenzene	0 R	10 U	0 R	500 U	0 R	10 U
Ethylbenzene	0 R	10 U	1100 J	930	0 R	10 U
Styrene	0 R	10 U	0 R	500 U	0 R	10 U
Xylene (total)	0 R	10 U	1600 J	1600	0 R	10 U
1,2-Dibromoethane(EDB)	10 U	5 U	10 U	250 U	10 U	5 U
Methyl Tertiary Butyl Ether	10 U	1.2 J	7700 D	6200	10 U	10 U
N-Propylbenzene	10 U	5 UJ	270 DJ	180 J	10 U	5 U

TABLE 6

TUTU WELLFIELD
SEMIVOLATILE DATA (ug/kg)
CASE 18503 SEM. SOIL

DATE: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	7/24/92 18503 MW-9 (0-4 ft) BHR-63 SOIL	7/24/92 18503 MW-9 (0-4 ft) MW-9 PRP SOIL	7/21/92 18503 MW-6D (0-2ft) BHR-64 SOIL	7/21/92 18503 MW-6D (0-2ft) MW-6D PRP SOIL **	7/20/92 18503 MW-8 (0-4ft) BHR-65 SOIL	7/20/92 18503 MW-8 (0-4ft) MW-8 PRP SOIL
Phenol	340 U	350 U	360 UJ		370 UJ	370 U
bis(2-Chloroethyl)ether	340 U	350 U	360 UJ		370 UJ	370 U
2-Chlorophenol	340 U	350 U	360 UJ		370 UJ	370 U
1,3-Dichlorobenzene	340 U	350 U	360 UJ		370 UJ	370 U
1,4-Dichlorobenzene	340 U	350 U	360 UJ		370 UJ	370 U
1,2-Dichlorobenzene	340 U	350 U	360 UJ		370 UJ	370 U
2-Methylphenol	340 U	350 U	360 UJ		370 UJ	370 U
2,2'-Oxybis(1-Chloropropane)	340 U	350 U	360 UJ		370 UJ	370 U
4-Methylphenol	340 U	350 U	360 UJ		370 UJ	370 U
N-Nitroso-di-n-propylamine	340 U	350 U	360 UJ		370 UJ	370 U
Hexachloroethane	340 U	350 U	360 UJ		370 UJ	370 U
Nitrobenzene	340 U	350 U	360 UJ		370 UJ	370 U
Isophorone	340 U	350 U	360 UJ		370 UJ	370 U
2-Nitrophenol	340 U	350 U	360 UJ		370 UJ	370 U
2,4-Dimethylphenol	340 U	350 U	360 UJ		370 UJ	370 U
bis(2-Chloroethoxy)Methane	340 U	350 U	360 UJ		370 UJ	370 U
2,4-Dichlorophenol	340 U	350 U	360 UJ		370 UJ	370 U
1,2,4-Trichlorobenzene	340 U	350 U	360 UJ		370 UJ	370 U
Naphthalene	340 U	350 U	360 UJ		370 UJ	370 U
4-Chloroaniline	340 UJ	350 U	360 UJ		370 UJ	370 U
Hexachlorobutadiene	340 U	350 U	360 UJ		370 UJ	370 U
4-Chloro-3-methylphenol	340 U	350 U	360 UJ		370 UJ	370 U
2-Methylnaphthalene	340 U	350 U	360 UJ		370 UJ	370 U
Hexachlorocyclopentadiene	340 U	350 U	360 UJ		370 UJ	370 U
2,4,6-Trichlorophenol	340 U	350 U	360 UJ		370 UJ	370 U
2,4,5-Trichlorophenol	830 U	860 U	870 UJ		370 UJ	900 U
2-Chloronaphthalene	340 U	350 U	360 UJ		370 UJ	370 U
2-Nitroaniline	830 U	860 U	870 UJ		890 UJ	900 U
Dimethyl Phtalate	340 U	350 U	360 UJ		370 UJ	370 U
Acenaphthylene	340 U	350 U	360 UJ		370 UJ	370 U
2,6-Dinitrotoluene	340 U	350 U	360 UJ		370 UJ	370 U
3-Nitroaniline	0 R	860 U	0 R		0 R	900 U
Acenaphthene	340 U	350 U	360 UJ		370 UJ	370 U
2,4-Dinitrophenol	830 U	860 U	870 UJ		890 UJ	900 U
4-Nitrophenol	830 UJ	860 U	870 UJ		890 UJ	900 U
Dibenzofuran	340 U	350 U	360 UJ		370 UJ	370 U

TABLE 6 Continued

TUTU WELLFIELD
SEMIVOLATILE DATA (ug/kg)
CASE NO. 18810 SEM. WATER

DATE: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	9/29/92 18810 FB-09/29 BHB-52 WATER	9/29/92 FB-09/29 FB-09/29 PRP WATER	9/29/92 18810 MW-6R BHB-53 WATER	9/29/92 MW-6R MW-6R PRP WATER	9/30/92 18810 MW-4 BHB-55 WATER	9/30/92 MW-4 MW-4 PRP WATER	10/1/92 18810 MW-5 BHB-56 WATER	10/1/92 MW-5 MW-5 PRP WATER	10/1/92 18810 MW-14 BHB-57 WATER	10/1/92 MW-14 MW-14 PRP WATER
2,4-Dinitrotoluene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Diethylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Fluorene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
4-Nitroaniline	25 U	25 U	25 U	25 U	25 U	25 U	100 U	25 U	25 U	25 U
4,6-Dinitro-2-methylphenol	25 UJ	25 U	25 UJ	25 U	25 U	25 U	100 U	25 U	25 U	25 U
N-Nitrosodiphenylamine (1)	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
4-Bromophenyl-phenylether	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Hexachlorobenzene	10 U	10 U	10 U	10 U	10 U	10 UJ	40 U	10 UJ	10 U	10 UJ
Pentachlorophenol	25 UJ	25 UJ	25 UJ	25 UJ	25 U	25 U	100 U	25 U	25 U	25 U
Phenanthrene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	1 J	2 J
Anthracene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Carbazole	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Di-n-Butylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Pyrene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Butylbenzylphthalate	10 U	10 UJ	10 U	10 U	10 U	10 UJ	40 U	10 UJ	10 U	10 UJ
3,3'-Dichlorobenzidine	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Benzo(a)anthracene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Chrysene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	10 U	50 BJ	2 JXXX	64 U	10 U	56 UJ	40 U	22 UJ	2 J	10 UJ
Di-n-octylphthalate	10 UJ	10 UJ	10 UJ	1 J	10 UJ	10 UJ	40 UJ	10 UJ	10 UJ	10 UJ
Benzo(b)fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Benzo(k)fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Benzo(a)pyrene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U

TABLE 6 Continued

TUTU WELLFIELD
SEMIVOLATILE DATA (ug/kg)
CASE 18503 SEM. SOIL

DATE: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	7/24/92 18503 MW-9 (0-4 ft) BHR-63 SOIL	7/24/92 MW-9 (0-4 ft) MW-9 PRP SOIL	7/21/92 18503 MW-60 (0-2ft) BHR-64 SOIL	7/21/92 MW-60 (0-2ft) MW-60 PRP SOIL **	7/20/92 18503 MW-8 (0-4ft) BHR-65 SOIL	7/20/92 MW-8 (0-4ft) MW-8 PRP SOIL
2,4-Dinitrotoluene	340 U	350 U	360 UJ		370 UJ	370 U
Diethylphthalate	340 U	350 U	360 UJ		370 UJ	370 U
4-Chlorophenyl-phenylether	340 U	350 U	360 UJ		370 UJ	370 U
Fluorene	340 U	350 U	360 UJ		370 UJ	370 U
4-Nitroaniline	830 U	860 U	870 UJ		890 UJ	900 U
4,6-Dinitro-2-methylphenol	830 UJ	860 U	870 UJ		890 UJ	900 U
N-Nitrosodiphenylamine (1)	340 UJ	350 U	360 UJ		370 UJ	370 U
4-Bromophenyl-phenylether	340 UJ	350 U	360 UJ		370 UJ	370 U
Hexachlorobenzene	340 UJ	350 U	360 UJ		370 UJ	370 U
Pentachlorophenol	830 U	860 U	870 UJ		890 UJ	900 U
Phenanthrene	340 U	350 U	360 UJ		370 UJ	370 U
Anthracene	340 U	350 U	360 UJ		370 UJ	370 U
Carbazole	340 U	350 U	360 UJ		370 UJ	370 U
Di-n-Butylphthalate	340 U	350 U	360 UJ		370 UJ	730 B
Fluoranthene	340 U	350 U	360 UJ		370 UJ	370 U
Pyrene	340 U	350 U	360 UJ		370 UJ	370 U
Butylbenzylphthalate	340 UJ	350 U	360 UJ		370 UJ	370 U
3,3'-Dichlorobenzidine	0 R	350 U	0 R		0 R	370 U
Benzo(a)anthracene	340 U	350 U	360 UJ		370 UJ	370 U
Chrysene	340 U	350 U	360 UJ		370 UJ	370 U
bis(2-Ethylhexyl)phthalate	340 UJ	46 J	360 UJ		370 UJ	370 U
Di-n-octylphthalate	340 UJ	350 U	360 UJ		370 UJ	370 U
Benzo(b)fluoranthene	340 U	350 U	360 UJ		370 UJ	370 U
Benzo(k)fluoranthene	340 U	350 U	360 UJ		370 UJ	370 U
Benzo(a)pyrene	340 U	350 U	360 UJ		370 UJ	370 U
Indeno(1,2,3-cd)pyrene	340 U	350 U	360 UJ		370 UJ	370 U
Dibenz(a,h)anthracene	340 U	350 U	360 UJ		370 UJ	370 U
Benzo(g,h,i)perylene	340 U	350 U	360 UJ		370 UJ	370 U

NOTE: ** - Location MW-60 was later abandoned and Geraghty and Miller did not provide the data.

TABLE 6 Continued

TUTU WELLFIELD
SOIL ORGANIC DATA
DATA (ug/l), (ug/kg)
CASE NO. 18544 SEMIVOL

DATE: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	7/30/92 18544 B-1 (4-8 ft) BHR-66 SOIL	7/30/92 B-1 (4-8 ft) B-1 PRP SOIL	7/30/92 18544 B-6 (4-8 ft) BHR-67 SOIL	7/30/92 B-6 (4-8 ft) B-6 PRP SOIL	7/29/92 18544 FB 7/29 BHR-69 WATER	7/29/92 FB 7/29 FB PRP WATER
Phenol	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
bis(2-Chloroethyl)ether	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
2-Chlorophenol	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
1,3-Dichlorobenzene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
1,4-Dichlorobenzene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
1,2-Dichlorobenzene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
2-Methylphenol	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
2,2'-Oxybis(1-Chloropropane)	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
4-Methylphenol	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
N-Nitroso-di-n-propylamine	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Hexachloroethane	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Nitrobenzene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Isophorone	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
2-Nitrophenol	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
2,4-Dimethylphenol	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
bis(2-Chloroethoxy)methane	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
2,4-Dichlorophenol	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
1,2,4-Trichlorobenzene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Naphthalene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
4-Chloroaniline	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Hexachlorobutadiene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
4-Chloro-3-methylphenol	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
2-Methylnaphthalene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Hexachlorocyclopentadiene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
2,4,6-Trichlorophenol	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
2,4,5-Trichlorophenol	860 U	3100 U	870 UJ	2000 U	25 UJ	25 U
2-Chloronaphthalene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
2-Nitroaniline	860 UJ	3100 U	870 UJ	2000 U	25 UJ	25 U
Dimethylphthalate	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Acenaphthylene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
2,6-Dinitrotoluene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
3-Nitroaniline	860 U	3100 U	870 UJ	2000 U	25 UJ	25 U
Acenaphthene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
2,4-Dinitrophenol	860 UJ	3100 U	870 UJ	2000 U	25 UJ	10 U
4-Nitrophenol	860 UJ	3100 U	870 UJ	2000 U	25 UJ	25 U
Dibenzofuran	350 U	1300 U	360 UJ	820 U	10 UJ	10 U

TABLE 6 Continued

TUTU WELLFIELD
 SOIL ORGANIC DATA
 DATA (ug/l), (ug/kg)
 CASE NO. 18544 SEMIVOL

DATE: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	7/30/92 18544 B-1 (4-8 ft) BHR-66 SOIL	7/30/92 B-1 (4-8 ft) B-1 PRP SOIL	7/30/92 18544 B-6 (4-8 ft) BHR-67 SOIL	7/30/92 B-6 (4-8 ft) B-6 PRP SOIL	7/29/92 18544 FB 7/29 BHR-69 WATER	7/29/92 FB 7/29 FB PRP WATER
2,4-Dinitrotoluene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Diethylphthalate	350 U	1300 U	360 UJ	820 U	1 BJ	10 U
4-Chlorophenyl-phenylether	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Fluorene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
4-Nitroaniline	860 UJ	3100 U	870 UJ	2000 U	25 UJ	25 U
4,6-Dinitro-2-methylphenol	860 U	3100 U	870 UJ	2000 U	25 UJ	25 U
N-Nitrosodiphenylamine (1)	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
4-Bromophenyl-phenylether	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Hexachlorobenzene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Pentachlorophenol	860 U	3100 U	870 UJ	2000 U	25 UJ	25 U
Phenanthrene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Anthracene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Carbazole	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Di-n-Butylphthalate	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Fluoranthene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Pyrene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Butylbenzylphthalate	350 UJ	1300 U	360 UJ	820 U	10 UJ	10 U
3,3'-Dichlorobenzidine	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Benzo(a)anthracene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Chrysene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
bis(2-Ethylhexyl)phthalate	49 J	1300 U	360 UJ	820 U	9 BJ	10 U
Di-n-octylphthalate	350 UJ	1300 U	360 UJ	820 U	10 UJ	10 U
Benzo(b)fluoranthene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Benzo(k)fluoranthene	350 UJ	1300 U	360 UJ	820 U	10 UJ	10 U
Benzo(a)pyrene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Indeno(1,2,3-cd)pyrene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Dibenz(a,h)anthracene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U
Benzo(g,h,i)perylene	350 U	1300 U	360 UJ	820 U	10 UJ	10 U

TABLE 6 Continued

TUTU WELLFIELD
DATA (ug/L), (ug/kg)
CASE NO. 18559 SEMIVOL

DATE: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	8/11/92 18559 FB-8/11 BHR60 WATER	8/11/92 FB-8/11 FB-8/11 PRP WATER	8/11/92 18559 B-12 (6-8 ft) BHR61 SOIL	8/11/92 B-12 (6-8 ft) B-12 PRP SOIL	8/11/92 18559 MW-5 (0-4 ft) BHR62 SOIL	8/11/92 MW-5 (0-4 ft) MW-5 PRP SOIL
Phenol	10 U	10 U	390 U	380 U	340 U	350 UJ
bis(2-Chloroethyl)ether	10 U	10 U	390 U	380 U	340 U	350 UJ
2-Chlorophenol	10 U	10 U	390 U	380 U	340 U	350 UJ
1,3-Dichlorobenzene	10 U	10 U	390 U	380 U	340 U	350 UJ
1,4-Dichlorobenzene	10 U	10 U	390 U	380 U	340 U	350 UJ
1,2-Dichlorobenzene	10 U	10 U	390 U	380 U	340 U	350 UJ
2-Methylphenol	10 U	10 U	390 U	380 U	340 U	350 UJ
2,2'-Oxybis(1-Chloropropene)	10 U	10 U	390 U	380 U	340 U	350 UJ
4-Methylphenol	10 U	10 U	390 U	380 U	340 U	350 UJ
N-Nitroso-di-n-propylamine	10 U	10 U	390 U	380 U	340 UJ	350 UJ
Hexachloroethane	10 U	10 U	390 U	380 U	340 U	350 UJ
Nitrobenzene	10 U	10 U	390 U	380 U	340 U	350 UJ
Isophorone	10 U	10 U	390 U	380 U	340 U	350 UJ
2-Nitrophenol	10 U	10 U	390 U	380 U	340 U	350 UJ
2,4-Dimethylphenol	10 U	10 U	390 U	380 U	340 U	350 UJ
bis(2-Chloroethoxy)Methane	10 U	10 U	390 U	380 U	340 U	350 UJ
2,4-Dichlorophenol	10 U	10 U	390 U	380 U	340 U	350 UJ
1,2,4-Trichlorobenzene	10 U	10 U	390 U	380 U	340 U	350 UJ
Naphthalene	10 U	10 U	390 U	380 U	340 U	350 UJ
4-Chloroaniline	10 U	10 U	390 U	380 U	340 U	350 UJ
Hexachlorobutadiene	10 U	10 U	390 U	380 U	340 U	350 UJ
4-Chloro-3-methylphenol	10 U	10 U	390 U	380 U	340 U	350 UJ
2-Methylnaphthalene	10 U	10 U	390 U	380 U	340 U	350 UJ
Hexachlorocyclopentadiene	10 U	10 U	390 U	380 U	340 U	350 UJ
2,4,6-Trichlorophenol	10 U	10 U	390 U	380 U	340 U	350 UJ
2,4,5-Trichlorophenol	25 U	25 U	940 U	920 U	820 U	860 UJ
2-Chloronaphthalene	10 U	10 U	390 U	380 U	340 U	350 UJ
2-Nitroaniline	25 U	25 U	940 U	920 U	820 U	860 UJ
Dimethylphthalate	10 U	10 U	390 U	380 U	340 U	350 UJ
Acenaphthylene	10 U	10 U	390 U	380 U	340 U	350 UJ
2,6-Dinitrotoluene	10 U	10 U	390 U	380 U	340 U	350 UJ
3-Nitroaniline	25 UJ	25 U	940 U	920 U	820 U	860 UJ
Acenaphthene	10 U	10 U	390 U	380 U	340 U	350 UJ
2,4-Dinitrophenol	25 U	25 U	940 U	920 U	820 UJ	860 UJ
4-Nitrophenol	25 UJ	25 U	940 UJ	920 U	820 UJ	860 UJ
Dibenzofuran	10 U	10 U	390 U	380 U	340 U	350 UJ
2,4-Dinitrotoluene	10 U	10 U	390 U	380 U	340 U	350 UJ
Diethylphthalate	10 U	10 U	390 U	380 U	340 U	350 UJ
4-Chlorophenyl-phenylether	10 U	10 U	390 U	380 U	340 U	350 UJ
Fluorene	10 U	10 U	390 U	380 U	340 U	350 UJ
4-Nitroaniline	25 UJ	25 U	940 U	920 UJ	820 UJ	860 UJ
4,6-Dinitro-2-methylphenol	25 U	25 U	940 U	920 U	820 U	860 UJ
N-Nitrosodiphenylamine (1)	10 U	10 U	390 U	920 U	340 U	350 UJ

TABLE 6 Continued

TUTU WELLFIELD
DATA (ug/L), (ug/kg)
CASE NO.18559 SEMIVOL

DATE: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	8/11/92 18559 FB-8/11 BHR60 WATER	8/11/92 FB-8/11 FB-8/11 PRP WATER	8/11/92 18559 B-12 (6-8 ft) BHR61 SOIL	8/11/92 B-12 (6-8 ft) B-12 PRP SOIL	8/11/92 18559 MW-5 (0-4 ft) BHR62 SOIL	8/11/92 MW-5 (0-4 ft) MW-5 PRP SOIL
4-Bromophenyl-phenylether	10 U	10 U	390 U	380 U	340 U	350 UJ
Hexachlorobenzene	10 U	10 U	390 U	380 U	340 U	350 UJ
Pentachlorophenol	25 U	25 U	940 U	920 U	820 U	860 UJ
Phenanthrene	10 U	10 U	390 U	380 U	340 U	350 UJ
Anthracene	10 U	10 U	390 U	380 U	340 U	350 UJ
Carbazole	10 U	10 U	390 U	380 U	340 U	350 UJ
Di-n-Butylphthalate	10 U	10 U	390 U	380 U	340 U	350 UJ
Fluoranthene	10 U	10 U	390 U	380 U	340 U	350 UJ
Pyrene	10 UJ	10 U	390 U	380 U	340 U	350 UJ
Butylbenzylphthalate	10 UJ	10 U	390 UJ	380 U	340 UJ	350 UJ
3,3'-Dichlorobenzidine	10 U	10 U	390 U	380 U	340 U	350 UJ
Benzo(a)anthracene	10 U	10 U	390 U	380 U	340 U	350 UJ
Chrysene	10 U	10 U	390 U	380 U	340 U	350 UJ
bis(2-Ethylhexyl)phthalate	3 BJ	10 U	390 UJ	380 U	340 UJ	45 J
Di-n-octylphthalate	10 UJ	10 U	390 UJ	380 U	340 UJ	350 UJ
Benzo(b)fluoranthene	10 U	10 U	390 U	380 U	340 U	350 UJ
Benzo(k)fluoranthene	10 U	10 U	390 U	380 U	340 U	350 UJ
Benzo(a)pyrene	10 U	10 U	390 U	380 U	340 U	350 UJ
Indeno(1,2,3-cd)pyrene	10 U	10 U	390 U	380 U	340 U	350 UJ
Dibenz(a,h)anthracene	10 U	10 U	390 U	380 U	340 U	350 UJ
Benzo(g,h,i)perylene	10 U	10 U	390 U	380 U	340 U	350 UJ

TABLE 6 Continued

TUTU WELLFIELD
SOIL ORGANIC DATA
DATA (ug/l), (ug/kg)
CASE NO. 18648 SEMIVOL

DATE: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	8/19/92 18648 SS-3 BFY35 SOIL	8/19/92 SS-3 SS-3 PRP SOIL	8/19/92 18648 SS-4 BFY36 SOIL	8/19/92 SS-4 SS-4 PRP SOIL	8/19/92 18648 SS-5 BFY37 SOIL	8/19/92 SS-5 SS-5 PRP SOIL	8/19/92 18648 SS-6 BFY38 SOIL	8/19/92 SS-6 SS-6 PRP SOIL	8/19/92 18648 SS-7 FB BFY-39 WATER	8/19/92 SS-7 FB SS-7 PRP SOIL
4-Chlorophenyl-phenylether	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Fluorene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
4-Nitroaniline	32000 UJ	0 R	28000 UJ	0 R	900 UJ	950 U	940 UJ	0 R	25 UJ	910 U
4,6-Dinitro-2-methylphenol	0 R	0 R	28000 UJ	0 R	900 U	950 U	940 U	0 R	25 UJ	910 U
N-Nitrosodiphenylamine (1)	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
4-Bromophenyl-phenylether	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Hexachlorobenzene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Pentachlorophenol	0 R	0 R	28000 UJ	0 R	900 U	950 U	940 UJ	0 R	25 UJ	910 U
Phenanthrene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Anthracene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Carbazole	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Di-n-Butylphthalate	9400 J	3400 J	1800 J	0 R	370 U	55 J	390 U	0 R	10 UJ	62 J
Fluoranthene	13000 UJ	0 R	11000 UJ	0 R	370 U	100 J	390 U	0 R	10 UJ	370 U
Pyrene	13000 UJ	0 R	11000 UJ	0 R	370 U	76 J	390 U	0 R	10 UJ	370 U
Butylbenzylphthalate	13000 UJ	0 R	11000 UJ	0 R	78 J	190 J	64 J	58 J	10 UJ	75 J
3,3'-Dichlorobenzidine	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	0 R	370 U
Benzo(a)anthracene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Chrysene	13000 UJ	0 R	11000 UJ	0 R	370 U	59 J	390 U	0 R	10 UJ	370 U
bis(2-Ethylhexyl)phthalate	13000 UJ	0 R	11000 UJ	0 R	370 U	430	390 UJ	290 J	2 BJ	270 J
Di-n-octylphthalate	13000 UJ	0 R	11000 UJ	0 R	370 UJ	390 U	390 UJ	0 R	10 UJ	370 U
Benzo(b)fluoranthene	13000 UJ	0 R	11000 UJ	0 R	370 U	84 J	390 U	0 R	10 UJ	370 U
Benzo(k)fluoranthene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Benzo(a)pyrene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Indeno(1,2,3-cd)pyrene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Dibenz(a,h)anthracene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Benzo(g,h,i)perylene	13000 UJ	0 R	11000 UJ	0 R	370 U	82 J	390 U	0 R	10 UJ	370 U

TABLE 6 Continued

TUTU WELLFIELD
SOIL ORGANIC DATA
DATA (ug/l), (ug/kg)
CASE NO. 18648 SEMIVOL

DATE: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	8/19/92 18648 SS-3 BFY35 SOIL	8/19/92 SS-3 SS-3 PRP SOIL	8/19/92 18648 SS-4 BFY36 SOIL	8/19/92 SS-4 SS-4 PRP SOIL	8/19/92 18648 SS-5 BFY37 SOIL	8/19/92 SS-5 SS-5 PRP SOIL	8/19/92 18648 SS-6 BFY38 SOIL	8/19/92 SS-6 SS-6 PRP SOIL	8/19/92 18648 SS-7 FB BFY-39 WATER	8/19/92 SS-7 FB SS-7 PRP SOIL
Phenol	0 R	0 R	11000 UJ	0 R	370 UJ	390 U	390 U	0 R	10 UJ	370 U
bis(2-Chloroethyl)ether	13000 UJ	0 R	11000 UJ	0 R	370 UJ	390 U	390 U	0 R	10 UJ	370 U
2-Chlorophenol	0 R	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
1,3-Dichlorobenzene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
1,4-Dichlorobenzene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
1,2-Dichlorobenzene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
2-Methylphenol	0 R	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
2,2'-Oxybis(1-Chloropropane)	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
4-Methylphenol	0 R	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
N-Nitroso-di-n-propylamine	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Hexachloroethane	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Nitrobenzene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Isophorone	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
2-Nitrophenol	0 R	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
2,4-Dimethylphenol	0 R	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
bis-(2-Chloroethoxy)Methane	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
2,4-Dichlorophenol	0 R	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
1,2,4-Trichlorobenzene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Naphthalene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
4-Chloroaniline	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Hexachlorobutadiene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
4-Chloro-3-methylphenol	0 R	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
2-Methylnaphthalene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Hexachlorocyclopentadiene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
2,4,6-Trichlorophenol	0 R	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
2,4,5-Trichlorophenol	0 R	0 R	28000 UJ	0 R	900 U	950 U	940 U	0 R	25 UJ	910 U
2-Chloronaphthalene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
2-Nitroaniline	32000 UJ	0 R	28000 UJ	0 R	900 UJ	950 U	940 UJ	0 R	25 UJ	910 U
Dimethylphthalate	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Acenaphthylene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
2,6-Dinitrotoluene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
3-Nitroaniline	32000 UJ	0 R	28000 UJ	0 R	900 UJ	950 U	940 UJ	0 R	25 UJ	910 U
Acenaphthene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
2,4-Dinitrophenol	0 R	0 R	28000 UJ	0 R	900 UJ	950 U	940 U	0 R	25 UJ	910 U
4-Nitrophenol	0 R	0 R	28000 UJ	0 R	900 U	950 U	940 U	0 R	25 UJ	910 U
Dibenzofuran	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
2,4-Dinitrotoluene	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U
Diethylphthalate	13000 UJ	0 R	11000 UJ	0 R	370 U	390 U	390 U	0 R	10 UJ	370 U

TABLE 6 Continued

TUTU WELLFIELD
SEMIVOLATILE DATA (ug/kg)
CASE NO. 18810 SEM. WATER

DATE: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	9/29/92 18810 FB-09/29 BHB-52 WATER	9/29/92 FB-09/29 FB-09/29 PRP WATER	9/29/92 18810 MW-6R BHB-53 WATER	9/29/92 MW-6R MW-6R PRP WATER	9/30/92 18810 MW-4 BHB-55 WATER	9/30/92 MW-4 MW-4 PRP WATER	10/1/92 18810 MW-5 BHB-56 WATER	10/1/92 MW-5 MW-5 PRP WATER	10/1/92 18810 MW-14 BHB-57 WATER	10/1/92 MW-14 MW-14 PRP WATER
Phenol	10 U	10 U	10 U	10 U	10 U	10 U	39 BJ	10 U	10 U	10 U
bis(2-Chloroethyl)ether	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
2-Chlorophenol	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
1,3-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
1,4-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
1,2-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
2-Methylphenol	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
2,2'-Oxybis(1-Chloropropane)	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 UJ	10 U	10 UJ
4-Methylphenol	10 U	10 U	10 U	10 U	10 U	10 U	40 U	3 J	10 U	10 U
N-Nitroso-di-n-propylamine	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Hexachloroethane	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Nitrobenzene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Isophorone	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
2-Nitrophenol	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
2,4-Dimethylphenol	10 U	10 U	10 U	10 U	10 U	10 U	19 J	7 J	10 U	10 U
bis(2-Chloroethoxy)methane	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
2,4-Dichlorophenol	10 U	25 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Naphthalene	10 U	10 U	10 U	10 U	10 U	10 U	160	310 D	10 U	10 U
4-Chloroaniline	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Hexachlorobutadiene	10 U	10 UJ	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
2-Methylnaphthalene	10 U	10 U	10 U	10 U	10 U	10 U	58	130 D	10 U	10 U
Hexachlorocyclopentadiene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
2,4,6-Trichlorophenol	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	25 U	25 U	25 U	25 U	25 U	25 U	100 U	25 U	25 U	25 U
2-Chloronaphthalene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
2-Nitroaniline	25 U	25 U	25 U	25 U	25 U	25 U	100 U	25 U	25 U	25 U
Dimethylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
Acenaphthylene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
2,6-Dinitrotoluene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
3-Nitroaniline	25 U	25 U	25 U	25 U	25 U	25 U	100 U	25 U	25 U	25 U
Acenaphthene	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	10 U	10 U
2,4-Dinitrophenol	25 UJ	25 U	25 UJ	25 U	25 UJ	25 U	100 UJ	25 U	25 UJ	25 U
4-Nitrophenol	25 U	25 UJ	25 U	25 U	25 U	25 U	100 U	25 U	25 U	25 U
Dibenzofuran	10 U	10 U	10 U	10 U	10 U	10 U	40 U	10 U	1 J	2 J

TABLE 7

TUTU WELLFIELD
WATER (ug/L), SOIL (ug/kg).
CASE NO.18503 METALS

DATE COLLECTED:	7/24/92	7/24/92	7/21/92	7/21/92	7/20/92	7/20/92
CASE/SAS NO:	18503		18503		18503	
SAMPLE LOCATION:	MW-9 (0-4 ft)	MW-9 (0-4 ft)	MW-6D (0-2 ft)	MW-6D (0-2ft)	MW-8 (2-4 ft)	MW-8 (2-4 ft)
SAMPLE NO:	MBES-56	MW-9 PRP	MBES-57	MW-6D PRP	MBES-58	MW-8 PRP
MATRIX:	SOIL	SOIL	SOIL	SOIL **	SOIL	SOIL
Aluminum	33600.00	22400.00	24200.00		33000.00	22500.00
Antimony	3.40 UJ	6.00 B	3.70 UJ		3.40 UJ	5.6 B
Arsenic	0.46 UJ	0.7 B	0.0 R		0.46 UJ	0.44 U
Barium	25.00 B	18.7 B	81.90		23.80 B	21.7 B
Beryllium	0.15 U	0.21 U	0.28 B		0.21 B	0.22 U
Cadmium	0.31 U	0.64 U	0.34 U		0.32 U	0.65 U
Calcium	43900.00	31600.00	38700.00		39000.00	28400.00
Chromium	25.40	15.6	28.90		20.80	15.3 J
Cobalt	26.80 J	18.9	23.10 J		24.50 J	19.00
Copper	67.00	50.7	68.40		57.10	49.7
Iron	39200.00	25700.00	40700.00		37500.00	26500.00
Lead	4.40 J	3.2 J	11.80 J		1.90 J	0.48 BJ
Magnesium	22000.00	15100.00	16700.00		20600.00	15400.00
Manganese	920.00	631.00	794.00		859.00	688.00
Mercury	0.05 U	0.05 U	0.06 U		0.05 U	0.05 U
Nickel	18.90 J	12.4	17.20 J		15.70 J	11.3
Potassium	264.00 B	205.00 B	897.00 B		201.00 B	204.00 B
Selenium	0.0 R	0.43 U	00 R		0.0 R	0.44 UWJ
Silver	1.80 B	0.64 U	1.70 B		1.70 B	0.65 U
Sodium	1010.00 B	654.00 B	717.00 B		843.00 B	491.00 B
Thallium	0.90 U	0.64 U	0.94 U		0.90 U	0.65 U
Vanadium	90.60	56.3	114.00		85.60	59.5
Zinc	51.70	32.4	84.70		45.10	31.8
Cyanide	0.52 U	0.53 U	0.53 U		0.55 U	0.55

NOTE: ** - Location MW-6D was later abandoned and Geraghty and Miller did not provide the data.

TABLE 7 Continued

TUTU WELLFIELD
 WATER (ug/L), SOIL (ug/kg)
 CASE NO. 18559 CYANIDE

DATE: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	8/11/92 18559 FB 8/11 MBES-70 WATER	8/11/92 18559 FB 8/11 FB PRP WATER	8/11/92 18559 B-12 (6-8 ft) MBES-71 SOIL	8/11/92 18559 B-12 (6-8 ft) B-12 PRP SOIL	8/11/92 18559 MW-5 (0-4 ft) MBES-72 SOIL
Cyanide	10 U	10 U	0.56 U	0.57 U	0.50 U

TABLE 7 Continued

TUTU WELLFIELD
WATER (ug/L), SOIL (ug/kg).
CASE NO. 18648 METALS

DATE COLLECTED: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	8/19/92 18648 SS-1 MBXS-33 SOIL	8/19/92 SS-1 SS-1 PRP SOIL	8/19/92 18648 SS-2 MBXS-34 SOIL	8/19/92 SS-2 SS-2 PRP SOIL	8/19/92 18648 SS-3 MBXS-35 SOIL	8/19/92 SS-3 SS-3 PRP SOIL	8/19/92 18648 SS-4 MBXS-36 SOIL	8/19/92 SS-4 SS-4 PRP SOIL	8/19/92 18648 SS-5 MBXS-37 SOIL	8/19/92 SS-5 SS-5 PRP SOIL
Aluminum	35600.00	23600.00	33100.00	16100.00	26900.00	23100.00	30900.00	23000.00	24900.00	17700.00
Antimony	3.4 U	6.1 BNJ	3.4 U	4.2 UNJ	4.1 U	7.2 BNJ	3.3 U	6.5 BNJ	3.8 U	8.2 BNJ
Arsenic	1.2 B	0.44 U	1.3 B	0.42 U	2.9	1.7 B	2.00 B	0.92 BNJ	16.5	3.5
Barium	47.00	41.9 B	43.6	30.1 B	98.3	94.2	49.00	39.4 B	134.00	97.00
Beryllium	0.20 B	0.22 U	0.34 B	0.21 U	0.25 B	0.26 U	0.14 U	0.22 U	0.28 B	0.22 U
Cadmium	0.31 U	0.66 U	0.32 U	0.62 U	0.37 U	0.77 U	0.30 U	0.66 U	0.35 U	0.66 U
Calcium	74700.00	75100.00	18700.00	9630.00	49600.00	56500.00	51000.00	61100.00	36000.00	35800.00
Chromium	29.9	23.4 NJ	30.6	25.8 NJ	34.1	33.8 NJ	31.8	25.1 NJ	33.00	17.6 NJ
Cobalt	28.6	25.7 J	27.4	18.00 J	23.4	22.1 J	21.3	20.9 J	20.7	19.4 J
Copper	73.9	55.3 NJ	70.00	40.3 NJ	75.00	72.8 NJ	71.5	62.9 NJ	80.1	79.2 NJ
Iron	43400.00	31300.00	40900.00	22600.00	42200.00	55400.00	35100.00	29800.00	37400.00	28100.00
Lead	2.5	2.1 SJ	4.00	1.7 J	27.7	12.2 J	13.5	9.1 J	23.7	149.00 SJ
Magnesium	22400.00	20500.00	19700.00	13200.00	18700.00	18700.00	18500.00	19300.00	12900.00	13600.00
Manganese	814.00	763.00	810.00	535.00	841.00	886.00	719.00	634.00	1030.00	708.00
Mercury	0.10 U	0.05 U	0.10 U	0.05 U	0.12 U	0.06 U	0.10 U	0.05 U	0.10 U	0.19
Nickel	19.6	18.9	18.8	15.5	17.1	19.2	16.1	16.8	15.1	12.6
Potassium	723.00 B	412.00 B	1090.00 J	568.00 B	8110.00 J	7140.00	1150.00 J	673.00 B	2610.00 J	4170.00
Selenium	0.78 UJ	0.44 UJ	0.76 U	0.42 UJ	0.88 UJ	0.51 UJ	0.73 U	0.44 UJ	0.80 U	0.44 UJ
Silver	1.9 B	0.98 B	2.2	0.99 B	1.7 B	2.1 B	1.4 B	0.93 B	1.5 B	2.8
Sodium	577.00 B	557.00 B	257.00 B	157.00 B	501.00 B	476.00 B	453.00 B	352.00 B	306.00 B	349.00 B
Thallium	0.19 UJ	0.66 U	0.19 UJ	0.62 U	0.22 UJ	0.77 U	0.18 UJ	0.66 U	0.20 UJ	0.66 U
Vanadium	151.00	109.00 UJ	139.00	74.9 NJ	102.00	88.3 NJ	107.00	86.00 UJ	113.00	78.8 NJ
Zinc	54.8	50.6	56.8	40.1	313.00	258.00	371.00	265.00	121.00	216.00
Cyanide	0.54 U	1.2	0.52 U	0.52 U	0.62 U	0.96	0.50 U	0.57 U	0.55 U	0.55 U

TABLE 7 Continued

TUTU WELLFIELD
WATER (ug/L), SOIL (ug/kg).
CASE NO. 18648 METALS

DATE COLLECTED: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	8/19/92 18648 SS-6 MBXS-38 SOIL	8/19/92 SS-6 SS-6 PRP SOIL	8/19/92 18648 SS-8 MBXS-40 SOIL	8/19/92 SS-8 SS-8 PRP SOIL	8/19/92 18648 FB SS-7 MBXS39 WATER	8/19/92 FB SS-7 FB SS-7 PRP WATER
Aluminum	30800.00	14300.00 J	31000.00	21500.00 J	48.2 BJ	13800.00 J
Antimony	3.8 U	7.4 BNJ	3.2 U	14.7 BNJ	16.3 UJ	6.00 BNJ
Arsenic	8.2	17.3 J	0.67 BJ	0.99 BJ	2.4 UJ	19.1 J
Barium	84.9	89.00 J	30.4 B	29.3 BJ	4.6 UJ	90.9 J
Beryllium	0.52 B	0.23 UJ	0.27 B	0.41 UJ	0.70 UJ	0.23 UJ
Cadmium	2.0	0.68 UJ	0.30 U	1.2 UJ	1.5 UJ	0.7 UJ
Calcium	34100.00	59200.00 J	100000.00	144000.00 J	64.4 BJ	30700.00 J
Chromium	21.5	23.3 NJ	20.4	16.2 NJ	4.9 UJ	18.8 NJ
Cobalt	22.7	14.00 J	20.00	16.9 BJ	3.5 UJ	13.8 J
Copper	96.2	55.4 NJ	56.1	43.1 NJ	3.8 UJ	54.8 NJ
Iron	42300.00	39500.00 J	33100.00	25400.00 J	7.6 UJ	23800.00 J
Lead	75.2	14.4 J	0.0 R	2.5 SJ	3.2 J	11.4 J
Magnesium	17700.00	9960.00 J	23800.00	21400.00 J	40.1 UJ	9670.00 J
Manganese	817.00	662.00 J	911.00	888.00 J	4.4 UJ	672.00 J
Mercury	0.25	0.06 U	0.09 U	0.05 U	0.31 J	0.06 U
Nickel	10.5	14.1 J	10.3	12.9 BJ	3.9 UJ	10.7 J
Potassium	4540.00 J	1910.00 J	520.00 B	325.00 BJ	266.00 UJ	2070.00 J
Selenium	0.0 R	0.46 UJ	0.70 UJ	0.41 UJ	3.6 UJ	0.47 UJ
Silver	3.2	1.6 BJ	0.95 U	1.7 UJ	4.8 UJ	0.93 UJ
Sodium	368.00 B	340.00 BJ	184.00 B	187.00 BJ	148.00 BJ	251.00 BJ
Thallium	0.20 UJ	0.68 UJ	0.18 UJ	0.62 UJ	0.90 UJ	0.7 UJ
Vanadium	131.00	71.3 NJ	108.00	82.1 NJ	2.4 UJ	73.1 NJ
Zinc	170.00	91.7 J	51.3	43.8 J	10.5 BJ	97.1 J
Cyanide	0.59 U	0.57 U	0.51 U	1.1	10.0 U	1.3

TABLE 7 Continued

TUTU WELLFIELD
WATER (ug/L), SOIL (ug/kg).
CASE NO. 18810 METALS

DATE COLLECTED: CASE/SAS NO: SAMPLE LOCATION: SAMPLE NO: MATRIX:	10/1/92 18810 MW-14 MBGG-57 WATER	10/1/92 MW-14 MW-14 PRP WATER	10/1/92 18810 MW-5 MBGG-58 WATER	10/1/92 MW-5 MBGG-58 PRP WATER	9/30/92 18810 MW-4 MBGG-59 WATER	9/30/92 MW-4 MW-4 PRP WATER	9/29/92 18810 MW-6R MBGG-60 WATER	9/29/92 MW-6R MW-6R PRP WATER	9/29/92 18810 FB 9/29 MBGG-61 WATER	9/29/92 FB 9/29 FB 9/29 PRP WATER
Aluminum	4370.00	5280.00	1790.00	1490.00	11200.00	6790.00	22000.00	16600.00	38.60 B	32.00 U
Antimony	11.00 U	20.00 U	11.00 U	20.00 U	11.00 U	20.00 U	11.00 U	20.00 U	11.00 U	20.00 U
Arsenic	3.00 UJ	2.00 UW	4.20 BJ	3.9 B	3.00 UJ	2.00 UW	3.00 UJ	2.00 UW	3.00 UJ	2.00 U
Barium	125.00 B	123.00 B	168.00 B	167.00 B	77.80 B	61.8 B	118.00 B	110.00 B	2.00 U	1.00 U
Beryllium	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Cadmium	2.00 U	3.00 U	2.00 U	3.00 U	2.00 U	3.00 U	2.00 U	3.00 U	2.00 U	3.00 U
Calcium	87000.00	89800.00	38000.00	40100.00	46000.00	44700.00	72200.00	64600.00	302.00 B	46.1 B
Chromium	16.40	13.9	14.90	15.7	30.50	19.00	39.60	22.5	2.00 B	4.00 U
Cobalt	6.70 B	7.3 B	5.60 B	6.9 B	13.20 B	10.2 B	19.70 B	12.3 B	2.00 U	4.00 U
Copper	27.40	20.3 B	14.20 B	9.2 B	40.80	28.00	79.60	56.4	6.60 B	4.00 U
Iron	6340.00	7160.00	2520.00	2280.00	16000.00	10700.00	28500.00	21400.00	137.00	14.9 B
Lead	1.30 BJ	1.8 B	5.00 UJ	1.00 U	1.00 BJ	2.4 BJ	5.00 UJ	4.7 S	1.00 BJ	1.00 U
Magnesium	40900.00	42300.00	19600.00	21700.00	36800.00	36500.00	44100.00	41700.00	81.20 B	44.3 B
Manganese	2550.00	2480.00	378.00	407.00	1180.00	1020.00	401.00	314.00	2.60 B	1.00 U
Mercury	0.20 U	0.1 U	0.20 U	0.1 U	0.20 U	0.1 U	0.20 U	0.1 U	0.20 U	0.1 U
Nickel	23.40 B	14.6 B	50.40	54.3	34.80 B	15.2 B	38.00 B	17.1 B	14.10 B	8.00 U
Potassium	1340.00 B	1300.00 B	9040.00	9310.00	2270.00 B	2810.00 B	3550.00 B	3540.00 B	409.00 U	560.00 U
Selenium	1.00 UJ	2.00 UJ	1.00 UJ	2.00 U	1.00 UJ	2.6 B	1.00 UJ	3.5 BJ	1.00 UJ	2.00 U
Silver	1.00 U	4.00 U	1.00 U	4.00 U	1.00 U	4.00 U	1.00 U	4.00 U	1.00 U	4.00 U
Sodium	128000.00	131000.00	199000.00	214000.00	238000.00	256000.00	217000.00	229000.00	500.00 B	379.00 B
Thallium	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 UJ	3.00 U	3.00 UJ	3.00 U	3.00 U
Vanadium	18.10 B	21.00 B	5.80 B	6.4 B	78.70	64.9	135.00	110.00	2.00 U	4.00 U
Zinc	44.90	34.9 J	30.50	26.1 J	41.10	27.00	72.30	47.00	6.10 B	2.00 U
Cyanide	10.00 UJ	10.00 UJ	10.00 UJ	10.00 UJ	10.00 UJ	10.00 UJ	10.00 UJ	0.00 R	10.00 UJ	10.00 UJ

ATTACHMENT 1

EPA SAMPLE ANALYSIS QUALIFIERS

1. EPA defined qualifiers for organic compounds

- U - Compound was analyzed but not detected.
- J - estimated value
- N - Presumptive evidence of a compound
- P - The difference for detected concentration of a pesticide/Aroclor target analyte is greater than 25% between the two GC columns.
- C - Identification of pesticide results was confirmed by GC/MS
- B - Analyte is found in the associated blank as well as in the sample
- E - Compounds concentrations exceed the calibration range of the GC/MS instrument for that specific analysis
- D - Compounds identified in an analysis at a secondary dilution factor.
- A - TIC is a suspected aldol - condensation product.
- R - Data Rejected

2. EPA defined qualifier for inorganic compounds.

(a) C (concentration) qualifier

- B - Reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL)
- U - Analyte was analyzed for but not detected.

(b) Q (Quality Control) qualifier

- E - The reported value is estimated because of the presence of interference.
- M - Duplicate injection precision not met.
- N - Sample recovery not within control limits
- S - The reported value was determined by the Method of Standard Additions (MSA)
- W - Post-digestion spike for Furnace AA analysis is out of control limits (85 - 115%), while sample absorbance is less than 50% of spike absorbance
- R - Data Rejected
- * - Duplicate analysis not within control limits
- + - Correlation coefficient for the MSA is less than 0.995

(c) M (method) qualifier

- P - for ICP
- A - for Flame AA
- F - for Furnace AA
- PM - for ICP when Microwave Digestion is used
- AM - for Flame AA when Microwave Digestion is used
- FM - for Furnace AA when Microwave Digestion is used
- CV - for Manual Cold Vapor AA
- AV - for Automated Cold Vapor AA
- CA - for Midi-Distillation spectrophotometric
- AS - for semi-Automated Spectrophotometric
- C - for manual Spectrophotometric
- T - for Titrimetric
- NR - If the analyte is not required to be analyzed.