CONTAINS FIELD & LABORATORY TEST RESULTS FROM BORINGS TAKEN WITHIN OR IMMEDIATELY ADJACENT TO THE FORMER WIESSNER PROPERTY.
ALL TESTS PERFORMED BY AQUATEC

RECEIVED
TRANSPORTATION
MAY 05 1989
ASST. AG'S
OFFICE

SOUTHERN CONNECTOR SUBSURFACE CONTAMINATION SEARCH

For
Vermont Agency of Transportation
Montpelier, Vermont

By
Aquatec, Inc.
75 Green Mountain Drive
South Burlington, Vermont

NO PAGE 2 OF 5-3-88 LETTER IN APPENDIX C

FINAL REPORT

June 1988

Table 2.7.1 Description of samples collected for CLP analysis (continued).

Sample ID	Date	Sample Description	Parameters 1=HSL Organics 2=HSL Inorganics
T-14-4-6	3/09/88	Brown-gray sand some dark staining (moist)	1,2
T-15-4-6	3/10/88	Brown sand on silt (moist)	1
T-16-1-4	3/10/88	Mixed brown-gray silts and clays with pebbles (moist)	1,2
T-17-1-3	3/10/88	Brown gravelly clay-like silt (moist)	1
T-18-2-4	3/11/88	Brown sandy silt over gray clay (moist)	1
T-20-4-6	3/11/88	Grayish-brown medium sand (wet)	1
T-20-19-21	3/11/88	Gray silty sand (wet)	1
T-21-4-6	3/14/88	Brown silt with clay (moist)	1
T-21-14-16	3/14/88	Gray silt with sand (wet)	1
TR-22-2-4	3/29/88	Brown-gray silty sand, chemical odor (moist)	1
T-22-14-16	3/14/88	Gray silty clay (wet)	1
T-23-19-21	3/14/88	Dark brown sand with peat and woody material (wet)	1
Culvert	3/14/88	Surface water	1
TW-11	3/08/88	Ground water	1

Table 3.4 Sample screening data (continued).

Sample I.D.	Date	Depth (ft.)	HNU	UV	Visible and Odor	Concentrations of Coal Tar Equivalent, ppm
T-6-1-3	2/26/88	1- 3	NR	NR	NR	5
T-6-4-6	2/26/88	4- 6	NR	NR	NR	0.6
T-6-9-11	2/26/88	9-11	NR	NR	NR	0.7
T-6-I4-16	2/26/88	14-16	NR	NR	NR	0.5
T-7-1-3	2/29/88	1- 3	NR	NR	NR	3
T-7-3-5*	2/29/88	3- 5	NR	NR	NR	1
T-7-9-11	2/29/88	9-11	NR	NR	NR	0.2
T-7-14-16	2/29/88	14-16	NR	NR	NR	0.2
T-8-1-3*	3/2/88	1- 3	NR	NR	Darkened soil heavy petro odor	170
T-9-1.5-3.5	3/3/88	1.5-3.5	NR	NR	NR	68
T-9-4-6	3/3/88	4- 6	NR	NR	NR	27
T-9-9-11*	3/3/88	9-11	NR	NR	NR	12
T-9-14-16	3/3/88	14-16	NR	NR	NR	1
T-9-19-21	3/3/88	19-21	NR	NR	NR	2
T-10-2-4	3/3/88	2- 4	NR	NR	NR	0
T-10-4-6	3/3/88	4- 6	NR	NR	NR	0
T-10-9-11	3/3/88	9-11	NR	NR	NR	0
T-10-14-16*	3/3/88	14-16	NR	NR	NR	0
T-10-19-21	3/3/88	19-21	NR	NR	NR	0
TW-11-2-4*	3/4/88	2- 4	NR	NR	NR	3
TW-11-4-6	3/4/88	4- 6	NR	NR	NR	0.2
TW-11-9-11	3/4/88	9-11	NR	NR	NR	0
TW-11-14-16*	3/4/88	14-16	NR	NR	NR	0
TW-11-19-21	3/4/88	19-21	NR	NR	NR	0
T-12-2-4	3/7/88	2- 4	NR	NR	NR	800
T-12-4-6*	3/7/88	4- 6	NR	NR	NR	0.3
T-12-9-11*	3/7/88	9-11	NR	NR	NR	0.3
T-12-14-16	3/7/88	14-16	NR	NR	NR	0.5
T-12-19-21	3/7/88	19-21	NR	NR	NR	0
TS-1-8-10*	3/8/88	8-10	5ppm	NR	Diesel Fuel Odor	NA
TS-2-2-4	3/8/88	2- 4	NR	NR	NR	0.4
TS-2-4-6	3/8/88	4- 6	NR	NR	NR	NA
TS-2-8-10	3/8/88	8-10	NR	NR	NR	1100
TS-2-10-12	3/8/88	10-12	NR	NR	NR	NA
TS-2-12-14	3/8/88	12-14	NR	NR	NR	NA
TS-2-14-16*	3/8/88	14-16	NR	NR	NR	6
TS-2-19-21	3/8/88	19-21	NR	NR	NR	1

Table 3.4 Sample screening data (continued).

Sample I.D.	Date	Depth (ft.)	HNU	UV	Visible and Odor	Concentrations of Coal Tar Equivalent, ppm
T-13-1-3	3/9/88	1- 3	NR	NR	NR	23
T-13-4-6*	3/9/88	4- 6	NR	NR	NR	2
T-13-9-11	3/9/88	9-11	NR	NR	NR	0.5
T-13-14-16	3/9/88	14-16	NR	NR	NR	0.1
T-13-19-21	3/9/88	19-21	NR	NR	NR	0
T-14-2-4	3/9/88	2- 4	NR	NR	NR	0.7
T-14-4-6*	3/9/88	4- 6	NR	NR	NR	0
T-14-6-8	3/9/88	6- 8	NR	NR	NR	0
T-14-8-10	3/9/88	8-10	NR	NR	NR	0.1
T-14-14-16	3/9/88	14-16	NR	NR	NR	0.2
T-15-1-3	3/10/88	1- 3	NR	NR	NR	7
T-15-4-6*	3/10/88	4- 6	NR	NR	NR	1
T-15-9-11	3/10/88	9-11	NR	NR	NR	12
T-15-14-16	3/10/88	14-16	NR	NR	NR	0.2
T-16-1-4*	3/10/88	1- 4	NR	NR	NR	0.2
T-17-1-3*	3/10/88	1- 3	NR	NR	NR	1
T-17-3-5	3/10/88	3- 5	NR	NR	NR	0
T-17-5-7	3/10/88	5- 7	NR	NR	NR	0
T-17-7-9	3/10/88	7- 9	NR	NR	NR	0
T-17-9-11	3/10/88	9-11	NR	NR	NR	0.3
T-17-11-13	3/10/88	11-13	NR	NR	NR	0
T-17-13-15	3/10/88	13-15	NR	NR	NR	0
T-17-20-22	3/10/88	20-22	NR	NR	NR	0
T-18-2-4*	3/11/88	2- 4	NR	NR	NR	1
T-18-4-6	3/11/88	4- 6	NR	NR	NR	0.2
T-18-6-6.5	3/11/88	6-6.5	NR	NR	NR	0
T-19-2-4	3/11/88	2- 4	NR	NR	NR	74
T-19-4-6	3/11/88	4- 6	NR	NR	NR	76
T-19-6-8	3/11/88	6- 8	NR	NR	NR	0
T-19-8-10	3/11/88	8-10	NR	NR	NR	0
T-20-2-4	3/11/88	2- 4	NR	NR	NR	0.8
T-20-4-6*	3/11/88	4- 6	NR	NR	NR	0
T-20-9-11	3/11/88	9-11	NR	NR	NR	1
T-20-14-16	3/11/88	14-16	NR	NR	NR	0.3
T-20-19-21*	3/11/88	19-21	NR	NR	NR	0.2
T-21-1-3	3/14/88	1- 3	NR	NR	NR	0
T-21-4-6*	3/14/88	4- 6	NR	NR	NR	0
T-21-9-11	3/14/88	9-11	NR	NR	NR	0
T-21-14-16*	3/14/88	14-16	NR	NR	NR	0
T-21-19-21	3/14/88	19-21	NR	NR	NR	0

Table 3.4 Sample screening data (continued).

Sample I.D.	Date	Depth (ft.)	HNU	UV	Visible and Odor	Concentrations of Coal Tar Equivalent, ppm
T-22-2-4	3/14/88	2- 4	20ppm	NR	Chemical Odor	0
T-22-4-6	3/14/88	4- 6	7-8ppm	NR	Chemical Odor	0.1
T-22-6-8	3/14/88	6- 8	4-5ppm	NR	Chemical Odor	0
T-22-9-11	3/14/88	9-11	-	NR	NR	0.5
T-22-14-16*	3/14/88	14-16	-	NR	NR	0
T-22-19-21	3/14/88	19-21	-	NR	NR	0
T-23-2-4	3/14/88	2- 4	NR	NR	NR	130
T-23-4-6	3/14/88	4- 6	NR	NR	NR	190
T-23-9-11	3/14/88	9-11	NR	NR	NR	92
T-23-14-16	3/14/88	14-16	NR	NR	NR	130
T-23-19-21*	3/14/88	19-21	NR	NR	NR	NA
TR-22-2-4[1]*		2-41	10ppm	NA	Chemical Odor	NA

1 - Replicate of T-22-2-4
NR - No reading above background
NA - Not available
* - Sample collected for CLP analysis

3.5 Analytical Results

Analytical results of samples collected are attached as Appendix C. Quality Assurance/Quality Control data are available for submittal under a separate cover for review. All analytical data are recorded on 5 1/4 inch floppy diskettes in a U.S. EPA review format.

3.5.1 Volatile Organic Compound Analysis

Hazardous Substance List (HSL) volatile organic compounds were detected in four (4) of the samples collected. The sample concentrations are in parts per billion (ppb).

TR-22-2-4:	Toluene	3900 ppb → Possible/probable blank contamination
	Ethylbenzene	270 ppb
	Xylene (total)	490 ppb

TS-2-14-16:	Anthracene	290 ppb
	Fluoranthene	1900 ppb
	Pyrene	1800 ppb
	Benzo(a)anthracene	1200 ppb
	Chrysene	1100 ppb
	Benzo(b)fluoranthene	730 ppb
	Benzo(k)fluoranthene	810 ppb
	Benzo(a)pyrene	880 ppb
	Indeno(1,2,3-cd pyrene)	470 ppb
	Benzo(g,h,i)perylene	490 ppb
TS-1-8-10:	Fluoranthene	110 ppb
Culvert:	2-methylnapthalene	7 ppb
	Phenanthrene	4 ppb
	Bis(2-ethylhexyl)phthalate	4 ppb

3.5.3 Pesticides and PCB Analysis

Pesticides or PCB's on the HSL were not detected in the samples collected.

3.5.4 Inorganics Analysis

Inorganic compounds on the HSL were not detected above expected natural conditions in the samples collected.

4.0 CONCLUSIONS

Hazardous substances list (HSL) compounds were detected at five (5) locations along the right-of-way above concentrations that would be expected in an urban environment.

At one location, the Vermont Gas Service Station at the corner of Briggs Street and Flynn Avenue, semi-volatile organic compounds were detected. These compounds were most predominate at boring location T-8 and T-18. The presence of these compounds may be due to the production of asphalt for patching which occurred on the site. REVISION FROM DRAFT

They never produced any. Just stored "cold patch"

A second location where HSL compounds were detected was at the location of the paint and lacquer mixing facility just south of Lakeside Avenue. Volatile organic compounds were detected at boring location T-22, sample TR-22 and may have originated from the use and storage of paints and lacquers at the site.

The third location where HSL compounds were detected was the area north of Lakeside Avenue along the proposed extension to Pine Street. Semi-volatile organic compounds and to a lesser degree volatile organic compounds were detected in borings north of station 228+0 on the center-line. HSL compounds were detected at boring locations TS-1, TS-2, TW-11 and T-23 and the culvert. The compounds detected in this area may be the result of extensive filling in the area, its proximity to the Barge Canal Site, storage of fuels at St. Johnsbury Trucking, and parking lot runoff.

The fourth location where HSL compounds were detected was at boring location T-17. Semi-volatile organic compounds were detected at this location. The origin of these compounds is unknown. Rev.

A fifth location where HSL compounds were detected was at boring T-14. This location is behind the Queen City Metals building. Semi-volatile organic compounds were detected. The source of these compounds may be the use of heavy petroleum products at the facility. Rev.

5.0 RECOMMENDATIONS

The following recommendations are based on information obtained from this investigation.

1) The extent of volatile organic compounds detected at the site of the paint-lacquer mixing facility should be delineated prior to road construction. A soil boring and ground water sampling program should be initiated to complete this task.

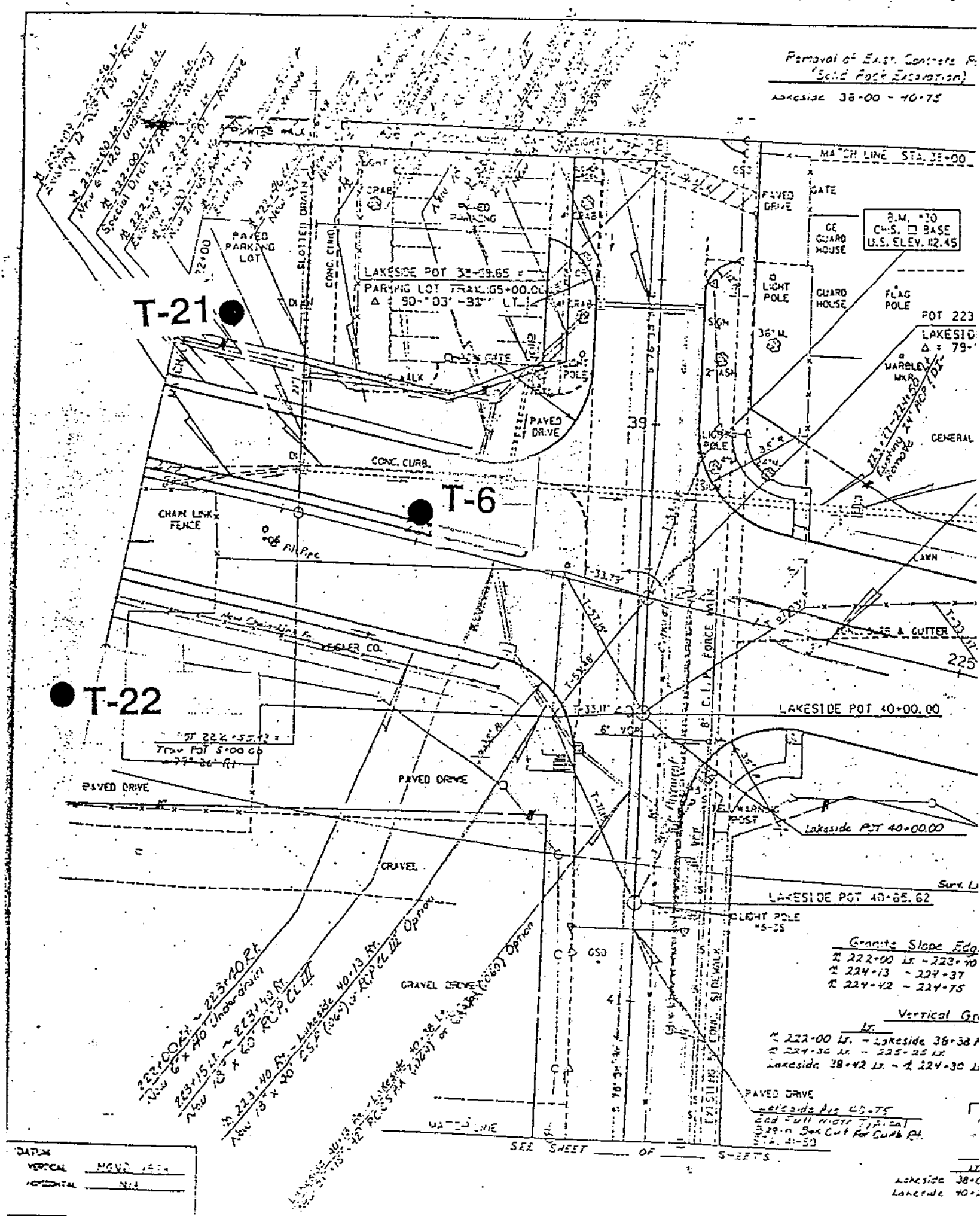
2) The extent of the HSL compounds detected north of station 228+0 on the proposed center-line should be determined before road construction proceeds north of Lakeside Avenue.

3) The extent of the HSL semi-volatile compounds detected near the abandoned Vermont Gas Service Station at the corner of Briggs Street and Flynn Avenue should be delineated prior to road construction.

4) The extent of HSL semi-volatile compounds behind Queen City Metals should be delineated when the underground storage tank at that location is removed.

5) The extent of HSL semi-volatile compounds detected at boring location T-17 should be determined before road construction proceeds.

6) Underground storage tanks along the center-line should be removed according to state guidelines prior to road construction.


T-21
T-6
T-22
PAVED PARKING LOT
CONC. CURB
CHAIN LINK FENCE
PAVED DRIVE
GRAVEL
GATE
GUARD HOUSE
FLAG POLE
LIGHT POLE
LAWN
LAKESIDE POT 40+00.00
LAKESIDE POT 40+65.62
SEE SHEET ___ OF ___ SHEETS

FIELD BORING LOG

Aquatec, Inc.
75 Green Mountain Drive
South Burlington, VT 05403

Project: Burlington
Project No: MEGC-M5000(1)^{c}/2
Location: Sta. 222+99,10LT

Boring No: T-6
Sheet 8 of 25
Dates: 2/26/88

Elev. T.O.W: 113.0' Elev. B.O.W: _____ Well Dia: _____ Boring Dia: 8"
Screen Inter: _____ Screen Matl: _____ Casing Matl: _____
Packing Matl: _____ Seal Matl: _____ Backfill Matl: _____
Contractor: _____ Driller: McGlynn/Powers Method: Hollow Stem Logged By: AM

Depth (Feet)	Sample Type and No	Sample Depth Range (Feet)	Sample Recovery or RQD	Sample Blows	Well Const.	Soil and Rock Descriptions/Comments (Unified soil class system, Rock description, Depth to water, Loss of drill water, discoloration, PID, etc.)
	SS	1-3		7,5,5,5		Moist brown-gray mottled SiSa w/ some roots
	SS	4-6		2,5,6,5		moist to wet brown-gray mottled SiSa w/ some roots
	SS	9-11		2,6,6,7		moist, mostly gray w/ minor brown mottling SiSa, SaSi
	SS	14-16		3,8,11,11		moist to wet, uniform gray ClySi SiCly

Sample Type: A-Auger SS-Split Spoon RC-Rock Core C-Chips

Summary: Overburden Depth: _____ Bedrock Depth: _____ Total Depth: _____

FIELD BORING LOG

Aquatec, Inc.
75 Green Mountain Drive
South Burlington, VT 05403

Project: Burlington
Project No: MEGL-M5000(1)^{c}/2
Location: STA 222+16, 61 LT

Boring No: T-21
Sheet 23 of 25
Dates: 3/14/88

Projected to STA 222+00
Elev. T.O.W: 115.0' Elev. B.O.W: _____ Well Dia: _____ Boring Dia: 8"

Screen Inter: _____ Screen Matl: _____ Casing Matl: _____

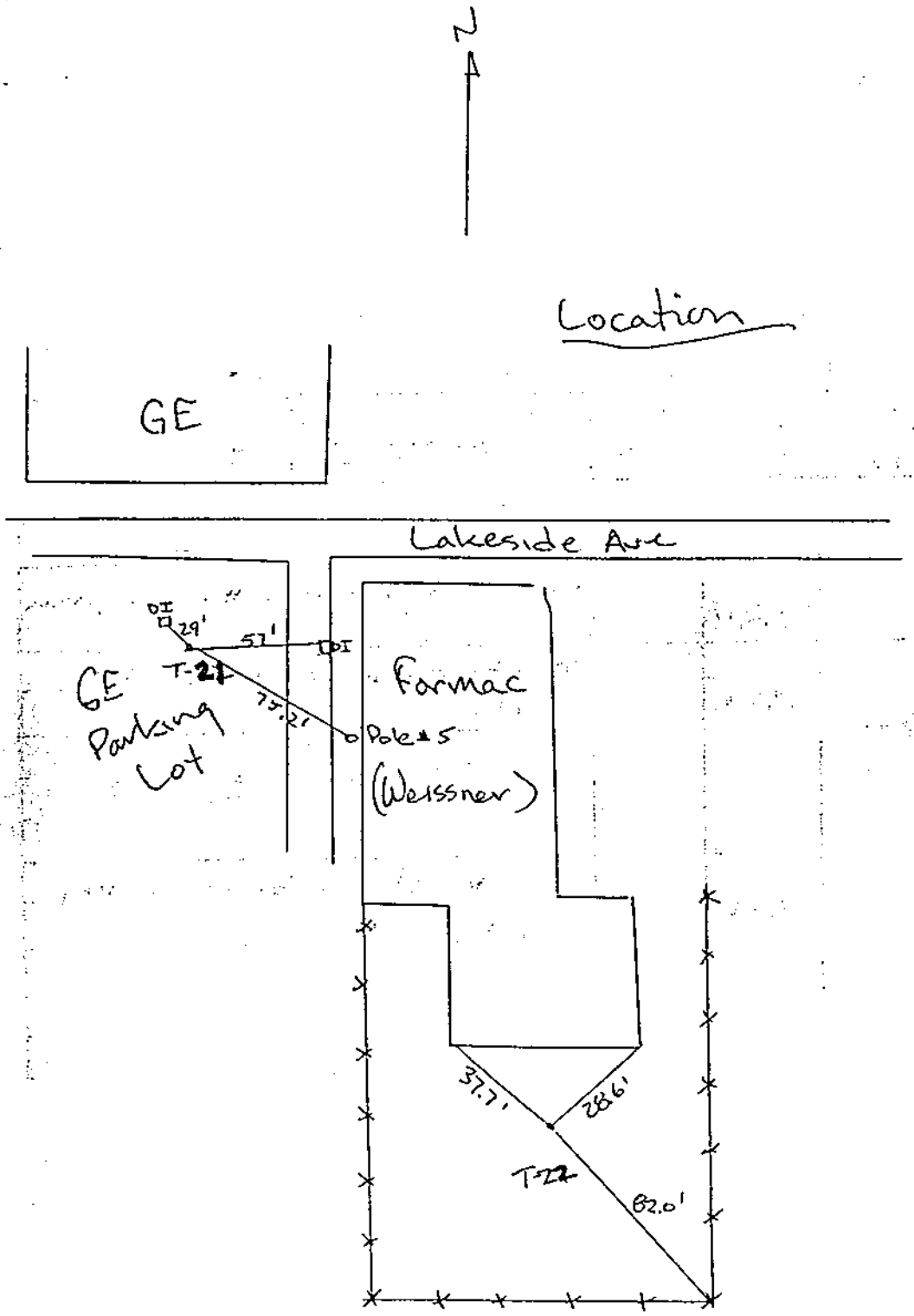
Packing Matl: _____ Seal Matl: _____ Backfill Matl: _____

Contractor: _____ Driller: McGlynn Method: Hollow stem Logged By: A.McBean

Depth (Feet)	Sample Type and No.	Sample Depth Range (Feet)	Sample Recovery or RQD	Sample Blows	Well Const.	Soil and Rock Descriptions/Comments (Unified soil class system, Rock description, Depth to water, Loss of drill water, discoloration, PID, etc.)
	SS	2-4		5,6,10,15		Moist Gray-brown mottled Sa, SiSa
	SS	4-6		3,4,5,6		Moist gray-brown mottled ClySi,SiCly.
	SS	9-11		2,2,4,6		Moist to wet gray brown mottled ClySi, SiCly.
	SS	14-16		2,4,5,6		Wet, gray ClySi, SiCly w/some Sa layers.
						Increase Sand content
	SS	19-21		6,8,7,9		Saturated gray Sa w/SiCly layers

Sample Type: A-Auger SS-Split Spoon RC-Rock Core C-Chips

Summary: Overburden Depth: _____ Bedrock Depth: _____ Total Depth: _____


N
Location
GE
Lakeside Ave
29'
57'
T-21
75.21'
GE Parking Lot
Pole #5
(Weissner)
Formac
37.7'
28.6'
T-22
82.0'

FIELD BORING LOG

Aquatec, Inc.
75 Green Mountain Drive
South Burlington, VT 05403

Project: Burlington
Project No: MEGL-5000(1)$_c$/2
Location: STA 221+90, 80 RT

Boring No: T-22
Sheet 24 of 25
Dates: 3/14/88

Projected to STA 222+00
Elev. T.O.W: 113.5 Elev. B.O.W: _____ Well Dia: _____ Boring Dia: 8"

Screen Inter: _____ Screen Matl: _____ Casing Matl: _____

Packing Matl: _____ Seal Matl: _____ Backfill Matl: _____

Contractor: _____ Driller: McGlynn Method: Hollow stem Logged By: A. McBean

Depth (Feet)	Sample Type and No	Sample Depth Range (Feet)	Sample Recovery or RQD	Sample Blows	Well Const.	Soil and Rock Descriptions/Comments (Unified soil class system, Rock description, Depth to water, Loss of drill water, discoloration, PID, etc.)
	SS	2-4		2,3,3,4		Wet brown-gray mottled Cly Petoleum odor
	SS	4-6		2,2,3,5		Wet brown-graymottled SiSa ClySi, Less distinct odor.
	SS	6-8		2,2,2,2		Wet gray w/minor brown mottling ClySi, SiCly
	SS	9-11		4,2,4,4		Wet gray ClySi, SiCly
	SS	14-16		1,4,4,6		Wet gray ClySi, SiCly
	SS	19-21		2,4,4,6		Wet gray ClySi ,SiCly

Sample Type: A-Auger SS-Split Spoon RC-Rock Core C-Chips

Summary: Overburden Depth: _____ Bedrock Depth: _____ Total Depth: _____

Explanation of Qualifiers Used in Analytical Reports

Under the column labeled "Q" for qualifier, flag each result with the specific Data Reporting Qualifiers listed below. The Contractor is encouraged to use additional flags or footnotes. The definition of such flags must be explicit and mist be included in the Case Narrative.

For reporting results to the USEPA, the following contract specific qualifiers are to be used. The seven qualifiers defined below <u>are not</u> subject to modification by the laboratory. Up to five qualifiers may be reported on Form I for each compound.

The seven EPA-defined qualifiers to be used are as follows:

U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For example, 10 U for phenol in water if the sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must <u>also</u> be adjusted for percent moisture. For example, if the sample had 24% moisture <u>and</u> a 1 to 10 dilution factor, the sample quantitation limit for phenol (330 U) would be corrected to:

$$\frac{(330\ U)}{D} \times df \qquad \text{where } D = \frac{100 - \%\ \text{moisture}}{100}$$

and df = dilution factor

$$\text{at 24\% moisture, } D = \frac{100-24}{100} = 0.76$$

$$\frac{(330\ U)}{.76} \times 10 = 4300\ U$$ rounded to the appropriate number of significant figures

For soil samples subject to GPC clean-up procedures, the CRQL is also multiplied by 2, to account for the fact that only half of the extract is recovered.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration of 3 ug/L is calculated, report it as 3J. The sample quantitation limit must be adjusted for <u>both</u> dilution and percent moisture as discussed for the U flag, so that if a sample with 24% moisture and a 1 to 10 dilution factor has a calculated concentration of 300 ug/L and a sample quantitation limit of 430 ug/kg, report the concentration as 300J on Form I.

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides $\geq$10 ng/ul in the final extract shall be confirmed by GC/MS.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified TCL compound.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to pesticides/PCBs analyzed by GC/EC methods. If one or more compounds have a response grater than full scale, the sample or extract must be diluted and re-analyzed according to the specifications in Exhibit D. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate Forms I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and <u>all</u> concentration values reported on that Form I are flagged with the "D" flag.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the Sample Data Summary Package and the Case Narrative. If more than one is required, use "Y" and "Z", as needed. If more than five qualifiers are required for a sample result, use the "X" flag to combine several flags, as needed. For instance, the "X" flag might combine the "A", "B", and "D" flags for some sample.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

T-21-4-6

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81178

Sample wt/vol: 2.6 (g/mL) G Lab File ID: C81178V

Level: (low/med) LOW Date Received: 03/14/88

% Moisture: not dec. 18 Date Analyzed: 03/15/88

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	24	U
74-83-9	Bromomethane	24	U
75-01-4	Vinyl Chloride	24	U
75-00-3	Chloroethane	24	U
75-09-2	Methylene Chloride	11	BJ
67-64-1	Acetone	5	BJ
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	5	BJ
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
108-05-4	Vinyl Acetate	24	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	24	U
591-78-6	2-Hexanone	24	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	12	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

T-21-14-16

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81179

Sample wt/vol: 2.7 (g/mL) G Lab File ID: C81179V

Level: (low/med) LOW Date Received: 03/14/88

% Moisture: not dec. 20 Date Analyzed: 03/15/88

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	23	U
74-83-9	Bromomethane	23	U
75-01-4	Vinyl Chloride	23	U
75-00-3	Chloroethane	23	U
75-09-2	Methylene Chloride	9	BJ
67-64-1	Acetone	6	BJ
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	6	BJ
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
108-05-4	Vinyl Acetate	23	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	23	U
591-78-6	2-Hexanone	23	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (total)	11	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TR-22-2-4

Name: AQUATEC, INC. Contract: 0981317

Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

rix: (soil/water) SOIL Lab Sample ID: 81816

ple wt/vol: 4.2 (g/mL) G Lab File ID: D81816EI2V

el: (low/med) MED Date Received: 03/29/88

oisture: not dec.16 Date Analyzed: 04/01/88

umn: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1400	U
74-83-9	Bromomethane	1400	U
75-01-4	Vinyl Chloride	1400	U
75-00-3	Chloroethane	1400	U
75-09-2	Methylene Chloride	670	BJ
67-64-1	Acetone	560	BJ
75-15-0	Carbon Disulfide	710	U
75-35-4	1,1-Dichloroethene	710	U
75-34-3	1,1-Dichloroethane	710	U
540-59-0	1,2-Dichloroethene (total)	710	U
67-66-3	Chloroform	710	U
107-06-2	1,2-Dichloroethane	710	U
78-93-3	2-Butanone	3800	B
71-55-6	1,1,1-Trichloroethane	710	U
56-23-5	Carbon Tetrachloride	710	U
108-05-4	Vinyl Acetate	1400	U
75-27-4	Bromodichloromethane	710	U
78-87-5	1,2-Dichloropropane	710	U
10061-01-5	cis-1,3-Dichloropropene	710	U
79-01-6	Trichloroethene	710	U
124-48-1	Dibromochloromethane	710	U
79-00-5	1,1,2-Trichloroethane	710	U
71-43-2	Benzene	270	BJ
10061-02-6	trans-1,3-Dichloropropene	710	U
75-25-2	Bromoform	710	U
108-10-1	4-Methyl-2-Pentanone	1400	U
591-78-6	2-Hexanone	1400	U
127-18-4	Tetrachloroethene	710	U
79-34-5	1,1,2,2-Tetrachloroethane	710	U
108-88-3	Toluene	3900	B
108-90-7	Chlorobenzene	710	U
100-41-4	Ethylbenzene	270	J
100-42-5	Styrene	710	U
1330-20-7	Xylene (total)	490	J

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TR-22-2-4

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81816

Sample wt/vol: 4.2 (g/mL) G Lab File ID: D81816EI2V

Level: (low/med) MED Date Received: 03/29/88

% Moisture: not dec. 16 Date Analyzed: 04/01/88

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	12.07	5400	J
2.		UNKNOWN HYDROCARBON	12.27	5500	J
3.		UNKNOWN	12.72	11000	J
4.		UNKNOWN C3SUBSTITUTED BENZEN	13.12	4300	J
5.		UNKNOWN C3SUBSTITUTED BENZEN	13.28	7100	J
6.		UNKNOWN C3SUBSTITUTED BENZEN	13.57	4300	J
7.		UNKNOWN C3SUBSTITUTED BENZEN	13.88	13000	J
8.		UNKNOWN HYDROCARBON	14.02	12000	J
9.		UNKNOWN C3SUBSTITUTED BENZEN	14.55	4200	J
10.		UNKNOWN AROMATIC HYDROCARBON	14.80	13000	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

T-22-14-16

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81181

Sample wt/vol: 2.5 (g/mL) G Lab File ID: C81181V

Level: (low/med) LOW Date Received: 03/14/88

% Moisture: not dec. 20 Date Analyzed: 03/15/88

Column: (pack/cap) PACK Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	25	U
74-83-9	Bromomethane	25	U
75-01-4	Vinyl Chloride	25	U
75-00-3	Chloroethane	25	U
75-09-2	Methylene Chloride	10	BJ
67-64-1	Acetone	7	BJ
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	6	BJ
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
108-05-4	Vinyl Acetate	25	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	13	U
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	25	U
591-78-6	2-Hexanone	25	U
127-18-4	Tetrachloroethene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

T-21-4-6

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81178

Sample wt/vol: 30.3 (g/mL) G Lab File ID: A81178S

Level: (low/med) LOW Date Received: 03/14/88

% Moisture: not dec. 22 dec. _____ Date Extracted: 03/16/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/08/88

GPC Cleanup: (Y/N) Y pH: 5.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	850	U
111-44-4	bis(2-Chloroethyl)ether	850	U
95-57-8	2-Chlorophenol	850	U
541-73-1	1,3-Dichlorobenzene	850	U
106-46-7	1,4-Dichlorobenzene	850	U
100-51-6	Benzyl alcohol	850	U
95-50-1	1,2-Dichlorobenzene	850	U
95-48-7	2-Methylphenol	850	U
108-60-1	bis(2-Chloroisopropyl)ether	850	U
106-44-5	4-Methylphenol	850	U
621-64-7	N-Nitroso-di-n-propylamine	850	U
67-72-1	Hexachloroethane	850	U
98-95-3	Nitrobenzene	850	U
78-59-1	Isophorone	850	U
88-75-5	2-Nitrophenol	850	U
105-67-9	2,4-Dimethylphenol	850	U
65-85-0	Benzoic acid	4300	U
111-91-1	bis(2-Chloroethoxy)methane	850	U
120-83-2	2,4-Dichlorophenol	850	U
120-82-1	1,2,4-Trichlorobenzene	850	U
91-20-3	Naphthalene	850	U
106-47-8	4-Chloroaniline	850	U
87-68-3	Hexachlorobutadiene	850	U
59-50-7	4-Chloro-3-methylphenol	850	U
91-57-6	2-Methylnaphthalene	850	U
77-47-4	Hexachlorocyclopentadiene	850	U
88-06-2	2,4,6-Trichlorophenol	850	U
95-95-4	2,4,5-Trichlorophenol	4300	U
91-58-7	2-Chloronaphthalene	850	U
88-74-4	2-Nitroaniline	4300	U
131-11-3	Dimethylphthalate	850	U
208-96-8	Acenaphthylene	850	U
606-20-2	2,6-Dinitrotoluene	850	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

T-21-4-6

ab Name: AQUATEC, INC. Contract: 0981317

ab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

atrix: (soil/water) SOIL Lab Sample ID: 81178

ample wt/vol: 30.3 (g/mL) G Lab File ID: A81178S

evel: (low/med) LOW Date Received: 03/14/88

Moisture: not dec. 22 dec. _____ Date Extracted: 03/16/88

xtraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/08/88

PC Cleanup: (Y/N) Y pH: 5.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	4300	U
83-32-9	Acenaphthene	850	U
51-28-5	2,4-Dinitrophenol	4300	U
100-02-7	4-Nitrophenol	4300	U
132-64-9	Dibenzofuran	850	U
121-14-2	2,4-Dinitrotoluene	850	U
84-66-2	Diethylphthalate	850	U
7005-72-3	4-Chlorophenyl-phenylether	850	U
86-73-7	Fluorene	850	U
100-01-6	4-Nitroaniline	4300	U
534-52-1	4,6-Dinitro-2-methylphenol	4300	U
86-30-6	N-Nitrosodiphenylamine (1)	850	U
101-55-3	4-Bromophenyl-phenylether	850	U
118-74-1	Hexachlorobenzene	850	U
87-86-5	Pentachlorophenol	4300	U
85-01-8	Phenanthrene	850	U
120-12-7	Anthracene	850	U
84-74-2	Di-n-butylphthalate	850	U
206-44-0	Fluoranthene	850	U
129-00-0	Pyrene	850	U
85-68-7	Butylbenzylphthalate	850	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
56-55-3	Benzo(a)anthracene	850	U
218-01-9	Chrysene	850	U
117-81-7	bis(2-Ethylhexyl)phthalate	850	U
117-84-0	Di-n-octylphthalate	850	U
205-99-2	Benzo(b)fluoranthene	850	U
207-08-9	Benzo(k)fluoranthene	850	U
50-32-8	Benzo(a)pyrene	850	U
193-39-5	Indeno(1,2,3-cd)pyrene	850	U
53-70-3	Dibenz(a,h)anthracene	850	U
191-24-2	Benzo(g,h,i)perylene	850	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

T-21-4-6

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81178

Sample wt/vol: 30.3 (g/mL) G Lab File ID: A81178S

Level: (low/med) LOW Date Received: 03/14/88

% Moisture: not dec. 22 dec. _____ Date Extracted: 03/16/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/08/88

GPC Cleanup: (Y/N) Y pH: 5.8 Dilution Factor: 1.0

Number TICs found: 7

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	6.23	740	JB
2.		UNKNOWN	7.62	5700	JAB
3.		UNKNOWN	8.33	390	JB
4.		UNKNOWN ALKANE	8.60	720	JB
5.		UNKNOWN ALKANE	8.93	750	JB
6.		UNKNOWN	10.72	410	JB
7.		UNKNOWN	11.85	740	JB
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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

T-21-14-16

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81179

Sample wt/vol: 29.7 (g/mL) G Lab File ID: A81179S

Level: (low/med) LOW Date Received: 03/14/88

% Moisture: not dec. 20 dec. _____ Date Extracted: 03/16/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/08/88

GPC Cleanup: (Y/N) Y pH: 8.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	850	U
111-44-4	bis(2-Chloroethyl)ether	850	U
95-57-8	2-Chlorophenol	850	U
541-73-1	1,3-Dichlorobenzene	850	U
106-46-7	1,4-Dichlorobenzene	850	U
100-51-6	Benzyl alcohol	850	U
95-50-1	1,2-Dichlorobenzene	850	U
95-48-7	2-Methylphenol	850	U
108-60-1	bis(2-Chloroisopropyl)ether	850	U
106-44-5	4-Methylphenol	850	U
621-64-7	N-Nitroso-di-n-propylamine	850	U
67-72-1	Hexachloroethane	850	U
98-95-3	Nitrobenzene	850	U
78-59-1	Isophorone	850	U
88-75-5	2-Nitrophenol	850	U
105-67-9	2,4-Dimethylphenol	850	U
65-85-0	Benzoic acid	4200	U
111-91-1	bis(2-Chloroethoxy)methane	850	U
120-83-2	2,4-Dichlorophenol	850	U
120-82-1	1,2,4-Trichlorobenzene	850	U
91-20-3	Naphthalene	850	U
106-47-8	4-Chloroaniline	850	U
87-68-3	Hexachlorobutadiene	850	U
59-50-7	4-Chloro-3-methylphenol	850	U
91-57-6	2-Methylnaphthalene	850	U
77-47-4	Hexachlorocyclopentadiene	850	U
88-06-2	2,4,6-Trichlorophenol	850	U
95-95-4	2,4,5-Trichlorophenol	4200	U
91-58-7	2-Chloronaphthalene	850	U
88-74-4	2-Nitroaniline	4200	U
131-11-3	Dimethylphthalate	850	U
208-96-8	Acenaphthylene	850	U
606-20-2	2,6-Dinitrotoluene	850	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

T-21-14-16

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81179

Sample wt/vol: 29.7 (g/mL) G Lab File ID: A81179S

Level: (low/med) LOW Date Received: 03/14/88

% Moisture: not dec. 20 dec. _____ Date Extracted: 03/16/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/08/88

GPC Cleanup: (Y/N) Y pH: 8.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	4200	U
83-32-9	Acenaphthene	850	U
51-28-5	2,4-Dinitrophenol	4200	U
100-02-7	4-Nitrophenol	4200	U
132-64-9	Dibenzofuran	850	U
121-14-2	2,4-Dinitrotoluene	850	U
84-66-2	Diethylphthalate	850	U
7005-72-3	4-Chlorophenyl-phenylether	850	U
86-73-7	Fluorene	850	U
100-01-6	4-Nitroaniline	4200	U
534-52-1	4,6-Dinitro-2-methylphenol	4200	U
86-30-6	N-Nitrosodiphenylamine (1)	850	U
101-55-3	4-Bromophenyl-phenylether	850	U
118-74-1	Hexachlorobenzene	850	U
87-86-5	Pentachlorophenol	4200	U
85-01-8	Phenanthrene	850	U
120-12-7	Anthracene	850	U
84-74-2	Di-n-butylphthalate	850	U
206-44-0	Fluoranthene	850	U
129-00-0	Pyrene	850	U
85-68-7	Butylbenzylphthalate	850	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
56-55-3	Benzo(a)anthracene	850	U
218-01-9	Chrysene	850	U
117-81-7	bis(2-Ethylhexyl)phthalate	850	U
117-84-0	Di-n-octylphthalate	850	U
205-99-2	Benzo(b)fluoranthene	850	U
207-08-9	Benzo(k)fluoranthene	850	U
50-32-8	Benzo(a)pyrene	850	U
193-39-5	Indeno(1,2,3-cd)pyrene	850	U
53-70-3	Dibenz(a,h)anthracene	850	U
191-24-2	Benzo(g,h,i)perylene	850	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

T-21-14-16

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81179

Sample wt/vol: 29.7 (g/mL) G Lab File ID: A81179S

Level: (low/med) LOW Date Received: 03/14/88

% Moisture: not dec. 20 dec. _____ Date Extracted: 03/16/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/08/88

GPC Cleanup: (Y/N) Y pH: 8.0 Dilution Factor: 1.0

Number TICs found: 8

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	6.27	820	JB
2.		UNKNOWN	7.62	7000	JAB
3.		UNKNOWN ALKANE	8.22	350	JB
4.		UNKNOWN	8.35	350	JB
5.		UNKNOWN ALKANE	8.60	760	JB
6.		UNKNOWN ALKANE	8.93	750	JB
7.		UNKNOWN	10.73	420	JB
8.		UNKNOWN	12.20	380	JB
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TR-22-2-4

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81816

Sample wt/vol: 1.1 (g/mL) G Lab File ID: A81816I2S

Level: (low/med) MED Date Received: 03/29/88

% Moisture: not dec. 21 dec. _____ Date Extracted: 04/05/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/05/88

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
108-95-2	Phenol	24000	U
111-44-4	bis(2-Chloroethyl)ether	24000	U
95-57-8	2-Chlorophenol	24000	U
541-73-1	1,3-Dichlorobenzene	24000	U
106-46-7	1,4-Dichlorobenzene	24000	U
100-51-6	Benzyl alcohol	24000	U
95-50-1	1,2-Dichlorobenzene	24000	U
95-48-7	2-Methylphenol	24000	U
108-60-1	bis(2-Chloroisopropyl)ether	24000	U
106-44-5	4-Methylphenol	24000	U
621-64-7	N-Nitroso-di-n-propylamine	24000	U
67-72-1	Hexachloroethane	24000	U
98-95-3	Nitrobenzene	24000	U
78-59-1	Isophorone	24000	U
88-75-5	2-Nitrophenol	24000	U
105-67-9	2,4-Dimethylphenol	24000	U
65-85-0	Benzoic acid	120000	U
111-91-1	bis(2-Chloroethoxy)methane	24000	U
120-83-2	2,4-Dichlorophenol	24000	U
120-82-1	1,2,4-Trichlorobenzene	24000	U
91-20-3	Naphthalene	24000	U
106-47-8	4-Chloroaniline	24000	U
87-68-3	Hexachlorobutadiene	24000	U
59-50-7	4-Chloro-3-methylphenol	24000	U
91-57-6	2-Methylnaphthalene	24000	U
77-47-4	Hexachlorocyclopentadiene	24000	U
88-06-2	2,4,6-Trichlorophenol	24000	U
95-95-4	2,4,5-Trichlorophenol	120000	U
91-58-7	2-Chloronaphthalene	24000	U
88-74-4	2-Nitroaniline	120000	U
131-11-3	Dimethylphthalate	24000	U
208-96-8	Acenaphthylene	24000	U
606-20-2	2,6-Dinitrotoluene	24000	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TR-22-2-4

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81816

Sample wt/vol: 1.1 (g/mL) G Lab File ID: A81816I2S

Level: (low/med) MED Date Received: 03/29/88

% Moisture: not dec. 21 dec. _____ Date Extracted: 04/05/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/05/88

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	120000	U
83-32-9	Acenaphthene	24000	U
51-28-5	2,4-Dinitrophenol	120000	U
100-02-7	4-Nitrophenol	120000	U
132-64-9	Dibenzofuran	24000	U
121-14-2	2,4-Dinitrotoluene	24000	U
84-66-2	Diethylphthalate	24000	U
7005-72-3	4-Chlorophenyl-phenylether	24000	U
86-73-7	Fluorene	24000	U
100-01-6	4-Nitroaniline	120000	U
534-52-1	4,6-Dinitro-2-methylphenol	120000	U
86-30-6	N-Nitrosodiphenylamine (1)	24000	U
101-55-3	4-Bromophenyl-phenylether	24000	U
118-74-1	Hexachlorobenzene	24000	U
87-86-5	Pentachlorophenol	120000	U
85-01-8	Phenanthrene	24000	U
120-12-7	Anthracene	24000	U
84-74-2	Di-n-butylphthalate	24000	U
206-44-0	Fluoranthene	24000	U
129-00-0	Pyrene	24000	U
85-68-7	Butylbenzylphthalate	24000	U
91-94-1	3,3'-Dichlorobenzidine	47000	U
56-55-3	Benzo(a)anthracene	24000	U
218-01-9	Chrysene	24000	U
117-81-7	bis(2-Ethylhexyl)phthalate	24000	U
117-84-0	Di-n-octylphthalate	24000	U
205-99-2	Benzo(b)fluoranthene	24000	U
207-08-9	Benzo(k)fluoranthene	24000	U
50-32-8	Benzo(a)pyrene	24000	U
193-39-5	Indeno(1,2,3-cd)pyrene	24000	U
53-70-3	Dibenz(a,h)anthracene	24000	U
191-24-2	Benzo(g,h,i)perylene	24000	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TR-22-2-4

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81816

Sample wt/vol: 1.1 (g/mL) G Lab File ID: A81816I2S

Level: (low/med) MED Date Received: 03/29/88

% Moisture: not dec. 21 dec. _____ Date Extracted: 04/05/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/05/88

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

Number TICs found: 2

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALKANE	13.42	12000	J
2.		UNKNOWN ALKANE	16.00	10000	J
3.					
4.					
5.					
6.					
7.					
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10.					
11.					
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29.					
30.					

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

T-22-14-16

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81181

Sample wt/vol: 30.2 (g/mL) G Lab File ID: A81181S

Level: (low/med) LOW Date Received: 03/14/88

% Moisture: not dec. 19 dec. _____ Date Extracted: 03/16/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/08/88

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	820	U
111-44-4	bis(2-Chloroethyl)ether	820	U
95-57-8	2-Chlorophenol	820	U
541-73-1	1,3-Dichlorobenzene	820	U
106-46-7	1,4-Dichlorobenzene	820	U
100-51-6	Benzyl alcohol	820	U
95-50-1	1,2-Dichlorobenzene	820	U
95-48-7	2-Methylphenol	820	U
108-60-1	bis(2-Chloroisopropyl)ether	820	U
106-44-5	4-Methylphenol	820	U
621-64-7	N-Nitroso-di-n-propylamine	820	U
67-72-1	Hexachloroethane	820	U
98-95-3	Nitrobenzene	820	U
78-59-1	Isophorone	820	U
88-75-5	2-Nitrophenol	820	U
105-67-9	2,4-Dimethylphenol	820	U
65-85-0	Benzoic acid	4100	U
111-91-1	bis(2-Chloroethoxy)methane	820	U
120-83-2	2,4-Dichlorophenol	820	U
120-82-1	1,2,4-Trichlorobenzene	820	U
91-20-3	Naphthalene	820	U
106-47-8	4-Chloroaniline	820	U
87-68-3	Hexachlorobutadiene	820	U
59-50-7	4-Chloro-3-methylphenol	820	U
91-57-6	2-Methylnaphthalene	820	U
77-47-4	Hexachlorocyclopentadiene	820	U
88-06-2	2,4,6-Trichlorophenol	820	U
95-95-4	2,4,5-Trichlorophenol	4100	U
91-58-7	2-Chloronaphthalene	820	U
88-74-4	2-Nitroaniline	4100	U
131-11-3	Dimethylphthalate	820	U
208-96-8	Acenaphthylene	820	U
606-20-2	2,6-Dinitrotoluene	820	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

T-22-14-16

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81181

Sample wt/vol: 30.2 (g/mL) G Lab File ID: A81181S

Level: (low/med) LOW Date Received: 03/14/88

% Moisture: not dec. 19 dec. _____ Date Extracted: 03/16/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/08/88

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	4100	U
83-32-9	Acenaphthene	820	U
51-28-5	2,4-Dinitrophenol	4100	U
100-02-7	4-Nitrophenol	4100	U
132-64-9	Dibenzofuran	820	U
121-14-2	2,4-Dinitrotoluene	820	U
84-66-2	Diethylphthalate	820	U
7005-72-3	4-Chlorophenyl-phenylether	820	U
86-73-7	Fluorene	820	U
100-01-6	4-Nitroaniline	4100	U
534-52-1	4,6-Dinitro-2-methylphenol	4100	U
86-30-6	N-Nitrosodiphenylamine (1)	820	U
101-55-3	4-Bromophenyl-phenylether	820	U
118-74-1	Hexachlorobenzene	820	U
87-86-5	Pentachlorophenol	4100	U
85-01-8	Phenanthrene	820	U
120-12-7	Anthracene	820	U
84-74-2	Di-n-butylphthalate	820	U
206-44-0	Fluoranthene	820	U
129-00-0	Pyrene	820	U
85-68-7	Butylbenzylphthalate	820	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)anthracene	820	U
218-01-9	Chrysene	820	U
117-81-7	bis(2-Ethylhexyl)phthalate	820	U
117-84-0	Di-n-octylphthalate	820	U
205-99-2	Benzo(b)fluoranthene	820	U
207-08-9	Benzo(k)fluoranthene	820	U
50-32-8	Benzo(a)pyrene	820	U
193-39-5	Indeno(1,2,3-cd)pyrene	820	U
53-70-3	Dibenz(a,h)anthracene	820	U
191-24-2	Benzo(g,h,i)perylene	820	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

T-22-14-16

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81181

Sample wt/vol: 30.2 (g/mL) G Lab File ID: A81181S

Level: (low/med) LOW Date Received: 03/14/88

% Moisture: not dec. 19 dec. _____ Date Extracted: 03/16/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/08/88

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.0

Number TICs found: 6

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	6.27	800	JB
2.		UNKNOWN	7.63	6700	JAB
3.		UNKNOWN	8.35	340	JB
4.		UNKNOWN ALKANE	8.62	650	JB
5.		UNKNOWN ALKANE	8.93	660	JB
6.		UNKNOWN	10.73	440	JB
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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

T-21-4-6

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81178

Sample wt/vol: 30.3 (g/mL) G Lab File ID: V040673

Level: (low/med) LOW Date Received: 03/14/88

% Moisture: not dec. 22 dec. _____ Date Extracted: 03/16/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/06/88

GPC Cleanup: (Y/N) Y pH: 5.8 Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	100	U
319-85-7	beta-BHC	100	U
319-86-8	delta-BHC	100	U
58-89-9	gamma-BHC (Lindane)	100	U
76-44-8	Heptachlor	100	U
309-00-2	Aldrin	100	U
1024-57-3	Heptachlor epoxide	100	U
959-98-8	Endosulfan I	100	U
60-57-1	Dieldrin	200	U
72-55-9	4,4'-DDE	200	U
72-20-8	Endrin	200	U
33213-65-9	Endosulfan II	200	U
72-54-8	4,4'-DDD	200	U
1031-07-8	Endosulfan sulfate	200	U
50-29-3	4,4'-DDT	200	U
72-43-5	Methoxychlor	1000	U
53494-70-5	Endrin ketone	200	U
5103-71-9	alpha-Chlordane	1000	U
5103-74-2	gamma-Chlordane	1000	U
8001-35-2	Toxaphene	2000	U
12674-11-2	Aroclor-1016	1000	U
11104-28-2	Aroclor-1221	1000	U
11141-16-5	Aroclor-1232	1000	U
53469-21-9	Aroclor-1242	1000	U
12672-29-6	Aroclor-1248	1000	U
11097-69-1	Aroclor-1254	2000	U
11096-82-5	Aroclor-1260	2000	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

T-21-14-16

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81179

Sample wt/vol: 29.7 (g/mL) G Lab File ID: V040674

Level: (low/med) LOW Date Received: 03/14/88

% Moisture: not dec. 20 dec. _____ Date Extracted: 03/16/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/06/88

GPC Cleanup: (Y/N) Y pH: 8.0 Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	100	U
319-85-7	beta-BHC	100	U
319-86-8	delta-BHC	100	U
58-89-9	gamma-BHC (Lindane)	100	U
76-44-8	Heptachlor	100	U
309-00-2	Aldrin	100	U
1024-57-3	Heptachlor epoxide	100	U
959-98-8	Endosulfan I	100	U
60-57-1	Dieldrin	200	U
72-55-9	4,4'-DDE	200	U
72-20-8	Endrin	200	U
33213-65-9	Endosulfan II	200	U
72-54-8	4,4'-DDD	200	U
1031-07-8	Endosulfan sulfate	200	U
50-29-3	4,4'-DDT	200	U
72-43-5	Methoxychlor	1000	U
53494-70-5	Endrin ketone	200	U
5103-71-9	alpha-Chlordane	1000	U
5103-74-2	gamma-Chlordane	1000	U
8001-35-2	Toxaphene	2000	U
12674-11-2	Aroclor-1016	1000	U
11104-28-2	Aroclor-1221	1000	U
11141-16-5	Aroclor-1232	1000	U
53469-21-9	Aroclor-1242	1000	U
12672-29-6	Aroclor-1248	1000	U
11097-69-1	Aroclor-1254	2000	U
11096-82-5	Aroclor-1260	2000	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TR-22-2-4

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81816

Sample wt/vol: 1.1 (g/mL) G Lab File ID: V040683

Level: (low/med) MED Date Received: 03/29/88

% Moisture: not dec. 21 dec. _____ Date Extracted: 04/05/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/06/88

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	720	U
319-85-7	beta-BHC	720	U
319-86-8	delta-BHC	720	U
58-89-9	gamma-BHC (Lindane)	720	U
76-44-8	Heptachlor	720	U
309-00-2	Aldrin	720	U
1024-57-3	Heptachlor epoxide	720	U
959-98-8	Endosulfan I	720	U
60-57-1	Dieldrin	1400	U
72-55-9	4,4'-DDE	1400	U
72-20-8	Endrin	1400	U
33213-65-9	Endosulfan II	1400	U
72-54-8	4,4'-DDD	1400	U
1031-07-8	Endosulfan sulfate	1400	U
50-29-3	4,4'-DDT	1400	U
72-43-5	Methoxychlor	7200	U
53494-70-5	Endrin ketone	1400	U
5103-71-9	alpha-Chlordane	7200	U
5103-74-2	gamma-Chlordane	7200	U
8001-35-2	Toxaphene	14000	U
12674-11-2	Aroclor-1016	7200	U
11104-28-2	Aroclor-1221	7200	U
11141-16-5	Aroclor-1232	7200	U
53469-21-9	Aroclor-1242	7200	U
12672-29-6	Aroclor-1248	7200	U
11097-69-1	Aroclor-1254	14000	U
11096-82-5	Aroclor-1260	14000	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

T-22-14-16

Lab Name: AQUATEC, INC. Contract: 0981317

Lab Code: AQUAI Case No.: 88014 SAS No.: _____ SDG No.: 80420

Matrix: (soil/water) SOIL Lab Sample ID: 81181

Sample wt/vol: 30.2 (g/mL) G Lab File ID: V040676

Level: (low/med) LOW Date Received: 03/14/88

% Moisture: not dec. 19 dec. _____ Date Extracted: 03/16/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 04/06/88

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	98	U
319-85-7	beta-BHC	98	U
319-86-8	delta-BHC	98	U
58-89-9	gamma-BHC (Lindane)	98	U
76-44-8	Heptachlor	98	U
309-00-2	Aldrin	98	U
1024-57-3	Heptachlor epoxide	98	U
959-98-8	Endosulfan I	98	U
60-57-1	Dieldrin	200	U
72-55-9	4,4'-DDE	200	U
72-20-8	Endrin	200	U
33213-65-9	Endosulfan II	200	U
72-54-8	4,4'-DDD	200	U
1031-07-8	Endosulfan sulfate	200	U
50-29-3	4,4'-DDT	200	U
72-43-5	Methoxychlor	980	U
53494-70-5	Endrin ketone	200	U
5103-71-9	alpha-Chlordane	980	U
5103-74-2	gamma-Chlordane	980	U
8001-35-2	Toxaphene	2000	U
12674-11-2	Aroclor-1016	980	U
11104-28-2	Aroclor-1221	980	U
11141-16-5	Aroclor-1232	980	U
53469-21-9	Aroclor-1242	980	U
12672-29-6	Aroclor-1248	980	U
11097-69-1	Aroclor-1254	2000	U
11096-82-5	Aroclor-1260	2000	U