



City of Rochester

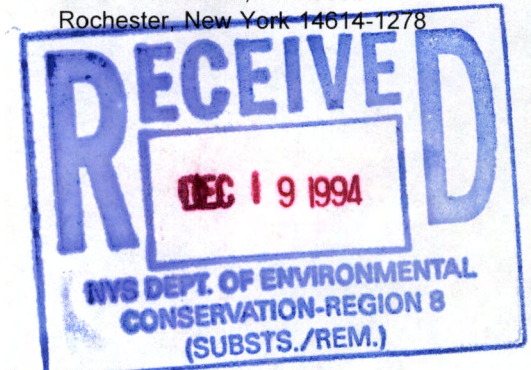
FAX (716) 428-6010
TDD/Voice 232-3260

Department of
Environmental Services

Office of the Commissioner
Division of Environmental Quality
30 Church Street, Rm. 300B
Rochester, New York 14614-1278

December 16, 1994

Mary Jane Peachey, P.E.
New York Department of Environmental Conservation
6274 E. Avon Lima Road
Avon, New York 14414



Re: Court Street Parking Garage IRM Vent System - Work Plan final layout

Dear Ms. Peachey:

On September 22 we sent you proposed additions to the vent system layout for the Court Street Parking Garage Project and in a follow-up October 20 letter provided the rationale for the vent system expansion. Your November 23 response indicated that the final plans for the vent system would be dependent on the results of verification soil samples collected on November 7. We provided our sample results for locations V8 to V16 to Todd Caffoe on December 6 and received the NYSDEC split sample results (V8 to V12) the following day from Todd. Copies of the analytical data are provided in Attachment 1.

Table 1 is a summary of the soil analytical data indicating results for those locations where contaminants were detected by either the NYSDEC or City analyses. I have included the previous test pit data from soils just to the north of the November 7 verification sampling area as well. No characteristic site contaminants, petroleum or chlorinated solvents related to dry cleaning, were detected at V8, V9, V10, V12, V13, V14, V15, or V16. Figure 1. is a sample location drawing

The results indicate that, in all but one location, the upper six inches of the remaining three feet of soil are not contaminated. Of the recent verification sampling, the only location where volatile organic compounds exceed STAR's guidance values was at V-11. The test pit data and our experience with excavating soils at this elevation (502-506 fmsl) suggests that some low-level contamination may be present at depths greater than six inches. However, the remaining 2 - 2.5 feet of soil do not exhibit the heavy staining or the sustained strong odors encountered at the apparent source area (the stone lined sump pit discovered at elevation 517-519 fmsl) or just above the dense glacial till (elevation 514-516 fmsl). At this point, we would propose that the soil conditions indicated by the verification data do not warrant the active ventilation system proposed in September or require removal. The garage excavation process has resulted in the removal of the source area and all heavily contaminated soil within the footprint of the garage. We believe the intent of the removal action described in the approved work plan has been met.

Based on observations of the shoring on the north side of the garage excavation, we do, however, now propose to install a 62 foot section of 4-inch diameter slotted schedule 40 PVC vent pipe between the foundation and the shoring along the eastern end of the north side of the garage. A

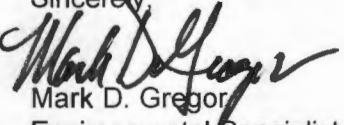
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revised proposed vent system layout is presented in Figure 2. In this area we have observed staining of the lagging and occasional small seeps of the same dark brown liquid possessing a petroleum solvent odor that was detected at various times during the soil removal process. The new section of vent pipe would be located above the garage perimeter drain system. The vent pipe would help prevent the accumulation of vapors in the drain system. The perimeter drain system is piped to a central drain location beneath the lower level of the garage where it runs through sand separators before being pumped to the storm sewer in Court Street. In addition to installing the vent pipe, we believe that it will be appropriate to periodically inspect the drain system and the sand separators for the possible presence of contamination from material entering the perimeter drain system.

We would like to determine the final system layout as soon as possible so that materials can be ordered, and we will provide the detailed drawings and specifications as soon as they are ready. Please let me know if you or Todd have any questions or would like to discuss the proposed revisions to the vent system. Thank you.

Sincerely,


Mark D. Gregor
Environmental Specialist
428-5978

attach.
xc.
T.Caffoe,NYS-DEC
R.Elliott,MC-DOH
D.Napier,NYS-DOC
James Hazel, NYS-DEC
E.Doherty
J.Brennan
N.Burton
S.Feuerstein
A.Klumpp
T.Seeler

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**Table 1. Court Street Parking Garage IRM
Soil sample results for locations where contaminants were detected**

Sample Results (ug/kg)							
Compound	TP-1	TP-2	V-8 ^s	V-9 ^s	V-10 ^s	V-11	V-11 ^s
ethylbenzene	8.8	5600	nd	nd	nd	13j	2.7
(m+p) xylene	nd	2800	na	na	na	76	na
o-xylene	22	15000	na	na	na	100	na
total xylene	na	na	nd	nd	nd	na	94
isopropylbenzene	16	12000	na	na	na	72	na
n-propylbenzene	nd	15000	na	na	na	160	na
1,3,5-trimethylbenzene	19	14000	na	na	na	3600e	na
1,2,4-trimethylbenzene	10	33000	na	na	na	7700e	na
sec-butylbenzene	nd	nd	na	na	na	550	na
p-isopropyltoluene	7.8	4300	na	na	na	1900e	na
napthalene	nd	nd	na	na	na	26j	na
n-butylbenzene	47	24000	na	na	na	nd	na
methylene chloride	na	na	1.5	1.3	1.5	na	1.4
acetone	na	na	nd	nd	nd	na	7.6
tetrachloroethylene	na	na	nd	nd	nd	na	5.4
TIC's:	na	na	na	na	na	na	
unknown hydrocarbon							220j
unknown hydrocarbon							280j
propyl benzene isomer							370j
propyl benzene isomer							560j
unknown hydrocarbon							950j
propyl benzene isomer							520j
unknown							210j
propyl benzene isomer							620j
butyl benzene isomer							370j
butyl benzene isomer							470j

Notes: S - indicates a NYSDEC split sample result
 nd - not detected during analysis
 na - analysis not performed for this compound
 j - estimated concentration

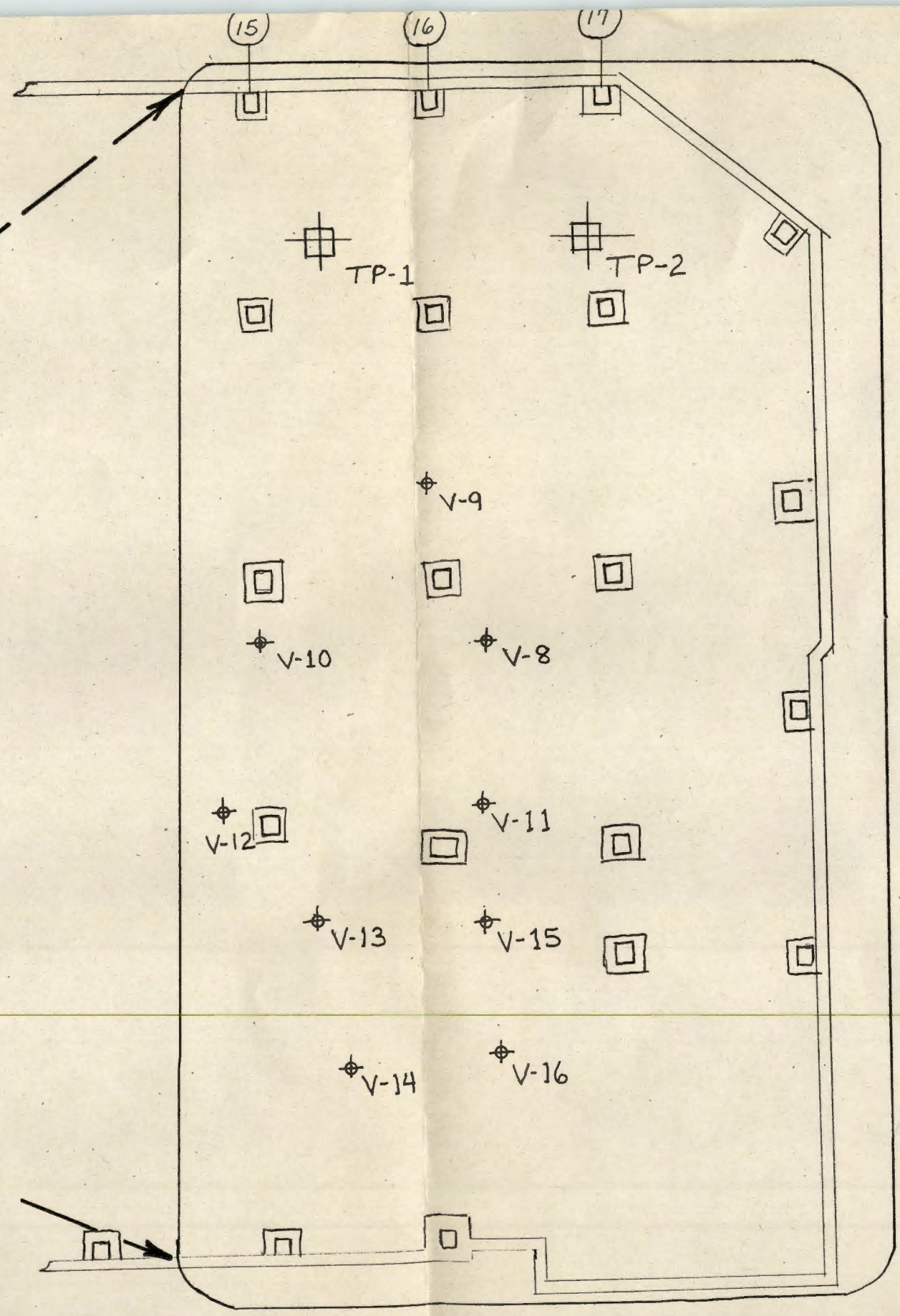
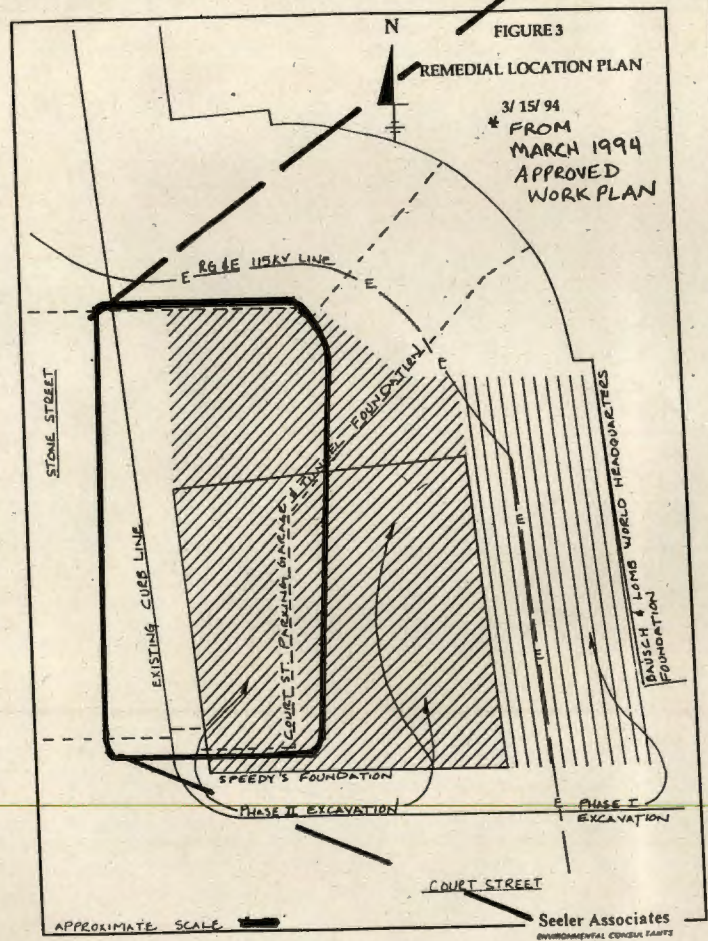
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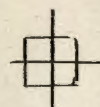

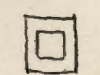


FIGURE 1

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-  TEST PIT LOCATION
-  SOIL SAMPLE LOCATION
-  SUPPORT COLUMN/FOOTER

SCALE 1/16" = 1'0"

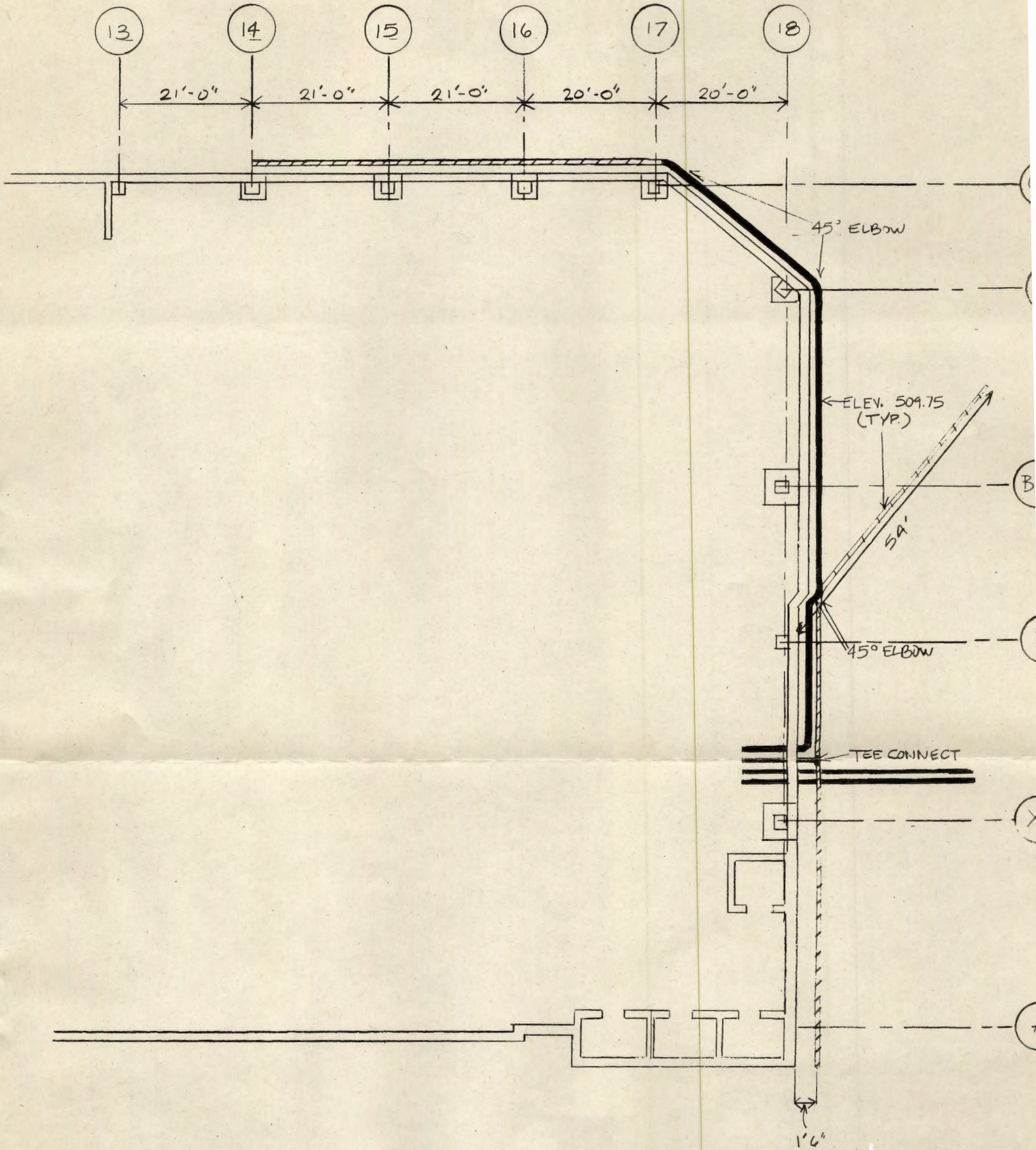
VERIFICATION SAMPLE
 LOCATION PLAN
 COURT STREET
 PARKING GARAGE 12-16-94

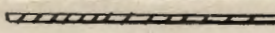
FIGURE 2

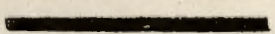
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DRAFT



 SLOTTED PIPE 4"φ

 SOLID PIPE 4"φ

SCALE $\frac{1}{16}'' = 1'0''$

PLAN VIEW
PIPING LAYOUT
LEVEL "B"
COURT ST. PARKING
GARAGE

REVISED 12-13-94

ATTACHMENT 1



ORGANICS QUALIFIERS - 1991

- U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. The 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.
- N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compound, where the identification is based on a mass spectral library search.
- P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.
- 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 ALL 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 - As specified in Case Narrative.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V8

Name: GENERAL TESTING

Contract: SEELER

Code: 10145

Case No.: ---

SAS No.: ---

SDG No.: V11

Matrix: (soil/water) SOIL

Lab Sample ID: 4374-11

Sample wt/vol: 5 (g/mL) G

Lab File ID: >J1467

Level: (low/med) LOW

Date Received: 11/07/94

Moisture: not dec.8

Date Analyzed: 11/19/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

Final extract Volume: -- (uL)

Quot Volume: -- (uL)

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

CAS NO.	COMPOUND	UG/KG	Q
1634-04-4	Methyl-t-Butyl Ether	5.	U
71-43-2	Benzene	5.	U
108-88-3	Toluene	5.	U
100-41-4	Ethylbenzene	5.	U
1330-20-7	(m+p)Xylene	5.	U
1330-20-7	o-Xylene	5.	U
98-82-8	Isopropyl Benzene	5.	U
103-65-1	n-Propylbenzene	5.	U
108-67-8	1,3,5-Trimethylbenzene	5.	U
98-06-6	tert-Butylbenzene	5.	U
95-63-6	1,2,4-Trimethylbenzene	5.	U
135-98-8	sec-Butylbenzene	5.	U
99-87-6	p-Isopropyltoluene	5.	U
104-51-8	n-Butylbenzene	5.	U
91-20-3	Naphthalene	5.	U

FORM_I_VOA

1/89 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V8DUP

Name: GENERAL TESTING

Contract: SEELER

Code: 10145

Case No.: ---

SAS No.: ---

SDG No.: V11

Matrix: (soil/water) SOIL

Lab Sample ID: 4374-1

Sample wt/vol: 1 (g/mL) G

Lab File ID: >J1462

Level: (low/med) LOW

Date Received: 11/07/94

Disturbance: not dec.8

Date Analyzed: 11/19/94

Container: (pack/cap) CAP

Dilution Factor: 1.0

Final extract Volume: --- (uL)

Quota Volume: --- (uL)

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

CAS NO. COMPOUND Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl-t-Butyl Ether	27.	U
71-43-2	Benzene	27.	U
108-88-3	Toluene	27.	U
100-41-4	Ethylbenzene	27.	U
1330-20-7	(m+p)Xylene	27.	U
1330-20-7	o-Xylene	27.	U
98-82-8	Isopropyl Benzene	27.	U
103-65-1	n-Propylbenzene	27.	U
108-67-8	1,3,5-Trimethylbenzene	27.	U
98-06-6	tert-Butylbenzene	27.	U
95-63-6	1,2,4-Trimethylbenzene	27.	U
135-98-8	sec-Butylbenzene	27.	U
99-87-6	p-Isopropyltoluene	27.	U
104-51-8	n-Butylbenzene	27.	U
91-20-3	Naphthalene	27.	U

FORM I_VOA

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V9

Name: GENERAL TESTING

Contract: SEELER

Code: 10145

Case No.: ---

SAS No.: ---

SDG No.: V11

Matrix: (soil/water) SOIL

Lab Sample ID: 4374-2

Sample wt/vol: 5 (g/mL) G

Lab File ID: >J1459

Level: (low/med) LOW

Date Received: 11/07/94

Moisture: not dec.8

Date Analyzed: 11/19/94

Container: (pack/cap) CAP

Dilution Factor: 1.0

Initial extract Volume: --- (uL)

Quot Volume: --- (uL)

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

CAS NO. COMPOUND Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl-t-Butyl Ether	5.	U
71-43-2	Benzene	5.	U
108-88-3	Toluene	5.	U
100-41-4	Ethylbenzene	5.	U
1330-20-7	(m+p)Xylene	5.	U
1330-20-7	o-Xylene	5.	U
98-82-8	Isopropyl Benzene	5.	U
103-65-1	n-Propylbenzene	5.	U
108-67-8	1,3,5-Trimethylbenzene	5.	U
98-06-6	tert-Butylbenzene	5.	U
95-63-6	1,2,4-Trimethylbenzene	5.	U
135-98-8	sec-Butylbenzene	5.	U
99-87-6	p-Isopropyltoluene	5.	U
104-51-8	n-Butylbenzene	5.	U
91-20-3	Naphthalene	5.	U

FORM I VOA

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V10

Name: GENERAL TESTING

Contract: SEELER

Code: 10145

Case No.: ---

SAS No.: ---

SDG No.: V11

Matrix: (soil/water) SOIL

Lab Sample ID: 4374-3

Sample wt/vol: 5 (g/mL) G

Lab File ID: >J1446

Level: (low/med) LOW

Date Received: 11/07/94

Disturbance: not dec.3

Date Analyzed: 11/18/94

Container: (pack/cap) CAP

Dilution Factor: 1.0

Final extract Volume: --- (uL)

Quot Volume: -- (uL)

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

CAS NO. COMPOUND Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl-t-Butyl Ether	5.	U
71-43-2	Benzene	5.	U
108-88-3	Toluene	5.	U
100-41-4	Ethylbenzene	5.	U
1330-20-7	(m+p)Xylene	5.	U
1330-20-7	o-Xylene	5.	U
98-82-8	Isopropyl Benzene	5.	U
103-65-1	n-Propylbenzene	5.	U
108-67-8	1,3,5-Trimethylbenzene	5.	U
98-06-6	tert-Butylbenzene	5.	U
95-63-6	1,2,4-Trimethylbenzene	5.	U
135-98-8	sec-Butylbenzene	5.	U
99-87-6	p-Isopropyltoluene	5.	U
104-51-8	n-Butylbenzene	5.	U
91-20-3	Naphthalene	5.	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V11

Name: GENERAL TESTING

Contract: SEELER

Code: 10145

Case No.: ---

SAS No.: ---

SDG No.: V11

Matrix: (soil/water) SOIL

Lab Sample ID: 4374-4

Sample wt/vol: 1 (g/mL) G

Lab File ID: >J1465

Level: (low/med) LOW

Date Received: 11/07/94

Moisture: not dec.9

Date Analyzed: 11/19/94

Container: (pack/cap) CAP

Dilution Factor: 1.0

Final extract Volume: --- (uL)

Quot Volume: --- (uL)

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl-t-Butyl Ether	27.	U
71-43-2	Benzene	27.	U
108-88-3	Toluene	27.	U
100-41-4	Ethylbenzene	13.	J
1330-20-7	(m+p)Xylene	76.	
1330-20-7	o-Xylene	100.	
98-82-8	Isopropyl Benzene	72.	
103-65-1	n-Propylbenzene	160.	
108-67-8	1,3,5-Trimethylbenzene	3600.	E
98-06-6	tert-Butylbenzene	27.	U
95-63-6	1,2,4-Trimethylbenzene	7700.	E
135-98-8	sec-Butylbenzene	550.	
99-87-6	p-Isopropyltoluene	1900.	E
104-51-8	n-Butylbenzene	27.	U
91-20-3	Naphthalene	26.	J

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V11DL

Name: GENERAL TESTING

Contract: SEELER

Code: 10145

Case No.: ---

SAS No.: ---

SDG No.: V11

Matrix: (soil/water) SOIL

Lab Sample ID: 4374-4DL

Sample wt/vol: 4 (g/mL) G

Lab File ID: >Q2543

Level: (low/med) MED

Date Received: --/--/--

Disturbance: not dec. 9

Date Analyzed: 11/21/94

Container: [pack/cap] CAP

Dilution Factor: 1.0

1.0 mL extract Volume: 10000 (uL)

Quot Volume: 50 (uL)

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

CAS NO. COMPOUND Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl-t-Butyl Ether	1400.	U
71-43-2	Benzene	1400.	U
108-88-3	Toluene	1400.	U
100-41-4	Ethylbenzene	1400.	U
1330-20-7	(m+p)Xylene	1400.	U
1330-20-7	o-Xylene	1400.	U
98-82-8	Isopropyl Benzene	1400.	U
103-65-1	n-Propylbenzene	1400.	U
108-67-8	1,3,5-Trimethylbenzene	3600.	D
98-06-6	tert-Butylbenzene	1400.	U
95-63-6	1,2,4-Trimethylbenzene	8100.	D
135-98-8	sec-Butylbenzene	560.	JD
99-87-6	p-Isopropyltoluene	1500.	D
104-51-8	n-Butylbenzene	1400.	U
91-20-3	Naphthalene	1400.	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V12

Name: GENERAL TESTING

Contract: SEELER

Code: 10145

Case No.: ---

SAS No.: ---

SDG No.: V11

Matrix: (soil/water) SOIL

Lab Sample ID: 4374-5

Sample wt/vol: 5 (g/mL) G

Lab File ID: >J1449

Level: (low/med) LOW

Date Received: 11/07/94

Disturbance: not dec.9

Date Analyzed: 11/19/94

Container: (pack/cap) CAP

Dilution Factor: 1.0

Final extract Volume: -- (uL)

Quota Volume: -- (uL)

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl-t-Butyl_Ether	5.	U
71-43-2	Benzene	5.	U
108-88-3	Toluene	5.	U
100-41-4	Ethylbenzene	5.	U
1330-20-7	(m+p)Xylene	5.	U
1330-20-7	o-Xylene	5.	U
98-82-8	Isopropyl_Benzene	5.	U
103-65-1	n-Propylbenzene	5.	U
108-67-8	1,3,5-Trimethylbenzene	5.	U
98-06-6	tert-Butylbenzene	5.	U
95-63-6	1,2,4-Trimethylbenzene	5.	U
135-98-8	sec-Butylbenzene	5.	U
99-87-6	p-Isopropyltoluene	5.	U
104-51-8	n-Butylbenzene	5.	U
91-20-3	Naphthalene	5.	U

FORM I VOA

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V13

Name: GENERAL TESTING

Contract: SEELER

Code: 10145

Case No.: ---

SAS No.: ---

SDG No.: V11

Matrix: (soil/water) SOIL

Lab Sample ID: 4374-6

Sample wt/vol: 5 (g/mL) G

Lab File ID: >J1464

Depth: (low/med) LOW

Date Received: 11/07/94

Moisture: not dec.9

Date Analyzed: 11/19/94

Container: (pack/cap) CAP

Dilution Factor: 1.0

Initial extract Volume: --- (uL)

Quot Volume: --- (uL)

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

CAS NO. COMPOUND Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1634-04-4	Methyl-t-Butyl Ether	5.	U
71-43-2	Benzene	5.	U
108-88-3	Toluene	5.	U
100-41-4	Ethylbenzene	5.	U
1330-20-7	(m+p)Xylene	5.	U
1330-20-7	o-Xylene	5.	U
98-82-8	Isopropyl Benzene	5.	U
103-65-1	n-Propylbenzene	5.	U
108-67-8	1,3,5-Trimethylbenzene	5.	U
98-06-6	tert-Butylbenzene	5.	U
95-63-6	1,2,4-Trimethylbenzene	5.	U
135-98-8	sec-Butylbenzene	5.	U
99-87-6	p-Isopropyltoluene	5.	U
104-51-8	n-Butylbenzene	5.	U
91-20-3	Naphthalene	5.	U

FORM I_VOA

1/89 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

LFA SAMPLE NO.

V14

Name: GENERAL TESTING

Contract: SEELER

Code: 10145

Case No.: ---

SAS No.: ---

SDG No.: V11

ix: (soil/water) SOIL

Lab Sample ID: 4374-7

le wt/vol: 5 (g/mL) G

Lab File ID: >J1468

l: (low/med) LOW

Date Received: 11/07/94

isture: not dec.7

Date Analyzed: 11/19/94

nm: (pack/cap) CAP

Dilution Factor: 1.0

l extract Volume: -- (uL)

uot Volume: -- (uL)

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

Q

CAS NO.	COMPOUND		
1634-04-4	Methyl-t-Butyl Ether	5.	U
71-43-2	Benzene	5.	U
108-88-3	Toluene	5.	U
100-41-4	Ethylbenzene	5.	U
1330-20-7	(m+p)Xylene	5.	U
1330-20-7	o-Xylene	5.	U
98-82-8	Isopropyl Benzene	5.	U
103-65-1	n-Propylbenzene	5.	U
108-67-8	1,3,5-Trimethylbenzene	5.	U
98-06-6	tert-Butylbenzene	5.	U
95-63-6	1,2,4-Trimethylbenzene	5.	U
135-98-8	sec-Butylbenzene	5.	U
99-87-6	p-Isopropyltoluene	5.	U
104-51-8	n-Butylbenzene	5.	U
91-20-3	Naphthalene	5.	U

FORM I_VOA

1/89 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V15

Name: GENERAL TESTING

Contract: SEELER

Code: 10145

Case No.: ---

SAS No.: ---

SDG No.: V11

Matrix: (soil/water) SOIL

Lab Sample ID: 4374-8

Sample wt/vol: 5 (g/mL) G

Lab File ID: >J1451

Level: (low/med) LOW

Date Received: 11/07/94

Moisture: not dec.9

Date Analyzed: 11/19/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

Final extract Volume: --- (uL)

Quot Volume: --- (uL)

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

CAS NO. COMPOUND UG/KG Q

CAS NO.	COMPOUND	UG/KG	Q
1634-04-4	Methyl-t-Butyl Ether	5.	U
71-43-2	Benzene	5.	U
108-88-3	Toluene	5.	U
100-41-4	Ethylbenzene	5.	U
1330-20-7	(m+p)Xylene	5.	U
1330-20-7	o-Xylene	5.	U
98-82-8	Isopropyl Benzene	5.	U
103-65-1	n-Propylbenzene	5.	U
108-67-8	1,3,5-Trimethylbenzene	5.	U
98-06-6	tert-Butylbenzene	5.	U
95-63-6	1,2,4-Trimethylbenzene	5.	U
135-98-8	sec-Butylbenzene	5.	U
99-87-6	p-Isopropyltoluene	5.	U
104-51-8	n-Butylbenzene	5.	U
91-20-3	Naphthalene	5.	U

FORM I_VOA

1/89 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

V16

Name: GENERAL TESTING

Contract: SEELER

Code: 10145

Case No.: ---

SAS No.: ---

SDG No.: V11

Matrix: (soil/water) SOIL

Lab Sample ID: 4374-9

Sample wt/vol: 5 (g/mL) G

Lab File ID: >J1461

Level: (low/med) LOW

Date Received: 11/07/94

Moisture: not dec.9

Date Analyzed: 11/19/94

Container: (pack/cap) CAP

Dilution Factor: 1.0

1 extract Volume: -- (uL)

Quot Volume: -- (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

1634-04-4	Methyl-t-Butyl Ether	5.	U
71-43-2	Benzene	5.	U
108-88-3	Toluene	5.	U
100-41-4	Ethylbenzene	5.	U
1330-20-7	(m+p)Xylene	5.	U
1330-20-7	o-Xylene	5.	U
98-82-8	Isopropyl Benzene	5.	U
103-65-1	n-Propylbenzene	5.	U
108-67-8	1,3,5-Trimethylbenzene	5.	U
98-06-6	tert-Butylbenzene	5.	U
95-63-6	1,2,4-Trimethylbenzene	5.	U
135-98-8	sec-Butylbenzene	5.	U
99-87-6	p-Isopropyltoluene	5.	U
104-51-8	n-Butylbenzene	5.	U
91-20-3	Naphthalene	5.	U

FORM I_VOA

1/89 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

CFA SAMPLE NO.

VTB

Name: GENERAL TESTING

Contract: SEELER

Code: 10145

Case No.: —

SAS No.: —

SDG No.: V11

Matrix: (soil/water) WATER

Lab Sample ID: 4374-10

Sample wt/vol: 5 (g/mL) ML

Lab File ID: >Q2505

Level: (low/med) LOW

Date Received: 11/07/94

Moisture: not dec.100

Date Analyzed: 11/19/94

Column: (pack/cap) CAP

Dilution Factor: 1.0

Final extract Volume: -- (uL)

Quot Volume: -- (uL)

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

CAS NO.

COMPOUND

Q

1634-04-4	Methyl-t-Butyl Ether	5.	U
71-43-2	Benzene	5.	U
108-88-3	Toluene	5.	U
100-41-4	Ethylbenzene	5.	U
1330-20-7	(m+p)Xylene	5.	U
1330-20-7	o-Xylene	5.	U
98-82-8	Isopropyl Benzene	5.	U
102-65-1	n-Propylbenzene	5.	U
108-67-8	1,3,5-Trimethylbenzene	5.	U
98-06-6	tert-Butylbenzene	5.	U
95-63-6	1,2,4-Trimethylbenzene	5.	U
135-98-8	sec-Butylbenzene	5.	U
99-87-6	p-Isopropyltoluene	5.	U
104-51-8	n-Butylbenzene	5.	U
91-20-3	Naphthalene	5.	U

FORM I_VOA

1/89 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VTBRE

Name: GENERAL TESTING

Contract: SEELER

Code: 10145

Case No.: ---

SAS No.: ---

SDG No.: V11

Matrix: (soil/water) WATER

Lab Sample ID: 4374-10RE

Sample wt/vol: 5 (g/mL) ML

Lab File ID: >Q2542

Level: (low/med) LOW

Date Received: 11/07/94

Moisture: not dec.100

Date Analyzed: 11/21/94

Container: (pack/cap) CAP

Dilution Factor: 1.0

Initial extract Volume: --- (uL)

Quot Volume: --- (uL)

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

CAS NO.	COMPOUND	Q
1634-04-4	Methyl-t-Butyl Ether	5. U
71-43-2	Benzene	5. U
108-88-3	Toluene	5. U
100-41-4	Ethylbenzene	5. U
1330-20-7	(m+p)Xylene	5. U
1330-20-7	o-Xylene	5. U
98-82-8	Isopropyl Benzene	5. U
103-65-1	n-Propylbenzene	5. U
108-67-8	1,3,5-Trimethylbenzene	5. U
98-06-6	tert-Butylbenzene	5. U
95-63-6	1,2,4-Trimethylbenzene	5. U
135-98-8	sec-Butylbenzene	5. U
99-87-6	p-Isopropyltoluene	5. U
104-51-8	n-Butylbenzene	5. U
91-20-3	Naphthalene	5. U

FORM I VOA

1/89 Rev.

COURT ST. GARAGE · NYS-DEC
 IRM PROJECT DATA: SPIT SAMPLE

RESULTS
 Rec'd 12/7/94

To be included with all lab data and with each workplan

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					*Metals	*Other
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #			
08	17241	8260						
09	17242							
10	17243							
11	17245							
12	17246	+						

RECEIVED
 DEC - 6 1994

NYS DEPT. OF ENVIRONMENTAL
 CONSERVATION-REGION 8
 (SUBSTS./REM.)

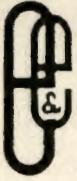
B-212

12/91

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
 VOLATILE (VOA)
 ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
14241	Soil	11-7-94	11-9-94	11-15-94	11-15-94
14242					
14243					
14244					
14245				11-15-94 11-16-94	11-16-94



ecology and environment, inc.

International Specialists in the Environment

ANALYTICAL SERVICES CENTER

4493 Walden Avenue

Lancaster, New York 14086

Tel. (716) 685-8080, Fax: (716) 685-0852

December 5, 1994

LAB NAME: Ecology and Environment, Inc.

CASE NUMBER: RH894

SDG NUMBER: 11207

CONTRACT NUMBER: C003181

SAMPLES IN SDG: 08 09 10 11 12

SDG NARRATIVE:

Enclosed are the analytical results for samples received at the Analytical Services Center on November 9, 1994. The samples were analyzed for the following parameter according to NYSDEC Analytical Services Protocol, September 1989, Revision 12/91:

Volatiles Method 8260

Electronic deliverables are not available for this analysis.

Two chromatograms are provided for each sample in this data package. One eliminates the early eluting carbon dioxide peak.

Due to hydrocarbon interference, the bromofluorobenzene surrogate recovery was calculated using the 174 ion.

2-chloroethylvinyl ether was not included in the calibration standards. It was not detected in any of the samples as a target compound or tentatively identified compound.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Gary Hahn - Manager
Analytical Services Center
December 5, 1994

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

08

Name: E & E INC.

Contract: C003181

Code: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Matrix: (soil/water) SOIL

Lab Sample ID: 17241

Concentration: 5.1 (g/mL) G

Lab File ID: F9063

Level: (low/med) LOW

Date Received: 11/09/94

Stability: not dec. 9

Date Analyzed: 11/15/94

Column: VOCOL ID: 0.530 (mm)

Dilution Factor: 1.0

Extract Volume: (uL)

Soil Aliquot Volume: (uL)

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

CAS NO. COMPOUND Q

74-87-3	Chloromethane	1.1	U
74-83-9	Bromomethane	1.1	U
75-01-4	Vinyl Chloride	1.1	U
75-00-3	Chloroethane	1.1	U
75-09-2	Methylene Chloride	1.5	
67-64-1	Acetone	1.1	U
75-15-0	Carbon Disulfide	1.1	U
75-35-4	1,1-Dichloroethene	1.1	U
75-34-3	1,1-Dichloroethane	1.1	U
156-60-5	trans-1,2-Dichloroethene	1.1	U
67-66-3	Chloroform	1.1	U
107-06-2	1,2-Dichloroethane	1.1	U
78-93-3	2-Butanone	1.1	U
71-55-6	1,1,1-Trichloroethane	1.1	U
56-23-5	Carbon Tetrachloride	1.1	U
75-27-4	Bromodichloromethane	1.1	U
78-87-5	1,2-Dichloropropane	1.1	U
10061-01-5	cis-1,3-Dichloropropene	1.1	U
79-01-6	Trichloroethene	1.1	U
124-48-1	Dibromochloromethane	1.1	U
79-00-5	1,1,2-Trichloroethane	1.1	U
71-43-2	Benzene	1.1	U
10061-02-6	trans-1,3-Dichloropropene	1.1	U
75-25-2	Bromoform	1.1	U
108-10-1	4-Methyl-2-Pentanone	1.1	U
591-78-6	2-Hexanone	1.1	U
127-18-4	Tetrachloroethene	1.1	U
79-34-5	1,1,2,2-Tetrachloroethane	1.1	U
108-88-3	Toluene	1.1	U
108-90-7	Chlorobenzene	1.1	U
100-41-4	Ethylbenzene	1.1	U
100-42-5	Styrene	1.1	U
1330-20-7	Xylene (total)	1.1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

08

Name: E & E INC. Contract: C003181
 Code: EANDE Case No.: RH894 SAS No.: SDG No.: 11207
 Matrix: (soil/water) SOIL Lab Sample ID: 17241
 Concentration: 5.1 (g/mL) G Lab File ID: F9063
 Level: (low/med) LOW Date Received: 11/09/94
 Status: not dec. 9 Date Analyzed: 11/15/94
 Column: VOCOL ID: 0.530 (mm) Dilution Factor: 1.0
 Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
 (ug/L or ug/Kg) UG/L Q

75-69-4-----	Trichlorofluoromethane	1.1	U
74-88-4-----	Methyl Iodide	1.1	U
156-60-5-----	cis-1,2-Dichloroethene	1.1	U
107-13-1-----	Acrylonitrile	1.1	U
74-95-3-----	Dibromomethane	1.1	U
110-57-6-----	trans-1,4-Dichloro-2-butene	1.1	U
630-20-6-----	1,1,1,2-Tetrachloroethane	1.1	U
96-18-4-----	1,2,3-Trichloropropane	1.1	U
106-46-7-----	1,4-Dichlorobenzene	1.1	U
95-50-1-----	1,2-Dichlorobenzene	1.1	U
96-12-8-----	1,2-Dibromo-3-Chloropropane	1.1	U
106-93-4-----	1,2-Dibromoethane	1.1	U
108-05-4-----	Vinyl Acetate	1.1	U
74-97-5-----	Bromochloromethane	1.1	U
541-73-1-----	1,3-Dichlorobenzene	1.1	U

1E
 VOLATILE ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

DEC SAMPLE NO.

08

Client: E & E INC.

Contract: C003181

Code: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Matrix: (soil/water) SOIL

Lab Sample ID: 17241

Concentration: wt/vol: 5.1 (g/mL) G

Lab File ID: F9063

Level: (low/med) LOW

Date Received: 11/09/94

Temperature: not dec. 9

Date Analyzed: 11/15/94

Column: VOCOL ID: 0.530 (mm)

Dilution Factor: 1.0

Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number of TICs found: 0

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

NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
-----	-----	-----	-----	-----

VOLATILE ORGANICS ANALYSIS DATA SHEET

09

Name: E & E INC.

Contract: C003181

Code: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Matrix: (soil/water) SOIL

Lab Sample ID: 17242

Concentration: 5.1 (g/mL) G

Lab File ID: F9064

Level: (low/med) LOW

Date Received: 11/09/94

Status: not dec. 9

Date Analyzed: 11/15/94

Column: VOCOL ID: 0.530 (mm)

Dilution Factor: 1.0

Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

74-87-3	Chloromethane	1.0	U
74-83-9	Bromomethane	1.0	U
75-01-4	Vinyl Chloride	1.0	U
75-00-3	Chloroethane	1.0	U
75-09-2	Methylene Chloride	1.3	
67-64-1	Acetone	1.0	U
75-15-0	Carbon Disulfide	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
78-93-3	2-Butanone	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
75-27-4	Bromodichloromethane	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
79-01-6	Trichloroethene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
71-43-2	Benzene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
75-25-2	Bromoform	1.0	U
108-10-1	4-Methyl-2-Pentanone	1.0	U
591-78-6	2-Hexanone	1.0	U
127-18-4	Tetrachloroethene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
108-88-3	Toluene	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
100-42-5	Styrene	1.0	U
1330-20-7	Xylene (total)	1.0	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

09

Name: E & E INC.

Contract: C003181

Code: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Matrix: (soil/water) SOIL

Lab Sample ID: 17242

Concentration: wt/vol: 5.1 (g/mL) G

Lab File ID: F9064

Level: (low/med) LOW

Date Received: 11/09/94

Temperature: not dec. 9

Date Analyzed: 11/15/94

Column: VOCOL ID: 0.530 (mm)

Dilution Factor: 1.0

Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

75-69-4	Trichlorofluoromethane	1.0	U
74-88-4	Methyl Iodide	1.0	U
156-60-5	cis-1,2-Dichloroethene	1.0	U
107-13-1	Acrylonitrile	1.0	U
74-95-3	Dibromomethane	1.0	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-Chloropropane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-05-4	Vinyl Acetate	1.0	U
74-97-5	Bromochloromethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U

1E
 VOLATILE ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

DEC SAMPLE NO.

09

Name: E & E INC. Contract: C003181
 Code: EANDE Case No.: RH894 SAS No.: SDG No.: 11207
 Matrix: (soil/water) SOIL Lab Sample ID: 17242
 Concentration: 5.1 (g/mL) G Lab File ID: F9064
 Level: (low/med) LOW Date Received: 11/09/94
 Moisture: not dec. 9 Date Analyzed: 11/15/94
 Column: VOCOL ID: 0.530 (mm) Dilution Factor: 1.0
 Extract Volume: (uL) Soil Aliquot Volume: (uL)
 Number of TICs found: 0

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

PEAK NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

10

Name: E & E INC. Contract: C003181
 Code: EANDE Case No.: RH894 SAS No.: SDG No.: 11207
 Matrix: (soil/water) SOIL Lab Sample ID: 17243
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: F9065
 Level: (low/med) LOW Date Received: 11/09/94
 Moisture: not dec. 5 Date Analyzed: 11/15/94
 Column: VOCOL ID: 0.530 (mm) Dilution Factor: 1.0
 Extract Volume: (uL) Soil Aliquot Volume: (uL)

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	1.1	U
74-83-9	Bromomethane	1.1	U
75-01-4	Vinyl Chloride	1.1	U
75-00-3	Chloroethane	1.1	U
75-09-2	Methylene Chloride	1.5	
67-64-1	Acetone	1.1	U
75-15-0	Carbon Disulfide	1.1	U
75-35-4	1,1-Dichloroethene	1.1	U
75-34-3	1,1-Dichloroethane	1.1	U
156-60-5	trans-1,2-Dichloroethene	1.1	U
67-66-3	Chloroform	1.1	U
107-06-2	1,2-Dichloroethane	1.1	U
78-93-3	2-Butanone	1.1	U
71-55-6	1,1,1-Trichloroethane	1.1	U
56-23-5	Carbon Tetrachloride	1.1	U
75-27-4	Bromodichloromethane	1.1	U
78-87-5	1,2-Dichloropropane	1.1	U
10061-01-5	cis-1,3-Dichloropropene	1.1	U
79-01-6	Trichloroethene	1.1	U
124-48-1	Dibromochloromethane	1.1	U
79-00-5	1,1,2-Trichloroethane	1.1	U
71-43-2	Benzene	1.1	U
10061-02-6	trans-1,3-Dichloropropene	1.1	U
75-25-2	Bromoform	1.1	U
108-10-1	4-Methyl-2-Pentanone	1.1	U
591-78-6	2-Hexanone	1.1	U
127-18-4	Tetrachloroethene	1.1	U
79-34-5	1,1,2,2-Tetrachloroethane	1.1	U
108-88-3	Toluene	1.1	U
108-90-7	Chlorobenzene	1.1	U
100-41-4	Ethylbenzene	1.1	U
100-42-5	Styrene	1.1	U
1330-20-7	Xylene (total)	1.1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

10

Client: E & E INC.

Contract: C003181

Client: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Sample: (soil/water) SOIL

Lab Sample ID: 17243

Concentration: wt/vol: 5.0 (g/mL) G

Lab File ID: F9065

Level: (low/med) LOW

Date Received: 11/09/94

Depth: 5 ft (not dec.)

Date Analyzed: 11/15/94

Injection Volume: 0.530 (mm)

Dilution Factor: 1.0

Extraction Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

75-69-4	Trichlorofluoromethane	1.1	U
74-88-4	Methyl Iodide	1.1	U
156-60-5	cis-1,2-Dichloroethene	1.1	U
107-13-1	Acrylonitrile	1.1	U
74-95-3	Dibromomethane	1.1	U
110-57-6	trans-1,4-Dichloro-2-butene	1.1	U
630-20-6	1,1,1,2-Tetrachloroethane	1.1	U
96-18-4	1,2,3-Trichloropropane	1.1	U
106-46-7	1,4-Dichlorobenzene	1.1	U
95-50-1	1,2-Dichlorobenzene	1.1	U
96-12-8	1,2-Dibromo-3-Chloropropane	1.1	U
106-93-4	1,2-Dibromoethane	1.1	U
108-05-4	Vinyl Acetate	1.1	U
74-97-5	Bromochloromethane	1.1	U
541-73-1	1,3-Dichlorobenzene	1.1	U

1E
 VOLATILE ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

DEC SAMPLE NO.

10

Client: E & E INC.

Contract: C003181

Site: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Matrix: (soil/water) SOIL

Lab Sample ID: 17243

Concn: wt/vol: 5.0 (g/mL) G

Lab File ID: F9065

Level: (low/med) LOW

Date Received: 11/09/94

Depth: 5 ft

Date Analyzed: 11/15/94

Method: VOCOL ID: 0.530 (mm)

Dilution Factor: 1.0

Extraction Volume: (uL)

Soil Aliquot Volume: (uL)

Number of TICs found: 0

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

NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

11

Name: E & E INC. Contract: C003181
 Code: EANDE Case No.: RH894 SAS No.: SDG No.: 11207
 Matrix: (soil/water) SOIL Lab Sample ID: 17244
 Concentration: 5.0 (g/mL) G Lab File ID: F9066
 Level: (low/med) LOW Date Received: 11/09/94
 Temperature: not dec. 7 Date Analyzed: 11/15/94
 Column: VOCOL ID: 0.530 (mm) Dilution Factor: 1.0
 Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

74-87-3	Chloromethane	1.1	U
74-83-9	Bromomethane	1.1	U
75-01-4	Vinyl Chloride	1.1	U
75-00-3	Chloroethane	1.1	U
75-09-2	Methylene Chloride	1.4	
67-64-1	Acetone	7.6	
75-15-0	Carbon Disulfide	1.1	U
75-35-4	1,1-Dichloroethene	1.1	U
75-34-3	1,1-Dichloroethane	1.1	U
156-60-5	trans-1,2-Dichloroethene	1.1	U
67-66-3	Chloroform	1.1	U
107-06-2	1,2-Dichloroethane	1.1	U
78-93-3	2-Butanone	1.1	U
71-55-6	1,1,1-Trichloroethane	1.1	U
56-23-5	Carbon Tetrachloride	1.1	U
75-27-4	Bromodichloromethane	1.1	U
78-87-5	1,2-Dichloropropane	1.1	U
10061-01-5	cis-1,3-Dichloropropene	1.1	U
79-01-6	Trichloroethene	1.1	U
124-48-1	Dibromochloromethane	1.1	U
79-00-5	1,1,2-Trichloroethane	1.1	U
71-43-2	Benzene	1.1	U
10061-02-6	trans-1,3-Dichloropropene	1.1	U
75-25-2	Bromoform	1.1	U
108-10-1	4-Methyl-2-Pentanone	1.1	U
591-78-6	2-Hexanone	1.1	U
127-18-4	Tetrachloroethene	5.4	
79-34-5	1,1,2,2-Tetrachloroethane	1.1	U
108-88-3	Toluene	1.1	U
108-90-7	Chlorobenzene	1.1	U
100-41-4	Ethylbenzene	2.7	
100-42-5	Styrene	1.1	U
1330-20-7	Xylene (total)	94	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

11

Name: E & E INC.

Contract: C003181

Code: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Matrix: (soil/water) SOIL

Lab Sample ID: 17244

Concentration: 5.0 (g/mL) G

Lab File ID: F9066

Level: (low/med) LOW

Date Received: 11/09/94

Temperature: not dec. 7

Date Analyzed: 11/15/94

Column: VOCOL ID: 0.530 (mm)

Dilution Factor: 1.0

Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

75-69-4-----	Trichlorofluoromethane	1.1	U
74-88-4-----	Methyl Iodide	1.1	U
156-60-5-----	cis-1,2-Dichloroethene	1.1	U
107-13-1-----	Acrylonitrile	1.1	U
74-95-3-----	Dibromomethane	1.1	U
110-57-6-----	trans-1,4-Dichloro-2-butene	1.1	U
630-20-6-----	1,1,1,2-Tetrachloroethane	1.1	U
96-18-4-----	1,2,3-Trichloropropane	1.1	U
106-46-7-----	1,4-Dichlorobenzene	1.1	U
95-50-1-----	1,2-Dichlorobenzene	1.1	U
96-12-8-----	1,2-Dibromo-3-Chloropropane	1.1	U
106-93-4-----	1,2-Dibromoethane	1.1	U
108-05-4-----	Vinyl Acetate	1.1	U
74-97-5-----	Bromochloromethane	1.1	U
541-73-1-----	1,3-Dichlorobenzene	1.1	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

DEC SAMPLE NO.

11

Name: E & E INC. Contract: C003181
 Code: EANDE Case No.: RH894 SAS No.: SDG No.: 11207
 Matrix: (soil/water) SOIL Lab Sample ID: 17244
 Concentration: wt/vol: 5.0 (g/mL) G Lab File ID: F9066
 Level: (low/med) LOW Date Received: 11/09/94
 Status: not dec. 7 Date Analyzed: 11/15/94
 Column: VOCOL ID: 0.530 (mm) Dilution Factor: 1.0
 Extract Volume: (uL) Soil Aliquot Volume: (uL)
 Total TICs found: 10 CONCENTRATION UNITS:
 (ug/L or ug/Kg) UG/KG

NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	UNKNOWN HYDROCARBON	18.37	220	J
	UNKNOWN HYDROCARBON	20.64	280	J
	PROPYLBENZENE ISOMER	21.19	370	J
	PROPYLBENZENE ISOMER	21.45	560	J
	UNKNOWN HYDROCARBON	21.96	950	J
	PROPYLBENZENE ISOMER	22.35	520	J
	UNKNOWN	22.69	210	J
	PROPYLBENZENE ISOMER	23.25	620	J
	BUTYLBENZENE ISOMER	23.88	370	J
	BUTYLBENZENE ISOMER	24.59	470	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

12

Name: E & E INC.

Contract: C003181

Code: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Matrix: (soil/water) SOIL

Lab Sample ID: 17245

Concentration: 5.1 (g/mL) G

Lab File ID: F9070

Level: (low/med) LOW

Date Received: 11/09/94

Moisture: not dec. 10

Date Analyzed: 11/16/94

Column: VOCOL ID: 0.530 (mm)

Dilution Factor: 1.0

Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO: COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG Q

74-87-3	Chloromethane	1.1	U
74-83-9	Bromomethane	1.1	U
75-01-4	Vinyl Chloride	1.1	U
75-00-3	Chloroethane	1.1	U
75-09-2	Methylene Chloride	1.1	U
67-64-1	Acetone	1.1	U
75-15-0	Carbon Disulfide	1.1	U
75-35-4	1,1-Dichloroethene	1.1	U
75-34-3	1,1-Dichloroethane	1.1	U
156-60-5	trans-1,2-Dichloroethene	1.1	U
67-66-3	Chloroform	1.1	U
107-06-2	1,2-Dichloroethane	1.1	U
78-93-3	2-Butanone	1.1	U
71-55-6	1,1,1-Trichloroethane	1.1	U
56-23-5	Carbon Tetrachloride	1.1	U
75-27-4	Bromodichloromethane	1.1	U
78-87-5	1,2-Dichloropropane	1.1	U
10061-01-5	cis-1,3-Dichloropropene	1.1	U
79-01-6	Trichloroethene	1.1	U
124-48-1	Dibromochloromethane	1.1	U
79-00-5	1,1,2-Trichloroethane	1.1	U
71-43-2	Benzene	1.1	U
10061-02-6	trans-1,3-Dichloropropene	1.1	U
75-25-2	Bromoform	1.1	U
108-10-1	4-Methyl-2-Pentanone	1.1	U
591-78-6	2-Hexanone	1.1	U
127-18-4	Tetrachloroethene	1.1	U
79-34-5	1,1,2,2-Tetrachloroethane	1.1	U
108-88-3	Toluene	1.1	U
108-90-7	Chlorobenzene	1.1	U
100-41-4	Ethylbenzene	1.1	U
100-42-5	Styrene	1.1	U
1330-20-7	Xylene (total)	1.1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

12

Name: E & E INC.

Contract: C003181

Code: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Medium: (soil/water) SOIL

Lab Sample ID: 17245

Concentration: wt/vol: 5.1 (g/mL) G

Lab File ID: F9070

Level: (low/med) LOW

Date Received: 11/09/94

Temperature: not dec. 10

Date Analyzed: 11/16/94

Column: VOCOL ID: 0.530 (mm)

Dilution Factor: 1.0

Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

75-69-4	Trichlorofluoromethane	1.1	U
74-88-4	Methyl Iodide	1.1	U
156-60-5	cis-1,2-Dichloroethene	1.1	U
107-13-1	Acrylonitrile	1.1	U
74-95-3	Dibromomethane	1.1	U
110-57-6	trans-1,4-Dichloro-2-butene	1.1	U
630-20-6	1,1,1,2-Tetrachloroethane	1.1	U
96-18-4	1,2,3-Trichloropropane	1.1	U
106-46-7	1,4-Dichlorobenzene	1.1	U
95-50-1	1,2-Dichlorobenzene	1.1	U
96-12-8	1,2-Dibromo-3-Chloropropane	1.1	U
106-93-4	1,2-Dibromoethane	1.1	U
108-05-4	Vinyl Acetate	1.1	U
74-97-5	Bromochloromethane	1.1	U
541-73-1	1,3-Dichlorobenzene	1.1	U

1E
 VOLATILE ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

DEC SAMPLE NO.

12

Client: E & E INC.

Contract: C003181

Code: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Matrix: (soil/water) SOIL

Lab Sample ID: 17245

Concentration: wt/vol: 5.1 (g/mL) G

Lab File ID: F9070

Level: (low/med) LOW

Date Received: 11/09/94

Temperature: not dec. 10

Date Analyzed: 11/16/94

Column: VOCOL ID: 0.530 (mm)

Dilution Factor: 1.0

Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number of TICs found: 0

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

NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLKS1

Name: E & E INC.

Contract: C003181

Code: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Matrix: (soil/water) SOIL

Lab Sample ID: VOA_HEAT_BLK

Concentration: 5.0 (g/mL) G

Lab File ID: F9061

Level: (low/med) LOW

Date Received:

Stability: not dec.

Date Analyzed: 11/15/94

Column: VOCOL ID: 0.530 (mm)

Dilution Factor: 1.0

Extract Volume: (uL)

Soil Aliquot Volume: (uL)

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

CAS NO.

COMPOUND

Q

74-87-3	Chloromethane	1.0	U
74-83-9	Bromomethane	1.0	U
75-01-4	Vinyl Chloride	1.0	U
75-00-3	Chloroethane	1.0	U
75-09-2	Methylene Chloride	1.0	U
67-64-1	Acetone	1.0	U
75-15-0	Carbon Disulfide	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
78-93-3	2-Butanone	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
75-27-4	Bromodichloromethane	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
79-01-6	Trichloroethene	1.0	U
124-48-1	Dibromochloromethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
71-43-2	Benzene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
75-25-2	Bromoform	1.0	U
108-10-1	4-Methyl-2-Pentanone	1.0	U
591-78-6	2-Hexanone	1.0	U
127-18-4	Tetrachloroethene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
108-88-3	Toluene	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
100-42-5	Styrene	1.0	U
1330-20-7	Xylene (total)	1.0	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLKS1

Client: E & E INC.

Contract: C003181

Code: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Matrix: (soil/water) SOIL

Lab Sample ID: VOA_HEAT_BLK

Concn: wt/vol: 5.0 (g/mL) G

Lab File ID: F9061

Level: (low/med) LOW

Date Received:

Interference: none

Date Analyzed: 11/15/94

Column: VOCOL ID: 0.530 (mm)

Dilution Factor: 1.0

Extract Volume: (uL)

Soil Aliquot Volume: (uL)

75-69-4-----	Trichlorofluoromethane	1.0	U
74-88-4-----	Methyl Iodide	1.0	U
156-60-5-----	cis-1,2-Dichloroethene	1.0	U
107-13-1-----	Acrylonitrile	1.0	U
74-95-3-----	Dibromomethane	1.0	U
110-57-6-----	trans-1,4-Dichloro-2-butene	1.0	U
630-20-6-----	1,1,1,2-Tetrachloroethane	1.0	U
96-18-4-----	1,2,3-Trichloropropane	1.0	U
106-46-7-----	1,4-Dichlorobenzene	1.0	U
95-50-1-----	1,2-Dichlorobenzene	1.0	U
96-12-8-----	1,2-Dibromo-3-Chloropropane	1.0	U
106-93-4-----	1,2-Dibromoethane	1.0	U
108-05-4-----	Vinyl Acetate	1.0	U
74-97-5-----	Bromochloromethane	1.0	U
541-73-1-----	1,3-Dichlorobenzene	1.0	U

1E
 VOLATILE ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

DEC SAMPLE NO.

VBLKS1

Name: E & E INC.

Contract: C003181

Code: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Matrix: (soil/water) SOIL

Lab Sample ID: VOA_HEAT_BLK

Concentration: wt/vol: 5.0 (g/mL) G

Lab File ID: F9061

Level: (low/med) LOW

Date Received:

Stability: not dec.

Date Analyzed: 11/15/94

Column: VOCOL ID: 0.530 (mm)

Dilution Factor: 1.0

Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Number of TICs found: 0

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

IS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

me: E & E INC.

Contract: C003181

de: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

(low/med) LOW

	DEC SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
	=====	=====	=====	=====	=====	=====
01	08	110	95	103	0	0
02	09	107	92	101	0	0
03	10	111	98	104	0	0
04	11	109	99	103	0	0
05	12	104	96	97	0	0
06	MSB	105	100	102	0	0
07	12MS	104	93	97	0	0
08	12MSD	102	97	96	0	0
09	VBLKS1	98	94	98	0	0

QC LIMITS

SMC1 (TOL) = Toluene-d8 (84-138)
 SMC2 (BFB) = Bromofluorobenzene (59-113)
 SMC3 (DCE) = 1,2-Dichloroethane-d4 (70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Name: E & E INC.

Contract: C003181

Code: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Spike - DEC Sample No.: MSB

Level: (low/med) LOW

POUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Dichloroethene	50.00	0	42.6	85	59-172
chloroethene	50.00	0	41.3	83	62-137
ene	50.00	0	42.6	85	66-142
ene	50.00	0	41.8	84	59-139
robenzene	50.00	0	89.8	80	60-133

mn to be used to flag recovery and RPD values with an asterisk
 es outside of QC limits

Recovery: 0 out of 5 outside limits

TS:

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

ame: E & E INC.

Contract: C003181

ode: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

ile ID (Standard): F9060

Date Analyzed: 11/15/94

ument ID: 7001F

Time Analyzed: 1641

olumn: VOCOL

ID: 0.530 (mm)

Heated Purge: (Y/N) Y

	IS1 (PFB)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	112591	8.74	135957	10.22	109123	16.96
UPPER LIMIT	225182	9.24	271914	10.72	218246	17.46
LOWER LIMIT	281478	8.24	67978	9.72	54562	16.46
DEC SAMPLE NO.						
3	89503	8.72	109182	10.22	83203	16.94
9	93052	8.71	115553	10.20	87463	16.92
0	62333	8.73	78254	10.20	58968	16.94
L	85762	8.72	108384	10.22	81236	16.94
2	103075	8.72	127391	10.20	101830	16.93
SB	107739	8.72	127883	10.20	101656	16.94
MS	101041	8.73	125146	10.21	96018	16.94
MSD	107745	8.73	129925	10.21	102129	16.94
BLKS1	113819	8.73	136601	10.22	110952	16.94

(PFB) = Pentafluorobenzene

(DFB) = 1,4-Difluorobenzene

(CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.

LOWER LIMIT = - 50% of internal standard area.

UPPER LIMIT = +0.50 minutes of internal standard RT.

LOWER LIMIT = -0.50 minutes of internal standard RT.

Column used to flag values outside QC limits with an asterisk.

Values outside of QC limits.

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY.

Client: E & E INC.

Contract: C003181

Code: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Spike - DEC Sample No.: 12

Level: (low/med) LOW

POUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Dichloroethene	53.40	0	46.0	86	59-172
Chloroethene	53.40	0	42.3	79	62-137
ene	53.40	0	45.8	86	66-142
ene	53.40	0	44.8	84	59-139
robenzene	53.40	0	43.0	81	60-133

POUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
Dichloroethene	53.40	45.0	84	0	22	59-172
Chloroethene	53.40	43.5	81	2	24	62-137
ene	53.40	44.5	83	4	21	66-142
ene	53.40	44.5	83	1	21	59-139
robenzene	53.40	43.0	81	0	21	60-133

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

Values outside of QC limits

0 out of 5 outside limits

Recovery: 0 out of 10 outside limits

TS:

4A
VOLATILE METHOD BLANK SUMMARY

DEC SAMPLE NO.

VBLKS1

Client: E & E INC.

Contract: C003181

Code: EANDE

Case No.: RH894

SAS No.:

SDG No.: 11207

Sample ID: F9061

Lab Sample ID: VOA_HEAT_BLK

Analyzed: 11/15/94

Time Analyzed: 1735

Column: VOCOL ID: 0.530(mm)

Heated Purge: (Y/N) Y

Method ID: 7001F

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

DEC SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01 MSB	SPIKE_BLANK	F9062	1839
02 08	17241	F9063	1958
03 09	17242	F9064	2036
04 10	17243	F9065	2113
05 11	17244	F9066	2149
06 12MS	17245MS	F9068	2303
07 12	17245	F9070	0015
08 12MSD	17245MSD	F9071	0113

TS: