CDM FEDERAL PROGRAMS CORPORATION

February 23, 1990

Mr. Dana J. Barnett
U.S. Environmental Protection Agency
841 Chestnut Building
Philadelphia, Pennsylvania 19107

PROJECT: EPA CONTRACT NO. 68-W9-0004

DOCUMENT NO.: TES7-R03008-EP-BKNS

SUBJECT: Trip Report for Work Assignment R03008
Short Term Sampling Assignment
Assoline
Philadelphia, Pennsylvania
TES7-R03008-RT-BNKT

Dear Mr. Barnett:

Please find the enclosed trip report for the sampling inspection which was conducted at the referenced facility.

The purpose of this sampling inspection was to ascertain whether or not the subject facility was being adversely affected by the conditions present at the adjacent property, Cooper Drum & Barrel (Cooper), a drum recycling facility. Based upon the results of this inspection, it is evident that hazardous constituents have migrated from Cooper via surface water runoff into the alley between the two properties. Areas of surface soil contamination were note in the area of the rear stairway leading into the Assoline building. While staining of the interior walls was noted in the Assoline basement, no contamination was detected in a soil sample collected from the basement in an area below the stained wall.

Based upon our findings, it is recommended that additional sampling be performed to determine the extent of contamination in the alley area. A sampling inspection of the Cooper facility is also recommended at this time. As the owner of the Assoline facility has indicated that the drains in the basement window wells discharge into the city sewer system, sampling of appropriate locations within the system may be warranted.

8 Valley Forge Executive Mall, Suite 230 Wayne, PA 19087 215 293-0450

If you have any questions or comments, please contact me at (215) 293-0450 within two weeks of the date of this letter.

Sincerely,

CDM Federal Programs Corporation

Bruce R. Pluta
Work Assignment Manager

Enclosure

cc: Jean Wright, EPA TES VII Project Officer (letter only)
Constance V. Braun, FPC Program Manager

SHORT TERM SAMPLING

ASSOLINE

Prepared for

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

Work Assignment No.	:	R03008
EPA Region	:	III
Facility I.D. No.	:	N/A
Contract No.	:	68-W9-0004
CDM Federal Programs Corporation Document No.	:	TES7-R03008-RT-BNKT
Prepared By	:	CDM Federal Programs Corporation
Work Assignment Project Manager	:	Bruce R. Pluta
Telephone Number	:	(215) 293-0450
Primary Contact	:	Dana J. Barnett
Telephone Number	:	(215) 597-6688
Date Prepared	:	February 23, 1990

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1.0 Introduction

CDM Federal Programs Corporation (FPC) received Work Assignment R03008 from the U.S. Environmental Protection Agency (EPA) under contract number 68-W9-0004 (TES VII) to perform short term sampling activities in support of RCRA enforcement activities in Region III. This report documents the sampling activities which were performed at the Assoline facility which is located at 314 Brown Street, Philadelphia, Pennsylvania. These activities were completed in response to work assignment amendment 6.

2.0 Description of Activities

2.1 Overview and Objectives

FPC was tasked to conduct a visual inspection at Assoline & Ting, Inc. (Assoline) in response to a citizen's complaint which was received by EPA. Assoline is located at 314 Brown Street in Philadelphia, Pennsylvania and is adjacent to Cooper Drum and Barrel (Cooper), a drum recycling facility. The citizen's complaint alleged that material attributable to Cooper was leaking into the basement at Assoline. FPC was instructed to collect samples if it appeared to be warranted based on the findings of the visual inspection. The results of the sampling are to be used to determine if a more comprehensive sampling program is needed.

Due to the nature of the inspection, specific sampling locations were not designated by EPA; however, FPC was to attempt to sample the actual material which was leaking into the basement if possible. At the time of the inspection, material was not directly observed in the basement, therefore this sample could not be collected. A description of the conditions observed and the samples which were collected are detailed in Section 2.2 of this report.

The sampling inspection was conducted on Friday, January 12, 1990. The weather at the time of the inspection was sunny and windy with a temperature of approximately 35 degrees Fahrenheit. Arrangements for sample analysis under TES VII work assignment R03010 were completed on Monday, January 15 and all samples were sent for analysis on Tuesday, January 16.

2.1.1 List of Inspectors

Bruce R. Pluta
Environmental Scientist
CDM Federal Programs Corporation
8 Valley Forge Executive Mall, Suite 230
Wayne, Pennsylvania 19087
(215) 293-0450

Andrew Hopton
Environmental Scientist
CDM Federal Programs Corporation
8 Valley Forge Executive Mall, Suite 230
Wayne, Pennsylvania 19087
(215) 293-0450

2.1.2 Facility Representatives

Joel Assoline
Owner
Assoline & Ting, Inc.
314 Brown Street
Philadelphia, Pennsylvania
(215) 627-3000

2.2 Observations

Upon arrival at the facility, FPC was provided with a description of the conditions at the facility by Mr. Assoline. Mr. Assoline indicated that runoff from Cooper enters the basement window area during periods of rain. He also indicated that during periods of heavy rain, the alley between Assoline and Cooper "fills up" with runoff and seeps through the wall at Assoline. Mr. Assoline indicated that the material seeping into the basement has a bitter odor.

The observations noted by FPC during the course of the inspection are detailed below.

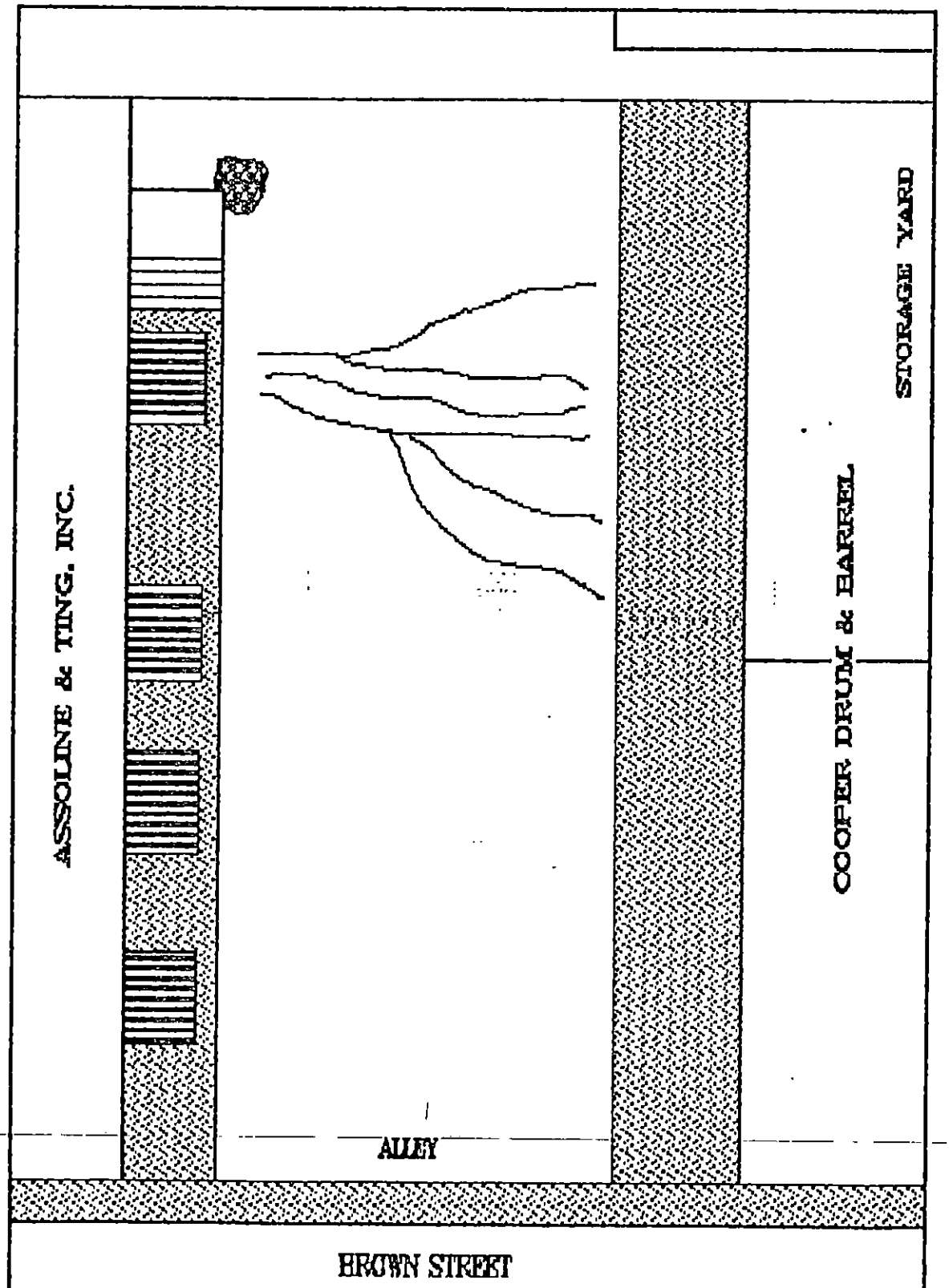
- Assoline is separated from Cooper by an alley which was approximately 16 feet wide. The center of the alley consisted of a brick road, approximately eight feet in width, most of which was covered by a significant amount of dirt and sediment. Concrete sidewalks, each approximately four feet wide, were located on both sides of the brick road. The slope of much of the alley was such that drainage would pond in the area of the interface of the brick road and the sidewalk adjacent to the Assoline building.

- Four basement window wells were located along the sidewalk adjacent to Assoline. Each well contained a small drain; the basement windows were boarded. (Mr. Assoline indicated that the drains had been cleaned to reduce the amount of ponding within the window well. He also indicated that the individual cleaning the drains indicated that the drain lines were "gunkified".)

- At the time of the inspection, the pattern of runoff from Cooper towards Assoline was evidenced by the pattern of moist soils in the area. The runoff pattern noted is depicted in Figure 1.

- An area of ponded water was noted at the rear of the stairway leading up to the Assoline warehouse area. This area was highlighted by the presence of a green colored stain.

- The portion of Cooper which was adjacent to the noted runoff area is apparently utilized for drum storage and possibly preliminary processing. The exact nature of the operations at Cooper could not be discerned at the time of the inspection, however it appeared that the drums in the yard were awaiting processing. Access to Cooper was restricted by a cyclone fence. The yard was approximately eight to 12 inches higher in elevation than the adjacent sidewalk.



LEGEND

SIDEWALK

WINDOW WELL

DRAINAGE PATH

PONDED WATER

ASSOLINE
SITE SKETCH
FIGURE 1
not to scale

- In the basement of Assoline, areas of past seepage through the walls was evidenced by the presence dark stains. These stains had the appearance of water stains. No liquid associated with stains was present at the time of the inspection.

- The Assoline basement floor was constructed of concrete; however, areas of dirt were present along the wall where the previously discussed stains were noted. The layout of the area of concern in the basement is depicted in figure 2.

- Upon arrival at the facility, an hNU photoionizer was zeroed to background conditions. Sporadic readings of 1 to 2 ppm were noted immediately adjacent to the soils in the basement which were adjacent to the stained area of the wall. No other readings above background were noted.

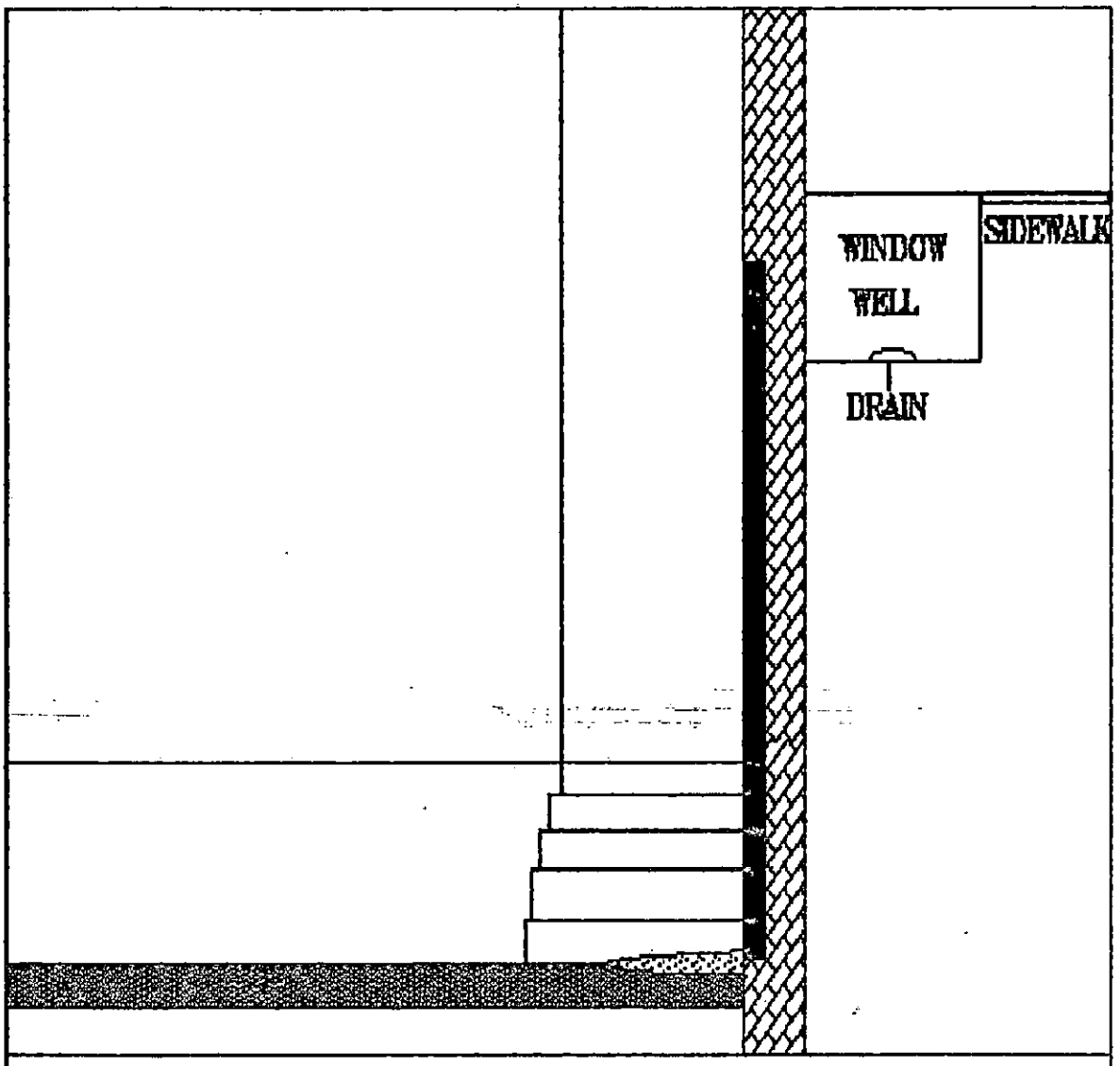
- FPC collected three soil samples at the time of the inspection:

  - Location 1 consisted of surface soils collected in the runoff area adjacent to a window well in an area believed to be prone to ponding. The sampled soils were moist and silty.

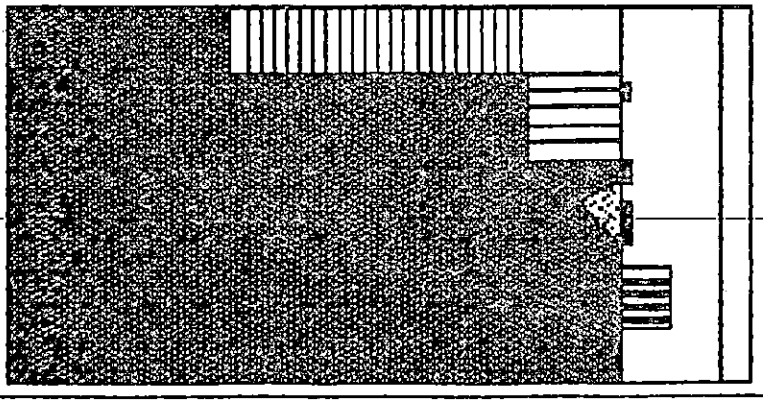
  - Location 2 consisted of surface soils/sediments collected from the area of ponded water previously described. The green stain which was previously discussed appeared to be a thin film of material, one millimeter or less, on the surface of the soils. The soil layer in this area was thin and underlain by rock.

  - Location 3 consisted of surface soils collected from the soil present in the basement adjacent to the stains noted on the basement wall.

SIDE VIEW



OVERHEAD VIEW



LEGEND

- AREAS OF SEEPAGE
- SOIL AREA
- WINDOW WELL
- STEPS
- BUILDING WALL
- BASEMENT FLOOR

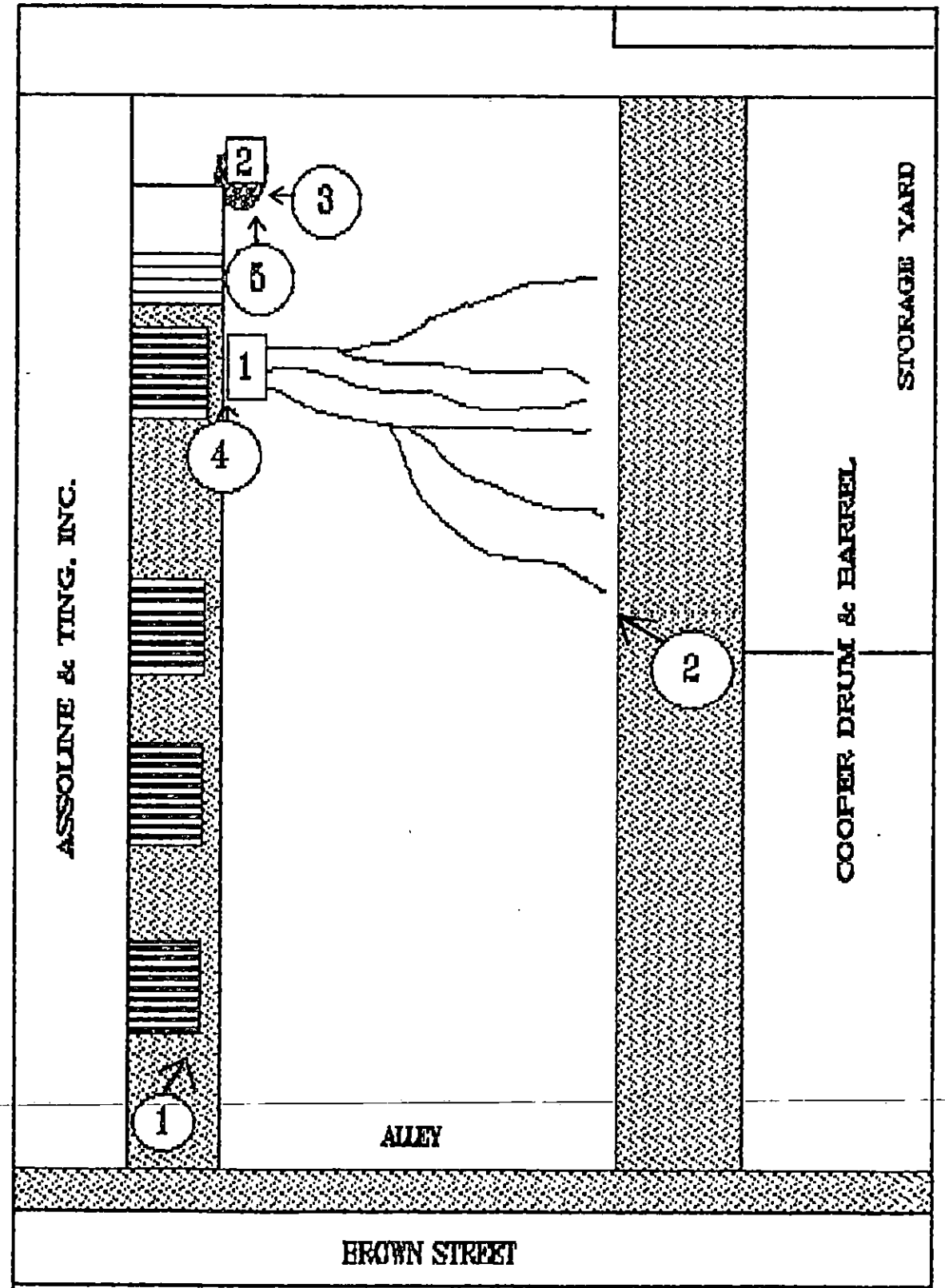
ASSOLINE
BASEMENT AREA
FIGURE 2
not to scale

The sample locations are depicted in Figures 3 and 4. The sample log is presented in Table 1. Photographs of facility conditions and sampling activities are presented in Appendix 1.

2.3 Deviations from the QAPP

As the quantity of glassware was limited at the time of sampling, only one 8 ounce jar was filled for BNA and metals analyses. Upon securing additional glassware, an appropriate quantity of material was placed into a separate jar; thus, separate 8 ounce jars, each with approximately 4 ounces of material, were shipped for BNA and metals analyses.

It should be noted that upon packaging the samples for shipment, it was noted that the ice used to keep the samples cool had melted and had leaked through both the bag within which it was contained, as well as some of the individual bags which contained the sample jars. It had appeared that the water had infiltrated some of the closed sample containers, specifically, one eight ounce jar from each location and possibly the second eight ounce jar for location 2. The remaining sample containers were not affected by the melted ice. Each of the three jars which were definitely affected were identified for metals analysis.



LEGEND

SAMPLE LOCATION

PHOTO LOCATION

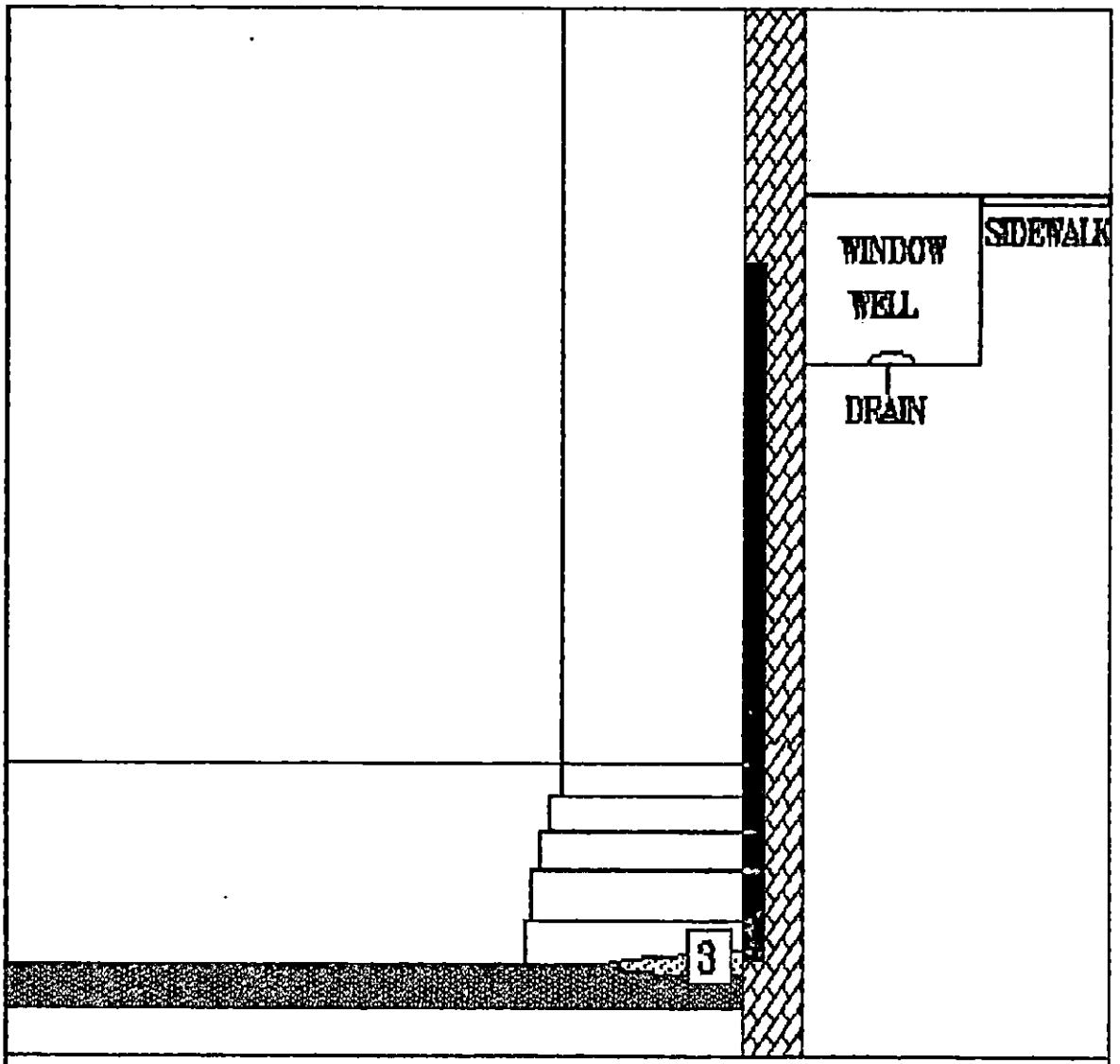
ASSOLINE

SAMPLE AND PHOTO LOCATION MAP

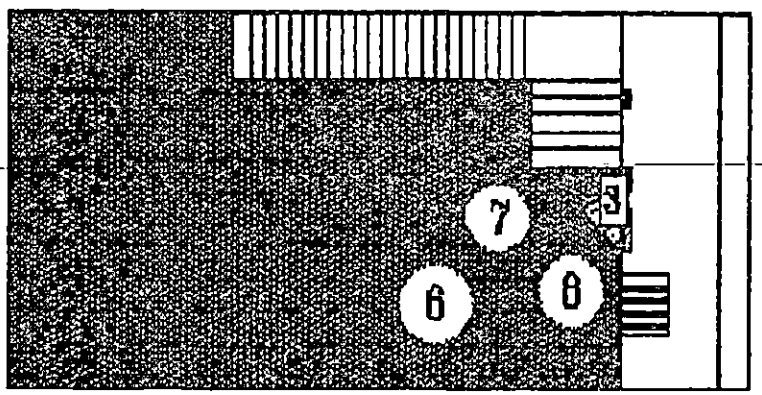
FIGURE 3

not to scale

SIDE VIEW



OVERHEAD VIEW



LEGEND

SAMPLE LOCATION

PHOTO LOCATION

ASSOLINE
BASEMENT AREA
SAMPLE AND PHOTO LOCATION MAP

FIGURE 4

not to scale

TABLE 1: SAMPLE LOG

STATION	SAMPLE NO.	ANALYSIS	TAG NOS.	SAMPLER	DATE	TIME	COMMENTS
LOCATION 1	1-1	VOA	3-1060491,92,93	A. Hopton	1/12/90	1000	Moist and silty soil.
	1-2	BNA/Pest/PCB	3-1060497	A. Hopton	1/12/90	1000	
	1-3	Metals	3-1060500	A. Hopton	1/12/90	1000	
Location 2	2-1	VOA	3-1060494,95	A. Hopton	1/12/90	1010	Green "film" on surface
	2-2	BNA/Pest/PCB	3-1060498	A. Hopton	1/12/90	1010	of moist, silty soil.
	2-3	Metals	3-1068275	A. Hopton	1/12/90	1010	
Location 3	3-1	VOA	3-1060496	A. Hopton	1/12/90	1025	
	3-2	BNA/Pest/PCB	3-1060499	A. Hopton	1/12/90	1025	
	3-3	Metals	3-1068276	A. Hopton	1/12/90	1025	

3.0 Analytical Results

A summary of the organic analytical results is presented in Table 2; inorganic results are presented in Table 3. These tables only present positive, unqualified results. Complete analytical summary sheets are presented in Appendix 2. The complete analytical package has been previously submitted to EPA in fulfillment of the reporting requirements of TES VII Work Assignment R03010.

TABLE 3: INORGANIC ANALYTICAL RESULTS

Compounds	Location 1	Location 2	Location 3
Aluminum	5,320	5,590	9,060
Antimony		18.4	
Arsenic	9.4	15.0	3.8
Barium	829	666	
Cadmium	6.7	6.6	
Calcium	13,300	20,000	5,660
Chromium	798	621	22.5
Colbalt	32.9	27.9	
Copper	447	345	18.5
Iron	17,500	26,800	15,500
Lead	2,580	2,100	48.0
Magnesium	2,970	2,940	3,090
Manganese	371	425	172
Mercury	3.8	4.4	
Nickel	37.5	28.5	9.9
Silver	3.4	3.1	
Vanadium	32.8	30.0	17.8
Zinc	1,260	1,080	57.2
Cyanide	26.2	20.7	0.43

All concentrations expressed as mg/kg.

Note: Only positive, unqualified results are provided,

TABLE 2: ORGANIC ANALYTICAL RESULTS

Compounds	Location 1	Location 1 (re)	Location 2	Location 3
Acetone	1,200	1,300	600	
2-Butanone	420	200	1,100	
Tetrachloroethene	72	86	180	
Toluene	41	58		
Total Xylenes			130	
Fluoranthene	27,000	N/A	29,000	
Pyrene	28,000	N/A		
bis(2-Ethylhexyl) Phthalate	77,000	N/A	52,000	
Benzo(b)Fluoranthene	43,000	N/A		
Benzo(k)Fluoranthene	28,000	N/A		
Benzo(a)Pyrene	27,000	N/A		
Indeno(1,2,3-cd)Pyrene	28,000	N/A		
delta-BHC	160	N/A	85	
Heptachlor	160	N/A		
Dieldrin	1,900	N/A	1,700	
4,4'-DDE	1,000	N/A	670	
Endosulfan II	1,100	N/A	560	
4,4'-DDD	680	N/A	480	
4,4'-DDT		N/A	3,400	
Methoxychlor	4,400	N/A	21,000	
alpha-chlordane	1,000	N/A	500	
gamma-chlordane	1,500	N/A	830	
Aroclor-1260	21,000	N/A	16,000	

All concentrations expressed as ug/kg.

N/A = not analyzed

Note: Only positive, unqualified results are provided

APPENDIX 1

PHOTO LOG

PHOTO 1: View of alley; Assoline on left, Cooper on right.

PHOTO 2: Area of runoff from Cooper toward Assoline.

PHOTO 3: Area of ponded water at back of stairway.

PHOTO 4: Hopton sampling at location 1.

PHOTO 5: Hopton sampling at location 2.

PHOTO 6: View of basement wall where seepage occurs.

PHOTO 7: Air monitoring near basement soil.

PHOTO 8: Hopton sampling at location 3.

APPENDIX 2

ANALYTICAL SUMMARY SHEETS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LOC1

Lab Name: VERSAR INC Contract:

b Code: VERSAR Case No.: 420_1_ SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94961

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U2048

Level: (low/med) LOW Date Received: 01/17/90

% Moisture: not dec. 27 Date Analyzed: 01/25/90

Column: (pack/cap) PACK Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	68	U
74-83-9	Bromomethane	68	U
75-01-4	Vinyl Chloride	68	U
75-00-3	Chloroethane	68	U
75-09-2	Methylene Chloride	34	U
67-64-1	Acetone	1200	
75-15-0	Carbon Disulfide	34	U
75-35-4	1,1-Dichloroethene	34	U
75-35-3	1,1-Dichloroethane	34	U
540-59-0	1,2-Dichloroethene (total)	34	U
67-66-3	Chloroform	34	U
107-06-2	1,2-Dichloroethane	34	U
78-93-3	2-Butanone	420	
71-55-6	1,1,1-Trichloroethane	34	U
56-23-5	Carbon Tetrachloride	34	U
108-05-4	Vinyl Acetate	68	U
75-27-4	Bromodichloromethane	34	U
78-87-5	1,2-Dichloropropane	34	U
100610-1-5	cis-1,3-Dichloropropene	34	U
79-01-6	Trichloroethene	34	U
124-48-1	Dibromochloromethane	34	U
79-00-5	1,1,2-Trichloroethane	34	U
71-43-2	Benzene	34	U
10061-02-6	trans-1,3-Dichloropropene	34	U
75-25-2	Bromoform	34	U
108-10-1	4-Methyl-2-Pentanone	68	U
591-78-6	2-Hexanone	68	U
127-18-4	Tetrachloroethene	72	
79-34-5	1,1,2,2-Tetrachloroethane	34	U
108-88-3	Toluene	41	
108-90-7	Chlorobenzene	34	U
100-41-4	Ethylbenzene	34	U
100-42-5	Styrene	34	U
1330-20-7	Total Xylenes	34	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

LOC1

Lab Name: VERSAR INC Contract:

b Code: VERSAR Case No.: 420_1_ SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94961

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U2048

Level: (low/med) LOW Date Received: 01/17/90

% Moisture: not dec. 27 Date Analyzed: 01/25/90

Column (pack/cap) PACK Dilution Factor: 5.0

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-05-7	HEXANAL, 2-ETHYL-	32.09	44	J
2.	UNKNOWN	33.71	54	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LOC1RE

Lab Name: VERSAR INC Contract:

b Code: VERSAR Case No.: 420_1_ SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94961RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U2052

Level: (low/med) LOW Date Received: 01/17/90

% Moisture: not dec. 27 Date Analyzed: 01/25/90

Column: (pack/cap) PACK Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	68	U
74-83-9	Bromomethane	68	U
75-01-4	Vinyl Chloride	68	U
75-00-3	Chloroethane	68	U
75-09-2	Methylene Chloride	34	U
67-64-1	Acetone	1300	
75-15-0	Carbon Disulfide	34	U
75-35-4	1,1-Dichloroethene	34	U
75-35-3	1,1-Dichloroethane	34	U
540-59-0	1,2-Dichloroethene (total)	34	U
67-66-3	Chloroform	34	U
107-06-2	1,2-Dichloroethane	34	U
78-93-3	2-Butanone	200	
71-55-6	1,1,1-Trichloroethane	34	U
56-23-5	Carbon Tetrachloride	34	U
108-05-4	Vinyl Acetate	68	U
75-27-4	Bromodichloromethane	34	U
78-87-5	1,2-Dichloropropane	34	U
100610-1-5	cis-1,3-Dichloropropene	34	U
79-01-6	Trichloroethene	34	U
124-48-1	Dibromochloromethane	34	U
79-00-5	1,1,2-Trichloroethane	34	U
71-43-2	Benzene	34	U
10061-02-6	trans-1,3-Dichloropropene	34	U
75-25-2	Bromoform	34	U
108-10-1	4-Methyl-2-Pentanone	68	U
591-78-6	2-Hexanone	68	U
127-18-4	Tetrachloroethene	86	
79-34-5	1,1,2,2-Tetrachloroethane	34	U
108-88-3	Toluene	58	
108-90-7	Chlorobenzene	34	U
100-41-4	Ethylbenzene	34	U
100-42-5	Styrene	34	U
1330-20-7	Total Xylenes	34	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

LOC1RE

Lab Name: VERSAR INC Contract:

b Code: VERSAR Case No.: 420_1_ SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94961RE

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U2052

Level: (low/med) LOW Date Received: 01/17/90

% Moisture: not dec. 27 Date Analyzed: 01/25/90

Column (pack/cap) PACK Dilution Factor: 5.0

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-05-7	Hexanal, 2-Ethyl-	32.04	50	J
2.	UNKNOWN	33.67	65	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LUC1_1-2

Lab Name: VERSAR INC Contract: _____

Lab Code: VERSAR Case No.: VERSCD SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94958

Sample wt/vol: 1.0 (g/mL) G Lab File ID: T1519

Level: (low/med) MED Date Received: 01/17/90

% Moisture: not dec. 27 dec. ____ Date Extracted: 01/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/06/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 0.97

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	26000	U
111-44-4	bis(2-Chloroethyl)Ether	26000	U
95-57-8	2-Chlorophenol	26000	U
541-73-1	1,3-Dichlorobenzene	26000	U
106-46-7	1,4-Dichlorobenzene	26000	U
100-51-6	Benzyl Alcohol	26000	U
95-50-1	1,2-Dichlorobenzene	26000	U
95-48-7	2-Methylphenol	26000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	26000	U
106-44-5	4-Methylphenol	26000	U
621-64-7	N-Nitroso-Di-n-Propylamine	26000	U
67-72-1	Hexachloroethane	26000	U
98-95-3	Nitrobenzene	26000	U
78-59-1	Isophorone	26000	U
88-75-5	2-Nitrophenol	26000	U
105-67-9	2,4-Dimethylphenol	26000	U
65-85-0	Benzoic Acid	130000	U
111-91-1	bis(2-Chloroethoxy)Methane	26000	U
120-83-2	2,4-Dichlorophenol	26000	U
120-82-1	1,2,4-Trichlorobenzene	26000	U
91-20-3	Naphthalene	26000	U
106-47-8	4-Chloroaniline	26000	U
87-68-3	Hexachlorobutadiene	26000	U
59-50-7	4-Chloro-3-Methylphenol	26000	U
91-57-6	2-Methylnaphthalene	26000	U
77-47-4	Hexachlorocyclopentadiene	26000	U
88-06-2	2,4,6-Trichlorophenol	26000	U
95-95-4	2,4,5-Trichlorophenol	130000	U
91-58-7	2-Chloronaphthalene	26000	U
88-74-4	2-Nitroaniline	130000	U
131-11-3	Dimethyl Phthalate	26000	U
208-96-8	Acenaphthylene	26000	U
606-20-2	2,6-Dinitrotoluene	26000	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LOC1_1-2

Lab Name: VERSAR INC Contract: _____

Lab Code: VERSAR Case No.: VERSCD SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94958

Sample wt/vol: 1.0 (g/mL) G Lab File ID: T1519

Level: (low/med) MED Date Received: 01/17/90

% Moisture: not dec. 27 dec. _____ Date Extracted: 01/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/06/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 0.97

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	130000	U
83-32-9	Acenaphthene	26000	U
51-28-5	2,4-Dinitrophenol	130000	U
100-02-7	4-Nitrophenol	130000	U
132-64-9	Dibenzofuran	26000	U
121-14-2	2,4-Dinitrotoluene	26000	U
84-66-2	Diethylphthalate	26000	U
7005-72-3	4-Chlorophenyl-phenylether	26000	U
86-73-7	Fluorene	26000	U
100-10-6	4-Nitroaniline	130000	U
534-52-1	4,6-Dinitro-2-Methylphenol	130000	U
86-30-6	N-Nitrosodiphenylamine (1)	26000	U
101-55-3	4-Bromophenyl-phenylether	26000	U
118-74-1	Hexachlorobenzene	26000	U
87-86-5	Pentachlorophenol	130000	U
85-01-8	Phenanthrene	16000	J
120-12-7	Anthracene	26000	U
84-74-2	Di-n-Butylphthalate	12000	J
206-44-0	Fluoranthene	27000	
129-00-0	Pyrene	28000	
85-68-7	Butylbenzylphthalate	26000	U
91-94-1	3,3'-Dichlorobenzidine	53000	U
56-55-3	Benzo(a)Anthracene	24000	J
218-01-9	Chrysene	26000	J
117-81-7	bis(2-Ethylhexyl)Phthalate	77000	
117-84-0	Di-n-Octyl Phthalate	26000	U
205-99-2	Benzo(b)Fluoranthene	43000	
207-08-9	Benzo(k)Fluoranthene	28000	
50-32-8	Benzo(a)Pyrene	27000	
193-39-5	Indeno(1,2,3-cd)Pyrene	28000	
53-70-3	Dibenz(a,h)Anthracene	26000	U
191-24-2	Benzo(g,h,i)Perylene	25000	J

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

LOC1_1-2

Lab Name: VERSAR INC Contract: _____

Lab Code: VERSAR Case No.: VERSCD SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94958

Sample wt/vol: 1.0 (g/mL) G Lab File ID: T1519

Level: (low/med) MED Date Received: 01/17/90

% Moisture: not dec. 27 dec. ____ Date Extracted: 01/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/06/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 0.97

Number TICs found: 18

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	19.17	8200	J
2.	UNKNOWN HYDROCARBON	26.17	12000	J
3.	UNKNOWN HYDROCARBON	26.84	13000	J
4.	UNKNOWN HYDROCARBON	28.09	30000	J
5.	UNKNOWN HYDROCARBON	28.41	10000	J
6.	UNKNOWN HYDROCARBON	29.02	23000	J
7.	UNKNOWN HYDROCARBON	29.31	15000	J
8.	UNKNOWN HYDROCARBON	30.17	21000	J
9.	UNKNOWN HYDROCARBON	30.99	40000	J
10.	UNKNOWN HYDROCARBON	32.01	28000	J
11.	UNKNOWN HYDROCARBON	32.51	34000	J
12.	UNKNOWN	32.89	14000	J
13.	UNKNOWN HYDROCARBON	33.26	15000	J
14.	UNKNOWN HYDROCARBON	33.51	8600	J
15.	UNKNOWN	33.86	16000	J
16.	UNKNOWN	35.07	17000	J
17.	UNK POLYAROMATIC HYDROCARBON	35.64	30000	J
18.	UNKNOWN	40.12	17000	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

L0C112

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: R3-5 SAS No.: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 94958

Sample wt/vol: 30 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Received: 01/17/90

% Moisture: not dec. dec. 27 Date Extracted: 01/24/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/07/90

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 10.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	110	U
319-85-7	beta-BHC	110	U
319-86-8	delta-BHC	160	
58-89-9	gamma-BHC (Lindane)	110	U
76-44-8	Heptachlor	160	
309-00-2	Aldrin	110	U
1024-57-3	Heptachlor Epoxide	110	U
959-98-8	Endosulfan I	110	U
60-57-1	Dieldrin	1900	
72-55-9	4,4'-DDE	1000	
72-20-8	Endrin	220	U
33213-65-9	Endosulfan II	1100	
72-54-8	4,4'-DDD	680	
1031-07-8	Endosulfan Sulfate	220	U
50-29-3	4,4'-DDT	220	U
72-43-5	Methoxychlor	4800	
53494-70-5	Endrin Ketone	220	U
5103-71-9	alpha-Chlordane	1000	
5103-74-2	gamma-Chlordane	1500	
8001-35-2	Toxaphene	2200	U
12674-11-2	Aroclor-1016	1100	U
11104-28-2	Aroclor-1221	1100	U
11141-16-5	Aroclor-1232	1100	U
53469-21-9	Aroclor-1242	1100	U
12672-29-6	Aroclor-1248	1100	U
11097-69-1	Aroclor-1254	2200	U
11096-82-5	Aroclor-1260	21000	

R 2/15/90

INORGANIC ANALYSES DATA SHEET

FIELD SAMPLE NO.

LOC1 1-3

Client : VERSAR_DIVISION_31__ Site: CDM_____

Lab Name: VERSAR_INC. Control No.: 1909____ Code: VERSCDM_ Batch: 1_____

Matrix : SOIL_____ Lab Sample ID: 94955____

Level (low/med): LOW_____ Date Received: 01/17/90_

% Solids: __66.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5320			P
7440-36-0	Antimony	16.8	B	N	P
7440-38-2	Arsenic	9.4			F
7440-39-3	Barium	829			P
7440-41-7	Beryllium	1.3	B	N	P
7440-43-9	Cadmium	6.7			P
7440-70-2	Calcium	13300			P
7440-47-3	Chromium	798			P
7440-48-4	Cobalt	32.9			P
7440-50-8	Copper	447		*	P
7439-89-6	Iron	17500			P
7439-92-1	Lead	2580			P
7439-95-4	Magnesium	2970		E	P
7439-96-5	Manganese	371			P
7439-97-6	Mercury	3.8			CV
7440-02-0	Nickel	37.5			P
7440-09-7	Potassium	745	U		P
7782-49-2	Selenium	5.8	U	N	F
7440-22-4	Silver	3.4			P
7440-23-5	Sodium	540	B		P
7440-28-0	Thallium	0.29	U	WN	F
7440-62-2	Vanadium	32.8			P
7440-66-6	Zinc	1260		E	P
	Cyanide	26.2		*	AS

Color Before: BLACK____ Clarity Before: _____ Texture: COARSE

Color After : YELLOW___ Clarity After: CLEAR_ Artifacts: YES___

Comments:
ARTIFACTS-_ROCKS;

FORM I - IN

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LOC2

Lab Name: VERSAR INC Contract:

b Code: VERSAR Case No.: 420_1_ SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94962

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U2049

Level: (low/med) LOW Date Received:

% Moisture: not dec. 33 Date Analyzed: 01/25/90

Column: (pack/cap) PACK Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	75	U
74-83-9	Bromomethane	75	U
75-01-4	Vinyl Chloride	75	U
75-00-3	Chloroethane	75	U
75-09-2	Methylene Chloride	37	U
67-64-1	Acetone	600	
75-15-0	Carbon Disulfide	37	U
75-35-4	1,1-Dichloroethene	37	U
75-35-3	1,1-Dichloroethane	37	U
540-59-0	1,2-Dichloroethene (total)	37	U
67-66-3	Chloroform	37	U
107-06-2	1,2-Dichloroethane	37	U
78-93-3	2-Butanone	1100	
71-55-6	1,1,1-Trichloroethane	37	U
56-23-5	Carbon Tetrachloride	37	U
108-05-4	Vinyl Acetate	75	U
75-27-4	Bromodichloromethane	37	U
78-87-5	1,2-Dichloropropane	37	U
100610-1-5	cis-1,3-Dichloropropene	37	U
79-01-6	Trichloroethene	37	U
124-48-1	Dibromochloromethane	37	U
79-00-5	1,1,2-Trichloroethane	37	U
71-43-2	Benzene	37	U
10061-02-6	trans-1,3-Dichloropropene	37	U
75-25-2	Bromoform	37	U
108-10-1	4-Methyl-2-Pentanone	75	U
591-78-6	2-Hexanone	75	U
127-18-4	Tetrachloroethene	180	
79-34-5	1,1,2,2-Tetrachloroethane	37	U
108-88-3	Toluene	180	X
108-90-7	Chlorobenzene	37	U
100-41-4	Ethylbenzene	37	U
100-42-5	Styrene	37	U
1330-20-7	Total Xylenes	130	

FORM I VOA 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LOC2_2-2

Lab Name: VERSAR INC Contract: _____

Lab Code: VERSAR Case No.: VERSCD SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94959

Sample wt/vol: 1.0 (g/mL) G Lab File ID: T1522

Level: (low/med) MED Date Received: 01/17/90

Moisture: not dec. 33 dec. ____ Date Extracted: 01/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/06/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 0.93

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	27000	U
111-44-4	bis(2-Chloroethyl)Ether	27000	U
95-57-8	2-Chlorophenol	27000	U
541-73-1	1,3-Dichlorobenzene	27000	U
106-46-7	1,4-Dichlorobenzene	27000	U
100-51-6	Benzyl Alcohol	27000	U
95-50-1	1,2-Dichlorobenzene	27000	U
95-48-7	2-Methylphenol	27000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	27000	U
106-44-5	4-Methylphenol	27000	U
621-64-7	N-Nitroso-Di-n-Propylamine	27000	U
67-72-1	Hexachloroethane	27000	U
98-95-3	Nitrobenzene	27000	U
78-59-1	Isophorone	27000	U
88-75-5	2-Nitrophenol	27000	U
105-67-9	2,4-Dimethylphenol	27000	U
65-85-0	Benzoic Acid	130000	U
111-91-1	bis(2-Chloroethoxy)Methane	27000	U
120-83-2	2,4-Dichlorophenol	27000	U
120-82-1	1,2,4-Trichlorobenzene	27000	U
91-20-3	Naphthalene	27000	U
106-47-8	4-Chloroaniline	27000	U
87-68-3	Hexachlorobutadiene	27000	U
59-50-7	4-Chloro-3-Methylphenol	27000	U
91-57-6	2-Methylnaphthalene	27000	U
77-47-4	Hexachlorocyclopentadiene	27000	U
88-06-2	2,4,6-Trichlorophenol	27000	U
95-95-4	2,4,5-Trichlorophenol	130000	U
91-58-7	2-Chloronaphthalene	27000	U
88-74-4	2-Nitroaniline	130000	U
131-11-3	Dimethyl Phthalate	27000	U
208-96-8	Acenaphthylene	27000	U
606-20-2	2,6-Dinitrotoluene	27000	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LOC2_2-2

Lab Name: VERSAR INC Contract: _____

Lab Code: VERSAR Case No.: VERSCD SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94959

Sample wt/vol: 1.0 (g/mL) G Lab File ID: T1522

Level: (low/med) MED Date Received: 01/17/90

% Moisture: not dec. 33 dec. _____ Date Extracted: 01/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/06/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 0.93

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	130000	U
83-32-9	Acenaphthene	27000	U
51-28-5	2,4-Dinitrophenol	130000	U
100-02-7	4-Nitrophenol	130000	U
132-64-9	Dibenzofuran	27000	U
121-14-2	2,4-Dinitrotoluene	27000	U
84-66-2	Diethylphthalate	27000	U
7005-72-3	4-Chlorophenyl-phenylether	27000	U
86-73-7	Fluorene	27000	U
100-10-6	4-Nitroaniline	130000	U
534-52-1	4,6-Dinitro-2-Methylphenol	130000	U
86-30-6	N-Nitrosodiphenylamine (1)	27000	U
101-55-3	4-Bromophenyl-phenylether	27000	U
118-74-1	Hexachlorobenzene	27000	U
87-86-5	Pentachlorophenol	130000	U
85-01-8	Phenanthrene	21000	J
120-12-7	Anthracene	27000	U
84-74-2	Di-n-Butylphthalate	16000	J
206-44-0	Fluoranthene	29000	
129-00-0	Pyrene	26000	J
85-68-7	Butylbenzylphthalate	27000	U
91-94-1	3,3'-Dichlorobenzidine	55000	U
56-55-3	Benzo(a)Anthracene	18000	J
218-01-9	Chrysene	19000	J
117-81-7	bis(2-Ethylhexyl)Phthalate	52000	
117-84-0	Di-n-Octyl Phthalate	27000	U
205-99-2	Benzo(b)Fluoranthene	19000	J
207-08-9	Benzo(k)Fluoranthene	19000	J
50-32-8	Benzo(a)Pyrene	15000	J
193-39-5	Indeno(1,2,3-cd)Pyrene	12000	J
53-70-3	Dibenz(a,h)Anthracene	27000	U
191-24-2	Benzo(g,h,i)Perylene	9900	J

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

LUC2_2-2

Lab Name: VERSAR INC Contract: _____

Lab Code: VERSAR Case No.: VERSCD SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94959

Sample wt/vol: 1.0 (g/mL) G Lab File ID: T1522

Level: (low/med) MED Date Received: 01/17/90

% Moisture: not dec. 33 dec. ____ Date Extracted: 01/26/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/06/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 0.93

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	9.12	17000	J
2.	UNKNOWN ORGANIC ACID	29.74	13000	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

LOC2

Lab Name: VERSAR INC Contract:

b Code: VERSAR Case No.: 420_1_ SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94962

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U2049

Level: (low/med) LOW Date Received:

% Moisture: not dec. 33 Date Analyzed: 01/25/90

Column (pack/cap) PACK Dilution Factor: 5.0

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 75-07-0	ACETALDEHYDE (DOT)	2.33	340	J
2. 64-17-5	ETHANOL (ACN)	5.03	1400	J
3.	UNKNOWN	19.95	97	J
4. 589-34-4	HEXANE, 3-METHYL-	23.37	100	J
5.	UNKNOWN HYDROCARBON	29.12	61	J

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LOC222

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: R3-5 SAS No.: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 94959

Sample wt/vol: 31 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Received: 01/17/90

% Moisture: not dec. dec. 33 Date Extracted: 01/24/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/10/90

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	12	U
319-85-7	beta-BHC	12	U
319-86-8	delta-BHC	85	
58-89-9	gamma-BHC (Lindane)	12	U
76-44-8	Heptachlor	12	U
309-00-2	Aldrin	12	U
1024-57-3	Heptachlor Epoxide	12	U
959-98-8	Endosulfan I	12	U
60-57-1	Dieldrin	1700	
72-55-9	4,4'-DDE	670	
72-20-8	Endrin	24	U
33213-65-9	Endosulfan II	560	
72-54-8	4,4'-DDD	480	
1031-07-8	Endosulfan Sulfate	24	U
50-29-3	4,4'-DDT	3400	
72-43-5	Methoxychlor	21000	
53494-70-5	Endrin Ketone	24	U
5103-71-9	alpha-Chlordane	500	
5103-74-2	gamma-Chlordane	830	
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	120	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	120	U
53469-21-9	Aroclor-1242	120	U
12672-29-6	Aroclor-1248	120	U
11097-69-1	Aroclor-1254	240	U
11096-82-5	Aroclor-1260	16000	

PC 2/15/90

1

INORGANIC ANALYSES DATA SHEET

FIELD SAMPLE NO.

LOC2 2-3

Client : VERSAR_DIVISION_31__ Site: CDM_____

Lab Name: VERSAR_INC. Control No.: 1909____ Code: VERSCDM_ Batch: 1_____

Matrix : SOIL_____ Lab Sample ID: 94956____

Level (low/med): LOW_____ Date Received: 01/17/90_

% Solids: __67.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5590			P
7440-36-0	Antimony	18.4		N	P
7440-38-2	Arsenic	15.0			F
7440-39-3	Barium	666			P
7440-41-7	Beryllium	0.61	B	N	P
7440-43-9	Cadmium	6.6			P
7440-70-2	Calcium	20000			P
7440-47-3	Chromium	621			P
7440-48-4	Cobalt	27.9			P
7440-50-8	Copper	345		*	P
7439-89-6	Iron	26800			P
7439-92-1	Lead	2100			P
7439-95-4	Magnesium	2940		E	P
7439-96-5	Manganese	425			P
7439-97-6	Mercury	4.4			CV
7440-02-0	Nickel	28.5			P
7440-09-7	Potassium	778	B		P
7782-49-2	Selenium	5.9	U	N	F
7440-22-4	Silver	3.1			P
7440-23-5	Sodium	302	B		P
7440-28-0	Thallium	0.30	U	WN	F
7440-62-2	Vanadium	30.0			P
7440-66-6	Zinc	1080		E	P
	Cyanide	20.7		*	AS

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After : YELLOW___ Clarity After: CLEAR_ Artifacts: YES___

Comments:
ARTIFACTS-_TWIGS;_____

FORM I - IN

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LOC3

Lab Name: VERSAR INC Contract:

b Code: VERSAR Case No.: 420_1_ SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94963

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U2047

Level: (low/med) LOW Date Received: 01/17/90

% Moisture: not dec. 9 Date Analyzed: 01/25/90

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	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-35-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
100610-1-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

LOC3

Lab Name: VERSAR INC Contract:

Lab Code: VERSAR Case No.: 420_1_ SAS No.: SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94963

Sample wt/vol: 5.0 (g/mL) G Lab File ID: U2047

Level: (low/med) LOW Date Received: 01/17/90

% Moisture: not dec. 9 Date Analyzed: 01/25/90

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN TRIMETHYL BENZENE	28.92	8.5	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LOC3_3-2

Lab Name: VERSAR INC Contract: _____

Lab Code: VERSAR Case No.: VERSCD SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94960

Sample wt/vol: 30.3 (g/mL) G Lab File ID: T1517

Level: (low/med) LOW Date Received: 01/17/90

% Moisture: not dec. 9 dec. ____ Date Extracted: 01/24/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/06/90

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	750	U
111-44-4	bis(2-Chloroethyl)Ether	750	U
95-57-8	2-Chlorophenol	750	U
541-73-1	1,3-Dichlorobenzene	750	U
106-46-7	1,4-Dichlorobenzene	750	U
100-51-6	Benzyl Alcohol	750	U
95-50-1	1,2-Dichlorobenzene	750	U
95-48-7	2-Methylphenol	750	U
39638-32-9	bis(2-Chloroisopropyl)Ether	750	U
106-44-5	4-Methylphenol	750	U
621-64-7	N-Nitroso-Di-n-Propylamine	750	U
67-72-1	Hexachloroethane	750	U
98-95-3	Nitrobenzene	750	U
78-59-1	Isophorone	750	U
88-75-5	2-Nitrophenol	750	U
105-67-9	2,4-Dimethylphenol	750	U
65-85-0	Benzoic Acid	3700	U
111-91-1	bis(2-Chloroethoxy)Methane	750	U
120-83-2	2,4-Dichlorophenol	750	U
120-82-1	1,2,4-Trichlorobenzene	750	U
91-20-3	Naphthalene	750	U
106-47-8	4-Chloroaniline	750	U
87-68-3	Hexachlorobutadiene	750	U
59-50-7	4-Chloro-3-Methylphenol	750	U
91-57-6	2-Methylnaphthalene	750	U
77-47-4	Hexachlorocyclopentadiene	750	U
88-06-2	2,4,6-Trichlorophenol	750	U
95-95-4	2,4,5-Trichlorophenol	3700	U
91-58-7	2-Chloronaphthalene	750	U
88-74-4	2-Nitroaniline	3700	U
131-11-3	Dimethyl Phthalate	750	U
208-96-8	Acenaphthylene	750	U
606-20-2	2,6-Dinitrotoluene	750	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LOC3_3-2

Lab Name: VERSAR INC Contract: _____

Lab Code: VERSAR Case No.: VERSCD SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94960

Sample wt/vol: 30.3 (g/mL) G Lab File ID: T1517

Level: (low/med) LOW Date Received: 01/17/90

% Moisture: not dec. 9 dec. ____ Date Extracted: 01/24/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/06/90

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3700	U
83-32-9	Acenaphthene	750	U
51-28-5	2,4-Dinitrophenol	3700	U
100-02-7	4-Nitrophenol	3700	U
132-64-9	Dibenzofuran	750	U
121-14-2	2,4-Dinitrotoluene	750	U
84-66-2	Diethylphthalate	750	U
7005-72-3	4-Chlorophenyl-phenylether	750	U
86-73-7	Fluorene	750	U
100-10-6	4-Nitroaniline	3700	U
534-52-1	4,6-Dinitro-2-Methylphenol	3700	U
86-30-6	N-Nitrosodiphenylamine (1)	750	U
101-55-3	4-Bromophenyl-phenylether	750	U
118-74-1	Hexachlorobenzene	750	U
87-86-5	Pentachlorophenol	3700	U
85-01-8	Phenanthrene	750	U
120-12-7	Anthracene	750	U
84-74-2	Di-n-Butylphthalate	750	U
206-44-0	Fluoranthene	750	U
129-00-0	Pyrene	750	U
85-68-7	Butylbenzylphthalate	750	U
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)Anthracene	750	U
218-01-9	Chrysene	750	U
117-81-7	bis(2-Ethylhexyl)Phthalate	750	U
117-84-0	Di-n-Octyl Phthalate	750	U
205-99-2	Benzo(b)Fluoranthene	750	U
207-08-9	Benzo(k)Fluoranthene	750	U
50-32-8	Benzo(a)Pyrene	750	U
193-39-5	Indeno(1,2,3-cd)Pyrene	750	U
53-70-3	Dibenz(a,h)Anthracene	750	U
191-24-2	Benzo(g,h,i)Perylene	750	U

(1) - Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LOC3_3-2

Lab Name: VERSAR INC Contract: _____

Lab Code: VERSAR Case No.: VERSCD SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94960

Sample wt/vol: 30.3 (g/mL) G Lab File ID: T1517

Level: (low/med) LOW Date Received: 01/17/90

% Moisture: not dec. 9 dec. ____ Date Extracted: 01/24/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/06/90

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3700	U
83-32-9	Acenaphthene	750	U
51-28-5	2,4-Dinitrophenol	3700	U
100-02-7	4-Nitrophenol	3700	U
132-64-9	Dibenzofuran	750	U
121-14-2	2,4-Dinitrotoluene	750	U
84-66-2	Diethylphthalate	750	U
7005-72-3	4-Chlorophenyl-phenylether	750	U
86-73-7	Fluorene	750	U
100-10-6	4-Nitroaniline	3700	U
534-52-1	4,6-Dinitro-2-Methylphenol	3700	U
86-30-6	N-Nitrosodiphenylamine (1)	750	U
101-55-3	4-Bromophenyl-phenylether	750	U
118-74-1	Hexachlorobenzene	750	U
87-86-5	Pentachlorophenol	3700	U
85-01-8	Phenanthrene	750	U
120-12-7	Anthracene	750	U
84-74-2	Di-n-Butylphthalate	750	U
206-44-0	Fluoranthene	750	U
129-00-0	Pyrene	750	U
85-68-7	Butylbenzylphthalate	750	U
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)Anthracene	750	U
218-01-9	Chrysene	750	U
117-81-7	bis(2-Ethylhexyl)Phthalate	750	U
117-84-0	Di-n-Octyl Phthalate	750	U
205-99-2	Benzo(b)Fluoranthene	750	U
207-08-9	Benzo(k)Fluoranthene	750	U
50-32-8	Benzo(a)Pyrene	750	U
193-39-5	Indeno(1,2,3-cd)Pyrene	750	U
53-70-3	Dibenz(a,h)Anthracene	750	U
191-24-2	Benzo(g,h,i)Perylene	750	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

LOC3_3-2

Lab Name: VERSAR INC Contract: _____

Lab Code: VERSAR Case No.: VERSCD SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 94960

Sample wt/vol: 30.3 (g/mL) G Lab File ID: T1517

Level: (low/med) LOW Date Received: 01/17/90

% Moisture: not dec. 9 dec. _____ Date Extracted: 01/24/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/06/90

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	30.96	720	J

FORM I SV-TIC

1/87 Rev.

200153

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LOC332

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: R3-5 SAS No.: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 94960

Sample wt/vol: 30 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Received: 01/17/90

% Moisture: not dec. dec. 10 Date Extracted: 01/24/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 02/10/90

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.8	U
319-85-7	beta-BHC	8.8	U
319-86-8	delta-BHC	8.8	U
58-89-9	gamma-BHC (Lindane)	8.8	U
76-44-8	Heptachlor	8.8	U
309-00-2	Aldrin	8.8	U
1024-57-3	Heptachlor Epoxide	8.8	U
959-98-8	Endosulfan I	8.8	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	18	U
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	18	U
72-54-8	4,4'-DDD	18	U
1031-07-8	Endosulfan Sulfate	18	U
50-29-3	4,4'-DDT	18	U
72-43-5	Methoxychlor	88	U
53494-70-5	Endrin Ketone	18	U
5103-71-9	alpha-Chlordane	18	U
5103-74-2	gamma-Chlordane	18	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	88	U
11104-28-2	Aroclor-1221	88	U
11141-16-5	Aroclor-1232	88	U
53469-21-9	Aroclor-1242	88	U
12672-29-6	Aroclor-1248	88	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	180	U

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100060

FORM I PEST

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INORGANIC ANALYSES DATA SHEET

FIELD SAMPLE NO.

LOC3 3-3

Client : VERSAR_DIVISION_31__ Site: CDM_____

Lab Name: VERSAR_INC. Control No.: 1909____ Code: VERSCDM_ Batch: 1_____

Matrix : SOIL_____ Lab Sample ID: 94957____

Level (low/med): LOW_____ Date Received: 01/17/90_

% Solids: __80.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9060			P
7440-36-0	Antimony	6.7	U	N	P
7440-38-2	Arsenic	3.8			F
7440-39-3	Barium	40.5	B		P
7440-41-7	Beryllium	0.57	B	N	P
7440-43-9	Cadmium	0.48	U		P
7440-70-2	Calcium	5660			P
7440-47-3	Chromium	22.5			P
7440-48-4	Cobalt	5.2	B		P
7440-50-8	Copper	18.5		*	P
7439-89-6	Iron	15500			P
7439-92-1	Lead	48.0			P
7439-95-4	Magnesium	3090		E	P
7439-96-5	Manganese	172			P
7439-97-6	Mercury	0.12	U		CV
7440-02-0	Nickel	9.9			P
7440-09-7	Potassium	986	B		P
7782-49-2	Selenium	0.49	U	WN	F
7440-22-4	Silver	1.1	B		P
7440-23-5	Sodium	221	B		P
7440-28-0	Thallium	0.25	U	N	F
7440-62-2	Vanadium	17.8			P
7440-66-6	Zinc	57.2		E	P
	Cyanide	0.43		*	AS

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After : YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

FORM I - IN

Versar INC

Data Qualifier Flags

J — For Target Compounds: This flag is used when mass spectral data indicates the presence of a compound but the result is less than the specified detection limit but still greater than zero.

For Non Target Compounds: This flag indicates that the concentration is an estimated value, assuming a 1 to 1 response with the internal standard.

B — This flag is used when the analyte is found in the blank as well as in the sample. It indicates possible/probable contamination and warns the data user to take appropriate action.

u — This flag states that the compound was analyzed for but was not detected. The number is the minimum attainable detection limit for the sample.

X or T — This flag states that the mass spectrum does not meet EPA CLP criteria for confirmation, but compound presence is strongly suspected.

E — This flag is used to indicate that the quantitation of the analyte is outside the linear calibration of the curve and that dilution was required in order to properly quantitate.

D — This flag is used to indicate the value for the target analyte was calculated from a dilution (see "E" flag above).

Y — This flag is used when a matrix spike compound is also confirmed present in the unspiked sample.

Flags excerpted from and established by the US EPA Contract Lab Program (CLP) protocol.