



Waste Management of North America, Inc.  
Midwest Region  
Two Westbrook Corporate Center • Suite 1000  
P.O. Box 7070  
Westchester, Illinois 60154  
708-409-0700

91659-30

January 7, 1991

Mr. Jae Lee, Remedial Project Manager  
Remedial Enforcement and Response Branch  
MI/WI Section, 5HR-11  
U.S. Environmental Protection Agency, Region V  
230 S. Dearborn Street  
Chicago, Illinois 60604

Ms. Terry Evanson  
Remedial Project Coordinator Hagen Farm Site  
Wisconsin Department of Natural Resources  
P. O. Box 7921  
Madison, Wisconsin 53707-7921

RE: HAGEN FARM SITE  
MONTHLY PROGRESS REPORT FOR DECEMBER 1990.

Dear Mr. Lee and Ms. Evanson:

In accordance with Section IX, paragraph E of the Hagen Farm Administrative Order by Consent, please find attached three (3) copies of the monthly progress report for December 1990.

Please contact me if you have any questions.

Sincerely,

*Dee Brncich*

Dee Brncich  
Remedial Projects Manager  
Waste Management of North America

DB:js  
attachment

cc: Gerard Hamblin-WMNA (report only)  
Greg Asbury-Warzyn (report only)  
Timothy C. Wright-The Jesup Group (report only)  
Rich O'Hara-WMNA-EMD (report only)  
Ann Straw-WMNA-Legal (report only)  
Bill Schubert-WMNA (report only)  
Oliver J. Janney-The Jesup Group, Inc. (report only)  
Rich Kogler-WMWI (report only)  
Don Otter-WMWI (report only)  
Jane LeCapitaine-WMWI (report only)  
files (8.0 w/attachment, 2.1, 2.3 w/o attachment)



MONTHLY STATUS REPORT  
DECEMBER 1990

**SITE NAME/ACTIVITY:**

Hagen Farm  
Stoughton, Wisconsin  
Remedial Investigation/Feasibility Study

**PREPARED BY:**

Dee Brncich  
Waste Management of North America  
Two Westbrook Corporate Center  
P. O. Box 7070  
Westchester, IL. 60153

Greg E. Asbury  
Warzyn Engineering, Inc.  
One Science Court  
Madison, Wisconsin 53705

**DATE:**

January 7, 1991

**PERIOD:**

December 1990

**PROGRESS MADE THIS REPORTING PERIOD:**

During December 1990 the following project activities were conducted:

- The groundwater pump test was initiated on Thursday, December 13, 1990 and immediately terminated due to the use of PVC glue in the pipe joints connecting the carbon units together.
- The groundwater pump test was re-initiated at 12:45 p.m. on December 14, 1990 following completion of replumbing activities.
- The groundwater pump test was performed for approximately 32 hours and then permanently terminated at 10:05 p.m. on December 15, 1990 due to the apparent breakthrough of the largest carbon column available at the site.
- Drilling activities continued on the downgradient plume characterization soil borings.
- The Monthly Agency Status Report for November was submitted for Agency review.

**DATA TRANSMITTED WITH REPORT:**

- Pumping Test--water quality results (does not include results for manganese, and TCL semi-volatiles at 25.0 hours [See Table 3--Work Plan Addendum]). RAW data submitted with full report to follow.
- Contaminant Characterization Investigation--water quality results (does not include results from borings TB-5 or TB-6).

**ANTICIPATED PROBLEMS AND RECOMMENDED SOLUTIONS:**

- None

**DOCUMENTS SUBMITTED:**

None

**UPCOMING ACTIVITIES PLANNED:**

- Complete downgradient soil borings to characterize groundwater quality at distance and depth.
- Summarize the results of the groundwater pump testing.

**PERSONNEL CHANGES:**

- None

**TRAVEL MEETINGS:**

- None

**CONTRACT LABORATORY:**

- Round 4 groundwater monitoring well survey will be conducted at the completion of the current field construction program.

**SCHEDULE:**

- Attached is a project schedule listing for near-term activities showing the current breakdown of anticipated dates.

**HAGEN FARM RI/FS  
NEAR-TERM SCHEDULE**

Activity	January				February				March			
	1	2	3	4	1	2	3	4	1	2	3	4
3.2.3 Hydrogeologic Investigation Water Levels	—————▶											
3.3 Contaminant Characterization	—————▶											
Evaluate Pump Test Data	—————				—————							
Treatability Analysis	—————				—————							
Soil Boring Construction	—————											
Field Sample Analysis/Interpretation			—————		—————							
EPA/WDNR Concurrence					*							
Monitoring Well Construction					—————							
Round 4 Sampling											—————	

\* Indicates a non-schedulable activity

**Explanation of Sample Descriptions  
For the Pumping Test Water Quality Results**

<u>Sample Description</u>	<u>Explanation</u>
HF-RW1	Hagen Farm-recovery well (Before Pumping Test)
Step Test After 15000 #CU	Sample taken from effluent of 15000 lb carbon unit
HF-PTBT-3.5Q	Hagen Farm-Pumping Test-Before Treatment-3.5 hours from start of test
HF-PTBT-0.1	Hagen Farm-Pumping Test-Before Treatment 0.1 hours from start of test
HF-PTBT-1.0	Hagen Farm-Pumping Test-Before Treatment 1.0 hours from start of test
HF-PTBT-5.N	Hagen Farm-Pumping Test-Before Treatment 5.0 hours from start of test
HF-PTBT-5N DUP	Hagen Farm-Pumping Test-Before Treatment Field Blank taken 5.0 hours from start of test - duplicate sample
HF-PTBT-5FB	Hagen Farm-Pumping Test-before Treatment Field blank taken 5.0 hours from start of test
HF-PTBT-10N	Hagen Farm-Pumping Test-before Treatment-10.0 hours from start of test.
HF-PTA15-25Q & N	Hagen Farm-Pumping Test-After 15,000 lb. carbon units-25.0 hours from start of test.
HF-PTA2-25Q & N	Hagen Farm-Pumping Test-After 2,000 lb. carbon units - 25.0 hours from start of test.

Sample DescriptionExplanation

HF-PTBT-32.5

Hagen Farm-Pumping Test-Before Treatment-32.5 hours from start of test (immediately prior to termination of test)

HF-PTBA15-32.5

Hagen Farm-Pumping Test-After 15,000 lb. carbon unit-32.5 hours from start of test (immediately prior to termination of test).

HF-PTA2-32.5

Hagen Farm-Pumping Test-After 2,000 lb. carbon units-32.5 hours from start of test (immediately prior to termination of test).

HF-PTA2-32.5 DUP

Hagen Farm-Pumping Test-After 2,000 lb. carbon units-32.5 hours from start of test (immediately prior to termination of test) - Duplicate.

TK/mpb  
[mpb-112-76]  
13452.80-MD



MADISON  
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ANALYTICAL LABORATORY RESULTS  
WI LAB CERTIFICATION ID#: 113138300

Project: Hagen Farms

Location: Town of Dunkirk, Wisconsin

Project #: 13452.85

Date Sampled: 11/30/90

Ck'd: *JWS* App'd: *RJ*

Date Issued: 12/20/90

Lab No.	2023-001
<u>Sample Description</u>	<u>HF-RW1</u>
Arsenic	0.074
Barium	0.46
Cadmium	<0.0002
Chromium, Total	<0.0002
Iron	25.2
Lead	<0.003
Magnesium	50.7
Mercury	<0.0002

Results are reported in mg/L.

Method Reference: EPA-600, "Methods for Chemical Analysis of Water and Wastes", March, 1984.



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**ANALYTICAL LABORATORY RESULTS**  
**WI LAB CERTIFICATION ID#: 113138300**

Project: Hagen Farms

Project #: 13452.85

Location: Town of Dunkirk, Wisconsin

Date Sampled: 11/30/90

Ck'd: *JW* App'd: *[Signature]*

Date Issued: 12/20/90

<u>Lab No.</u>	<u>2023-001</u>
<u>Sample Description</u>	<u>HF-RW1</u>
Alkalinity, Bicarbonate	627
Alkalinity, Total	627
Biochemical Oxygen Demand	27
Chemical Oxygen Demand	87
Conductivity @ 25°C (umhos/cm)	1140
Nitrogen, Nitrate+Nitrite	<0.10 (1)
Phosphorus, Total	0.24
Solids, Total Dissolved	647
Solids, Total Suspended	42

Results are reported in mg/L unless otherwise stated.

(1) Elevated detection limit necessary to overcome interference.

Method Reference: EPA-600, "Methods for Chemical Analysis of Water and Wastes", March, 1984.



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ANALYTICAL LABORATORY RESULTS  
WI LAB CERTIFICATION ID#: 113138300

Project: Hagen Farms

Location: Town of Dunkirk, Wisconsin

Project #: 13452.85  
Date Sampled: 11/30/90  
Ck'd: *BJ* App'd: *KDS*  
Date Issued: 1/3/91

Lab No.	2023-001
<u>Sample Description</u>	<u>HF-RW1</u>
Total Organic Carbon	18

Results are reported in mg/L.

Method Reference: EPA-600, "Methods for Chemical Analysis of Water and Wastes", March, 1984.

Method 415.1: Total Organic Carbon

1B  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2023-001  
HF-RW1

Lab Name: COMPUCHEM, RTP Contract: 248901

Lab Code: COMPU Case No.: 22001 SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: 385139

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH085139A06

Level: (low/med) LOW Date Received: 12/01/90

% Moisture: not dec. \_\_\_\_\_ dec. \_\_\_\_\_ Date Extracted: 12/03/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 12/10/90

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

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

CAS NO. COMPOUND Q

108-95-2-----Phenol	10	U
111-44-4-----bis(2-Chloroethyl)Ether	20	U
95-57-8-----2-Chlorophenol	10	U
541-73-1-----1,3-Dichlorobenzene	10	U
106-46-7-----1,4-Dichlorobenzene	3	J
100-51-6-----Benzyl Alcohol	10	U
95-50-1-----1,2-Dichlorobenzene	10	U
95-48-7-----2-Methylphenol	10	U
39638-32-9-----bis(2-Chloroisopropyl)Ether	10	U
106-44-5-----4-Methylphenol	10	U
621-64-7-----N-Nitroso-Di-n-Propylamine	10	U
67-72-1-----Hexachloroethane	10	U
98-95-3-----Nitrobenzene	10	U
78-59-1-----Isophorone	10	U
88-75-5-----2-Nitrophenol	10	U
105-67-9-----2,4-Dimethylphenol	3	J
65-85-0-----Benzoic Acid	100	U
111-91-1-----bis(2-Chloroethoxy)Methane	10	U
120-83-2-----2,4-Dichlorophenol	10	U
120-82-1-----1,2,4-Trichlorobenzene	10	U
91-20-3-----Naphthalene	3	J
106-47-8-----4-Chloroaniline	10	U
87-68-3-----Hexachlorobutadiene	10	U
59-50-7-----4-Chloro-3-Methylphenol	10	U
91-57-6-----2-Methylnaphthalene	10	U
77-47-4-----Hexachlorocyclopentadiene	10	U
88-06-2-----2,4,6-Trichlorophenol	20	U
95-95-4-----2,4,5-Trichlorophenol	20	U
91-58-7-----2-Chloronaphthalene	10	U
88-74-4-----2-Nitroaniline	10	U
131-11-3-----Dimethyl Phthalate	10	U
208-96-8-----Acenaphthylene	10	U
606-20-2-----2,6-Dinitrotoluene	10	U

1C  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2023-001  
HF-RW1

Lab Name: COMPUCHEM, RTP Contract: 248901  
 Lab Code: COMPU Case No.: 22001 SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_  
 Matrix: (soil/water) WATER Lab Sample ID: 385139  
 Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH085139A06  
 Level: (low/med) LOW Date Received: 12/01/90  
 Moisture: not dec. \_\_\_\_\_ dec. \_\_\_\_\_ Date Extracted: 12/03/90  
 Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 12/10/90  
 SPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	40	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-Methylphenol	30	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

## SUMMARY OF ORGANIC QUALIFIER DEFINITIONS

### Laboratory Qualifiers

---

- U The material was analyzed for, but not detected.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the quality control criteria are not met.
- B This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible blank contamination and warns the data user to take appropriate action. This flag must be used for a tentatively identified compound as well as for a positively identified target compound.
- C (For Pesticide/PCB data). The associated value was confirmed using dual column verification.
- E The compound was quantitated above the linear calibration range.
- D The compound was quantitated from an analysis at a secondary dilution factor.
- X The associated value was quantitated manually.
- I The tentatively identified compound is an isomeric-type of the compound reported.
- C The tentatively identified compound refers to a class of compounds.
- A The tentatively identified compound is an aldol-type compound.

### Data Validation Qualifiers

---

- U The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
- UJ The material was analyzed for, but was not detected. The associated numerical value is an estimated quantity because quality control criteria were not met.
- J The associated numerical value is an estimated quantity.
- R The data are unusable (compound may or may not be present). Resampling and/or reanalysis is necessary for verification.

[jlv-601-11]

## SUMMARY OF INORGANIC QUALIFIER DEFINITIONS

### Laboratory Qualifiers

---

- U The material was analyzed for, but was not detected.
- K The associated value was greater than or equal to the instrument detection limit, but less than the contract required detection limit.
- E Indicates the value reported is estimated due to the presence of an interference.
- M Duplicate injection precision for furnace analyses was not met.
- \* Duplicate analysis is not within control limits.
- + Correlation coefficient for the MSA is less than 0.995.
- S The associated value was determined by the method of standard additions.
- N Indicates the spike sample recovery is not within control limits.
- W Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of the spike absorbance.

### Data Validation Qualifiers

---

- U The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
- UJ Sample was analyzed, but not detected. The associated value is an estimated quantity because quality control criteria were not met.
- R The data are unusable (compound may or may not be present). Resampling and/or reanalysis is necessary for verification.
- J The associated numerical value is an estimated quantity because quality control criteria were not met.

[jlv-601-11]



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Volatile Organic Compound Results  
 WI Lab Certification ID#: 113138300  
 Project: Hagen Farms  
 Location: Town of Dunkirk, Wisconsin  
 C#: 13452.85

Page 1 of 2  
 Ck'd: [Signature] App'd: [Signature]  
 Date Issued: 11/14/90

Compound	Reportable Detection Limit (UG/L)	2024-001(1) HF-RW1 11/30/90
Benzene	200	X
Bromodichloromethane	200	X
Bromoform	1000	X
Bromomethane	1000	X
Carbon Tetrachloride	200	X
Chlorobenzene	200	X
Chlorodibromomethane	200	X
Chloroethane	600	X
2-Chloroethylvinyl Ether	5000	X
1,2-Dichlorobenzene	200	X
1,3-Dichlorobenzene	200	X
1,4-Dichlorobenzene	200	X
1,1-Dichloroethane	200	X
1,2-Dichloroethane	200	X
1,1-Dichloroethene	600	X
cis-1,2-Dichloroethene	600	X
trans-1,2-Dichloroethene	600	X
1,2-Dichloropropane	200	X
cis-1,3-Dichloropropene	200	X
trans-1,3-Dichloropropene	200	X
Ethyl Benzene	200	1250
Dichloromethylene Chloride	1000	X
1,1,2,2-Tetrachloroethane	200	X
Tetrachloroethene	200	X
Toluene	200	X
1,1,1-Trichloroethane	200	X
1,1,2-Trichloroethane	200	X
Trichloroethene	5000	X
Trichlorofluoromethane	600	X
Vinyl Chloride	600	X
Xylenes	600	11300
Methyl Ethyl Ketone (MEK)	4000	X
Methyl Isobutyl Ketone (MIBK)	2000	X
Tetrahydrofuran	4000	14100
Styrene	200	X



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Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farms  
Location: Town of Dunkirk, Wisconsin  
C#: 13452.85

Page 2 Of 2  
Checked: JWW App'd: *[Signature]*  
Date Issued: 12/11/90

X - Analyzed, but not detected.

(1) Sample chromatogram contains unidentified compounds.

Method Reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.



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ANALYTICAL LABORATORY RESULTS  
WI LAB CERTIFICATION ID#: 113138300

Project: Hagen Farms

Project #: 13452.85

Location: Town of Dunkirk, Wisconsin

Date Sampled: 12/12/90

Ck'd: *sw* App'd: *MJL*

Date Issued: 1/3/91

<u>Lab No.</u> <u>Sample</u> <u>Description</u>	<u>2093-001</u> <u>Step Test After</u> <u>15000# CU</u>
Arsenic	0.041
Barium	0.02
Cadmium	<0.0002
Chromium, Total	0.0005
Lead	<0.003
Mercury	<0.0002

Results are reported in mg/L.

Method Reference: EPA-600, "Methods for Chemical Analysis of Water and Wastes", March, 1984.



Volatile Organic Compound Results  
 WI Lab Certification ID#: 113138300  
 Project: Hagen Farm Site  
 Location: Dunkirk, Wisconsin  
 C#: 13452.85

Page 1 Of 1  
 Ck'd: *MSW* App'd: *MJL*  
 Date Issued: 1/3/91

Compound -----	Reportable Detection Limit (ug/L) -----	2093-001 Step Test After 15000# CU 12/13/90 -----	2093-002 Trip Blank 12/12/90 -----
Benzene	1.00	X	X
Bromodichloromethane	1.00	X	X
Bromoform	1.00	X	X
Bromomethane	1.00	X	X
Carbon Tetrachloride	1.00	X	X
Chlorobenzene	1.00	X	X
Chlorodibromomethane	1.00	X	X
Chloroethane	1.00	X	X
2-Chloroethylvinyl Ether	10.0	X	X
Chloroform	1.00	X	X
Chloromethane	1.00	X	X
1,2-Dichlorobenzene	1.00	X	X
1,3-Dichlorobenzene	1.00	X	X
1,4-Dichlorobenzene	1.00	X	X
1,1-Dichloroethane	1.00	X	X
1,2-Dichloroethane	1.00	X	X
1,1-Dichloroethene	1.00	X	X
cis-1,2-Dichloroethene	1.00	X	X
trans-1,2-Dichloroethene	1.00	X	X
1,2-Dichloropropane	1.00	X	X
cis-1,3-Dichloropropene	1.00	X	X
trans-1,3-Dichloropropene	1.00	X	X
Ethyl Benzene	1.00	X	X
Methylene Chloride	5.00	X	X
1,1,2,2-Tetrachloroethane	1.00	X	X
Tetrachloroethene	1.00	X	X
Toluene	1.00	X	X
1,1,1-Trichloroethane	1.00	X	X
1,1,2-Trichloroethane	1.00	X	X
Trichloroethene	1.00	X	X
Trichlorofluoromethane	1.00	X	X
Vinyl Chloride	1.00	X	X
Xylenes	3.00	X	X
Styrene	10.0	X	X
Methyl ethyl ketone	10.0	X	X
Methyl isobutyl ketone	10.0	X	X
Tetrahydrofuran	10.0	X	X

X = Analyzed, but not detected.

Method Reference: SW846, "Test Methods for Evaluating Solid Waste",  
 September, 1986. Methods 8010 and 8020  
 with modifications.

1X  
ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

2093-001

*Step Test After 1500# Cu*

Lab Name: COMPUCHEM, RTP

Contract: 248901

Lab Code: COMPU

Case No.: 22145

SAS No.: \_\_\_\_\_

SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER

Lab Sample ID: 389062

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: GJ089062B06

Level: (low/med) LOW

Date Received: 12/17/90

% Moisture: \_\_\_\_\_ decanted: (Y/N) N

Date Extracted: 12/19/90

Concentrated Extract Volume: 1000(ul)

Date Analyzed: 12/21/90

Injection Volume: 1.0(ul)

Dilution Factor: 1.0

G Cleanup: (Y/N) N pH: \_\_\_\_\_

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

CAS NO.

COMPOUND

Q

108-95-2-----	Phenol	6	J
111-44-4-----	bis(2-Chloroethyl) Ether	20	U
95-57-8-----	2-Chlorophenol	10	U
541-73-1-----	1,3-Dichlorobenzene	10	U
106-46-7-----	1,4-Dichlorobenzene	10	U
100-51-6-----	Benzyl Alcohol	10	U
95-50-1-----	1,2-Dichlorobenzene	10	U
95-48-7-----	2-Methylphenol	10	U
39638-32-9-----	bis(2-Chloroisopropyl) Ether	10	U
106-44-5-----	4-Methylphenol	10	U
621-64-7-----	N-Nitroso-Di-n-Propylamine	10	U
67-72-1-----	Hexachloroethane	10	U
98-95-3-----	Nitrobenzene	10	U
78-59-1-----	Isophorone	10	U
88-75-5-----	2-Nitrophenol	10	U
105-67-9-----	2,4-Dimethylphenol	10	U
65-85-0-----	Benzoic Acid	100	U
111-91-1-----	bis(2-Chloroethoxy)Methane	10	U
120-83-2-----	2,4-Dichlorophenol	10	U
120-82-1-----	1,2,4-Trichlorobenzene	10	U
91-20-3-----	Naphthalene	10	U
106-47-8-----	4-Chloroaniline	10	U
87-68-3-----	Hexachlorobutadiene	10	U
59-50-7-----	4-Chloro-3-Methylphenol	10	U
91-57-6-----	2-Methylnaphthalene	10	U
77-47-4-----	Hexachlorocyclopentadiene	10	U
88-06-2-----	2,4,6-Trichlorophenol	20	U
95-95-4-----	2,4,5-Trichlorophenol	20	U
91-58-7-----	2-Chloronaphthalene	10	U
88-74-4-----	2-Nitroaniline	10	U
131-11-3-----	Dimethyl Phthalate	10	U
208-96-8-----	Acenaphthylene	10	U
606-20-2-----	2,6-Dinitrotoluene	10	U

99-09-2-----	3-Nitroaniline	20	U
83-32-9-----	Acenaphthene	10	U
51-28-5-----	2,4-Dinitrophenol	40	U
100-02-7-----	4-Nitrophenol	10	U
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-01-6-----	4-Nitroaniline	10	U
534-52-1-----	4,6-Dinitro-2-Methylphenol	30	U
86-30-6-----	N-Nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	20	U
85-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
84-74-2-----	Di-n-Butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	10	U
56-55-3-----	Benzo(a)Anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl) Phthalate	10	U
117-84-0-----	Di-n-Octyl Phthalate	10	U
205-99-2-----	Benzo(b) Fluoranthene	10	U
207-08-9-----	Benzo(k) Fluoranthene	10	U
50-32-8-----	Benzo(a) Pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd) Pyrene	10	U
53-70-3-----	Dibenz(a,h) Anthracene	10	U
191-24-2-----	Benzo(g,h,i) Perylene	10	U

#### METHOD REFERENCE

To determine the concentration of Semi-Volatile organic compounds in aqueous matrix CompuChem employs the methods as outlined in SW-846 for sample preparation (Method 3510) and analysis (Method 8270). These methods are approved for obtaining data to satisfy the requirement of 40CFR part 261, Identification and Listing of Hazardous Waste.

#### METHOD SUMMARY

Surrogates are added to an aliquot (usually 1-liter) of aqueous sample. The sample is extracted at a pH of greater than 11 and then at a pH of less than 2 using a separatory funnel. The solvent used is methylene chloride. The extracts are dried and concentrated for analysis.

Analysis is performed by separation of the components by gas chromatography followed by qualitative and quantitative identification by mass spectrometry using internal standard technique.



Volatile Organic Compound Results  
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Compound -----	Reportable Detection Limit (ug/L) -----	2099-001(1) HF-PTBT -3.5Q 12/14/90 -----
Benzene	100	X
Bromodichloromethane	100	X
Bromoform	100	X
Bromomethane	100	X
Carbon Tetrachloride	100	X
Chlorobenzene	100	X
Chlorodibromomethane	100	X
Chloroethane	100	X
2-Chloroethylvinyl Ether	1000	X
Chloroform	100	X
Chloromethane	100	X
1,2-Dichlorobenzene	100	X
1,3-Dichlorobenzene	100	X
1,4-Dichlorobenzene	100	X
1,1-Dichloroethane	100	X
1,2-Dichloroethane	100	X
1,1-Dichloroethene	100	X
cis-1,2-Dichloroethene	100	X
trans-1,2-Dichloroethene	100	X
1,2-Dichloropropane	100	X
cis-1,3-Dichloropropene	100	X
trans-1,3-Dichloropropene	100	X
Ethyl Benzene	100	668
Methylene Chloride	500	X
1,1,2,2-Tetrachloroethane	100	X
Tetrachloroethene	100	X
Toluene	100	X
1,1,1-Trichloroethane	100	X
1,1,2-Trichloroethane	100	X
Trichloroethene	100	X
Trichlorofluoromethane	100	X
Vinyl Chloride	100	X
Xylenes	300	8130
Tetrahydrofuran	5000	11800



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Volatile Organic Compound Results  
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(1) Sample chromatogram contains unidentified compounds.

X = analyzed, but not detected.

Method reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.



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Compound -----	Reportable Detection Limit (ug/L) -----	2104-001 HF-PTBT -0.1 12/14/90 -----
Benzene	250	X
Bromochloromethane	250	X
Bromodichloromethane	250	X
Bromoform	250	X
Bromomethane	250	X
Carbon Tetrachloride	250	X
Chlorobenzene	250	X
Chlorodibromomethane	250	X
Chloroethane	250	X
2-Chloroethylvinyl Ether	2500	X
Chloroform	250	X
Chloromethane	250	X
1,2-Dibromo-3-Chloropropane	500	X
1,2-Dichlorobenzene	250	X
1,3-Dichlorobenzene	250	X
1,4-Dichlorobenzene	250	X
1,1-Dichloroethane	250	X
1,2-Dichloroethane	250	X
1,1-Dichloroethene	250	X
cis-1,2-Dichloroethene	250	X
trans-1,2-Dichloroethene	250	X
1,2-Dichloropropane	250	X
cis-1,3-Dichloropropene	250	X
trans-1,3-Dichloropropene	250	X
Ethyl Benzene	250	958
Methylene Chloride	1250	X
1,1,1,2-Tetrachloroethane	250	X
1,1,2,2-Tetrachloroethane	250	X
Tetrachloroethene	250	X
Toluene	250	X
1,1,1-Trichloroethane	250	X
1,1,2-Trichloroethane	250	X
Trichloroethene	250	X
Trichlorofluoromethane	250	X
Vinyl Chloride	250	X
Xylenes	750	11100
Styrene	250	X
Methyl ethyl ketone (MEK)	6250	X
Methyl isobutyl ketone (MIBK)	2500	X
Tetrahydrofuran	2500	14900



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Compound	Reportable Detection Limit (ug/L)	2104-002 HF-PTBT-1.0 12/14/90	2104-003 HF-PTBT-5.N 12/14/90
Benzene	50.0	X	X
Bromodichloromethane	50.0	X	X
Bromoform	50.0	X	X
Bromomethane	50.0	X	X
Carbon Tetrachloride	50.0	X	X
Chlorobenzene	50.0	X	X
Chlorodibromomethane	50.0	X	X
Chloroethane	50.0	X	X
2-Chloroethylvinyl Ether	500	X	X
Chloroform	50.0	X	X
Chloromethane	50.0	X	X
1,2-Dichlorobenzene	50.0	X	X
1,3-Dichlorobenzene	50.0	X	X
1,4-Dichlorobenzene	50.0	X	X
1,1-Dichloroethane	50.0	X	X
1,2-Dichloroethane	50.0	X	X
1,1-Dichloroethene	50.0	X	X
cis-1,2-Dichloroethene	50.0	X	X
trans-1,2-Dichloroethene	50.0	X	X
1,2-Dichloropropane	50.0	X	X
cis-1,3-Dichloropropene	50.0	X	X
trans-1,3-Dichloropropene	50.0	X	X
Ethyl Benzene	50.0	1020	778
Methylene Chloride	250	X	X
1,1,2,2-Tetrachloroethane	50.0	X	X
Tetrachloroethene	50.0	X	X
Toluene	50.0	X	X
1,1,1-Trichloroethane	50.0	X	X
1,1,2-Trichloroethane	50.0	X	X
Trichloroethene	50.0	X	X
Trichlorofluoromethane	50.0	X	X
Vinyl Chloride	50.0	X	X
Xylenes	1500	10500	8220
Styrene	500	X	X
Methyl ethyl ketone (MEK)	12500	X	X
Methyl isobutyl ketone (MIBK)	5000	X	X
Tetrahydrofuran	5000	14300	12000



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Compound	Reportable Detection Limit (ug/L)	2104-004 HF-PTBT-10N 12/14/90	2104-005 HF-PTBT-5N DUP 12/14/90
Benzene	50.0	X	X
Bromodichloromethane	50.0	X	X
Bromoform	50.0	X	X
Bromomethane	50.0	X	X
Carbon Tetrachloride	50.0	X	X
Chlorobenzene	50.0	X	X
Chlorodibromomethane	50.0	X	X
Chloroethane	50.0	X	X
2-Chloroethylvinyl Ether	500	X	X
Chloroform	50.0	X	X
Chloromethane	50.0	X	X
1,2-Dichlorobenzene	50.0	X	X
1,3-Dichlorobenzene	50.0	X	X
1,4-Dichlorobenzene	50.0	X	X
1,1-Dichloroethane	50.0	X	X
1,2-Dichloroethane	50.0	X	X
1,1-Dichloroethene	50.0	X	X
cis-1,2-Dichloroethene	50.0	X	X
trans-1,2-Dichloroethene	50.0	X	X
1,2-Dichloropropane	50.0	X	X
cis-1,3-Dichloropropene	50.0	X	X
trans-1,3-Dichloropropene	50.0	X	X
Ethyl Benzene	50.0	683	844
Methylene Chloride	250	X	X
1,1,2,2-Tetrachloroethane	50.0	X	X
Tetrachloroethene	50.0	X	X
Toluene	50.0	X	X
1,1,1-Trichloroethane	50.0	X	X
1,1,2-Trichloroethane	50.0	X	X
Trichloroethene	50.0	X	X
Trichlorofluoromethane	50.0	X	X
Vinyl Chloride	50.0	X	X
Xylenes	1500	7450	9020
Styrene	500	X	X
Methyl ethyl ketone (MEK)	12500	X	X
Methyl isobutyl ketone (MIBK)	5000	X	X
Tetrahydrofuran	5000	11200	12500



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Compound -----	Reportable Detection Limit (ug/L) -----	2104-006 HF-PTBT -5FB 12/14/90 -----
Benzene	1.00	X
Bromochloromethane	1.00	X
Bromodichloromethane	1.00	X
Bromoform	1.00	X
Bromomethane	1.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	1.00	X
2-Chloroethylvinyl Ether	10.0	X
Chloroform	1.00	X
Chloromethane	1.00	X
1,2-Dibromo-3-Chloropropane	2.00	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	1.00	X
cis-1,2-Dichloroethene	1.00	X
trans-1,2-Dichloroethene	1.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	X
Methylene Chloride	5.00	X
1,1,1,2-Tetrachloroethane	1.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	1.00	X
Vinyl Chloride	1.00	X
Xylenes	4.00	X
Styrene	1.00	X
Methyl ethyl ketone (MEK)	25.0	X
Methyl isobutyl ketone (MIBK)	10.0	X
Tetrahydrofuran	10.0	X



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Compound	Reportable Detection Limit (ug/L)	2104-007 TRIP BLANK 12/12/90
Benzene	1.00	X
Bromochloromethane	1.00	X
Bromodichloromethane	1.00	X
Bromoform	1.00	X
Bromomethane	1.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	1.00	X
2-Chloroethylvinyl Ether	10.0	X
Chloroform	1.00	X
Chloromethane	1.00	X
1,2-Dibromo-3-Chloropropane	2.00	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	1.00	X
cis-1,2-Dichloroethene	1.00	X
trans-1,2-Dichloroethene	1.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	X
Methylene Chloride	5.00	X
1,1,1,2-Tetrachloroethane	1.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	1.00	X
Vinyl Chloride	1.00	X
Xylenes	3.00	X
Styrene	1.00	X
Methyl ethyl ketone (MEK)	25.0	X
Methyl isobutyl ketone (MIBK)	10.0	X
Tetrahydrofuran	10.0	X



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Volatile Organic Compound Results  
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X - analyzed, but not detected.

Method reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.



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Compound	Reportable Detection Limit (ug/L)	2100-001 HF-PTA15 -250 12/15/90	2100-002 HF-PTA2 -250 12/15/90
Benzene	1.00	X	X
Bromodichloromethane	1.00	X	X
Bromoform	1.00	X	X
Bromomethane	1.00	X	X
Carbon Tetrachloride	1.00	X	X
Chlorobenzene	1.00	X	X
Chlorodibromomethane	1.00	X	X
Chloroethane	1.00	X	X
2-Chloroethylvinyl Ether	10.0	X	X
Chloroform	1.00	X	X
Chloromethane	1.00	X	X
1,2-Dichlorobenzene	1.00	X	X
1,3-Dichlorobenzene	1.00	X	X
1,4-Dichlorobenzene	1.00	X	X
1,1-Dichloroethane	1.00	X	X
1,2-Dichloroethane	1.00	X	X
1,1-Dichloroethene	1.00	X	X
cis-1,2-Dichloroethene	1.00	X	X
trans-1,2-Dichloroethene	1.00	X	X
1,2-Dichloropropane	1.00	X	X
cis-1,3-Dichloropropene	1.00	X	X
trans-1,3-Dichloropropene	1.00	X	X
Ethyl Benzene	1.00	1.89	X
Methylene Chloride	5.00	X	X
1,1,2,2-Tetrachloroethane	1.00	X	X
Tetrachloroethene	1.00	X	X
Toluene	1.00	X	X
1,1,1-Trichloroethane	1.00	X	X
1,1,2-Trichloroethane	1.00	X	X
Trichloroethene	1.00	X	X
Trichlorofluoromethane	1.00	X	X
Vinyl Chloride	1.00	X	X
Xylenes	3.00	12.8	X
Tetrahydrofuran	10.0	101	X



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Compound -----	Reportable Detection Limit (ug/L) -----	2100-003 HF-PT TRIP BLANK 12/15/90 -----
Benzene	1.00	X
Bromodichloromethane	1.00	X
Bromoform	1.00	X
Bromomethane	1.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	1.00	X
2-Chloroethylvinyl Ether	10.0	X
Chloroform	1.00	X
Chloromethane	1.00	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	1.00	X
cis-1,2-Dichloroethene	1.00	X
trans-1,2-Dichloroethene	1.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	X
Methylene Chloride	5.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	1.00	X
Vinyl Chloride	1.00	X
Xylenes	3.00	X
Tetrahydrofuran	10.0	X



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Volatile Organic Compound Results  
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X - analyzed, but not detected.

Method reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.



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ANALYTICAL LABORATORY RESULTS  
WI LAB CERTIFICATION ID#: 113138300

Project: Hagen Farms

Project #: 13452.85

Location: Town of Dunkirk, Wisconsin

Date Sampled: 12/15/90

Ck'd: *JWJ* App'd: *NJK*

Date Issued: 1/3/91

Lab No. <u>Sample Description</u>	2103-001 <u>HF-PTBT-25N</u>	2103-002 <u>HF-PTA2-25N</u>
Arsenic	0.051	0.015
Barium	0.26	0.18
Cadmium	<0.0002	<0.0002
Chromium, Total	0.0004	0.0002
Lead	<0.003	<0.003
Mercury	<0.0002	<0.0002

Results are reported in mg/L.

Method Reference: EPA-600, "Methods for Chemical Analysis of Water and Wastes", March, 1984.



Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
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Location: Town of Dunkirk, Wisconsin  
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Compound -----	Reportable Detection Limit (ug/L) -----	2103-001 HF-PTBT-25N 12/15/90 -----
Benzene	50.0	X
Bromodichloromethane	50.0	X
Bromoform	50.0	X
Bromomethane	50.0	X
Carbon Tetrachloride	50.0	X
Chlorobenzene	50.0	X
Chlorodibromomethane	50.0	X
Chloroethane	50.0	X
2-Chloroethylvinyl Ether	500	X
Chloroform	50.0	X
Chloromethane	50.0	X
1,2-Dichlorobenzene	50.0	X
1,3-Dichlorobenzene	50.0	X
1,4-Dichlorobenzene	50.0	X
1,1-Dichloroethane	50.0	X
1,2-Dichloroethane	50.0	X
1,1-Dichloroethene	50.0	X
cis-1,2-Dichloroethene	50.0	X
trans-1,2-Dichloroethene	50.0	X
1,2-Dichloropropane	50.0	X
cis-1,3-Dichloropropene	50.0	X
trans-1,3-Dichloropropene	50.0	X
Ethyl Benzene	50.0	449
Methylene Chloride	250	X
1,1,2,2-Tetrachloroethane	50.0	X
Tetrachloroethene	50.0	X
Toluene	50.0	X
1,1,1-Trichloroethane	50.0	X
1,1,2-Trichloroethane	50.0	X
Trichloroethene	50.0	X
Trichlorofluoromethane	50.0	X
Vinyl Chloride	50.0	X
Xylenes	1500	5780
Methyl Ethyl Ketone (MEK)	1250	X
Methyl isobutyl Ketone (MIBK)	500	X
Styrene	50.0	X
Tetrahydrofuran	5000	7780



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Ck'd: JWW/ App'd: MJL  
Date Issued: 1/5/91

Compound	Reportable Detection Limit (ug/L)	2103-002 HF-PTA2-25N 12/15/90
Benzene	1.00	X
Bromodichloromethane	1.00	X
Bromoform	1.00	X
Bromomethane	1.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	1.00	X
2-Chloroethylvinyl Ether	10.0	X
Chloroform	1.00	X
Chloromethane	1.00	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	1.00	X
cis-1,2-Dichloroethene	1.00	X
trans-1,2-Dichloroethene	1.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	X
Methylene Chloride	5.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	1.00	X
Vinyl Chloride	1.00	X
Xylenes	4.00	X
Methyl Ethyl Ketone (MEK)	25.0	X
Methyl isobutyl Ketone (MIBK)	10.0	X
Styrene	1.00	X
Tetrahydrofuran	20.0	X



Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farm Site  
Location: Town of Dunkirk, Wisconsin  
C#: 13452.85

Page 3 of 5  
Ck'd: gww App'd: MJL  
Date Issued: 1/3/91

Compound	Reportable Detection Limit (ug/L)	2103-003 HF-PTA15-25N 12/15/90
Benzene	1.00	X
Bromodichloromethane	1.00	X
Bromoform	1.00	X
Bromomethane	1.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	1.00	X
2-Chloroethylvinyl Ether	10.0	X
Chloroform	1.00	X
Chloromethane	1.00	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	1.00	X
cis-1,2-Dichloroethene	1.00	X
trans-1,2-Dichloroethene	1.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	1.37
Methylene Chloride	5.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	1.00	X
Vinyl Chloride	1.00	X
Xylenes	3.00	13.6
Methyl Ethyl Ketone (MEK)	25.0	X
Methyl isobutyl Ketone (MIBK)	10.0	X
Styrene	1.00	X
Tetrahydrofuran	50.0	87.6



Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farm Site  
Location: Town of Dunkirk, Wisconsin  
C#: 13452.85

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Ck'd: [signature] App'd: MJL  
Date Issued: 1/3/91

Compound -----	Reportable Detection Limit (ug/L) -----	2103-004 TRIP BLANK 12/12/90 -----
Benzene	1.00	X
Bromodichloromethane	1.00	X
Bromoform	1.00	X
Bromomethane	1.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	1.00	X
2-Chloroethylvinyl Ether	10.0	X
Chloroform	1.00	X
Chloromethane	1.00	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	1.00	X
cis-1,2-Dichloroethene	1.00	X
trans-1,2-Dichloroethene	1.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	X
Methylene Chloride	5.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	1.00	X
Vinyl Chloride	1.00	X
Xylenes	3.00	X
Methyl Ethyl Ketone (MEK)	25.0	X
Methyl isobutyl Ketone (MIBK)	10.0	X
Styrene	1.00	X
Tetrahydrofuran	10.0	X



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Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farm Site  
Location: Town of Dunkirk, Wisconsin  
C#: 13452.85

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Ck'd: *rmw* App'd: *MJL*  
Date Issued: 1/3/91

X = Analyzed, but not detected.

Method Reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.



Volatile Organic Compound Results  
 WI Lab Certification ID#: 113138300  
 Project: Hagen Farm RI/FS  
 Location: Town of Dunkirk, Wisconsin  
 C#: 13452.85

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 Ck'd: sw App'd: [Signature]  
 Date Issued: 12/20/90

Compound	Reportable Detection Limit (ug/L)	2117-001 HF-PTBT -32.5 12/15/90
Benzene	250	X
Bromodichloromethane	250	X
Bromoform	250	X
Bromomethane	250	X
Carbon Tetrachloride	250	X
Chlorobenzene	250	X
Chlorodibromomethane	250	X
Chloroethane	250	X
2-Chloroethylvinyl Ether	2500	X
Chloroform	250	X
Chloromethane	250	X
1,2-Dichlorobenzene	250	X
1,3-Dichlorobenzene	250	X
1,4-Dichlorobenzene	250	X
1,1-Dichloroethane	250	X
1,2-Dichloroethane	250	X
1,1-Dichloroethene	250	X
cis-1,2-Dichloroethene	250	X
trans-1,2-Dichloroethene	250	X
1,2-Dichloropropane	250	X
cis-1,3-Dichloropropene	250	X
trans-1,3-Dichloropropene	250	X
Ethyl Benzene	250	412
Methylene Chloride	1250	X
1,1,2,2-Tetrachloroethane	250	X
Tetrachloroethene	250	X
Toluene	250	X
1,1,1-Trichloroethane	250	X
1,1,2-Trichloroethane	250	X
Trichloroethene	250	X
Trichlorofluoromethane	250	X
Vinyl Chloride	250	X
Xylenes	750	4850
Styrene	250	X
Methyl ethyl ketone (MEK)	6250	X
Methyl isobutyl ketone (MIBK)	2500	X
Tetrahydrofuran	2500	7840



Volatile Organic Compound Results  
 WI Lab Certification ID#: 113138300  
 Project: Hagen Farm RI/FS  
 Location: Town of Dunkirk, Wisconsin  
 C#: 13452.85

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 Date Issued: 12/26/90

Compound	Reportable Detection Limit (ug/L)	2117-002 HF-PTA15 -32.5 12/15/90
Benzene	1.00	X
Bromodichloromethane	1.00	X
Bromoform	1.00	X
Bromomethane	1.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	1.00	X
2-Chloroethyl vinyl Ether	10.0	X
Chloroform	1.00	X
Chloromethane	1.00	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	1.00	X
cis-1,2-Dichloroethene	1.00	X
trans-1,2-Dichloroethene	1.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	1.45
Methylene Chloride	5.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	1.00	X
Vinyl Chloride	1.00	X
Xylenes	3.00	15.7
Styrene	1.00	X
Methyl ethyl ketone (MEK)	25.0	X
Methyl isobutyl ketone (MIBK)	10.0	X
Tetrahydrofuran	10.0	100



Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farm RI/FS  
Location: Town of Dunkirk, Wisconsin  
C#: 13452.85

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Ck'd: *fw* App'd: *[Signature]*  
Date Issued: *12/26/90*

Compound	Reportable Detection Limit (ug/L)	2117-003 HF-PTA2 -32.5 12/15/90	2117-004 HF-PTA2 -32.5 DUP 12/15/90
Benzene	1.00	X	X
Bromodichloromethane	1.00	X	X
Bromoform	1.00	X	X
Bromomethane	1.00	X	X
Carbon Tetrachloride	1.00	X	X
Chlorobenzene	1.00	X	X
Chlorodibromomethane	1.00	X	X
Chloroethane	1.00	X	X
2-Chloroethylvinyl Ether	10.0	X	X
Chloroform	1.00	X	X
Chloromethane	1.00	X	X
1,2-Dichlorobenzene	1.00	X	X
1,3-Dichlorobenzene	1.00	X	X
1,4-Dichlorobenzene	1.00	X	X
1,1-Dichloroethane	1.00	X	X
1,2-Dichloroethane	1.00	X	X
1,1-Dichloroethene	1.00	X	X
cis-1,2-Dichloroethene	1.00	X	X
trans-1,2-Dichloroethene	1.00	X	X
1,2-Dichloropropane	1.00	X	X
cis-1,3-Dichloropropene	1.00	X	X
trans-1,3-Dichloropropene	1.00	X	X
Ethyl Benzene	1.00	X	X
Methylene Chloride	5.00	X	X
1,1,2,2-Tetrachloroethane	1.00	X	X
Tetrachloroethene	1.00	X	X
Toluene	1.00	X	X
1,1,1-Trichloroethane	1.00	X	X
1,1,2-Trichloroethane	1.00	X	X
Trichloroethene	1.00	X	X
Trichlorofluoromethane	1.00	X	X
Vinyl Chloride	1.00	X	X
Xylenes	4.00	X	X
Styrene	1.00	X	X
Methyl ethyl ketone (MEK)	25.0	X	X
Methyl isobutyl ketone (MIBK)	10.0	X	X
Tetrahydrofuran	10.0	X	X



Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farm RI/FS  
Location: Town of Dunkirk, Wisconsin  
C#: 13452.85

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Ck'd: *aw* App'd: *[Signature]*  
Date Issued: 12/18/90

Compound -----	Reportable Detection Limit (ug/L) -----	2117-005 TRIP BLANK 12/15/90 -----
Benzene	1.00	X
Bromodichloromethane	1.00	X
Bromoform	1.00	X
Bromomethane	1.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	1.00	X
2-Chloroethylvinyl Ether	10.0	X
Chloroform	1.00	X
Chloromethane	1.00	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	1.00	X
cis-1,2-Dichloroethene	1.00	X
trans-1,2-Dichloroethene	1.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	X
Methylene Chloride	5.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	1.00	X
Vinyl Chloride	1.00	X
Xylenes	3.00	X
Styrene	1.00	X
Methyl ethyl ketone (MEK)	25.0	X
Methyl isobutyl ketone (MIBK)	10.0	X
Tetrahydrofuran	10.0	X



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Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farm RI/FS  
Location: Town of Dunkirk, Wisconsin  
C#: 13452.85

Page 5 Of 5  
Ck'd: JWW App'd: [Signature]  
Date Issued: 12/26/92

X = analyzed, but not detected.

Method reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.

Explanation of Sample Descriptions  
for the Contaminant Characterization Investigation  
Water Quality Results

Description	Explanation
HF-GWDTB01-22	Hagen Farm - Groundwater - Test Boring #1 - 22 feet
HF-GWDTB01-91	Hagen Farm - Groundwater - Test Boring #1 - 22 feet Duplicate
HF-GWDTB01-37	Hagen Farm - Groundwater - Test Boring #1 - 37 feet
HF-GWDTB01-57	Hagen Farm - Groundwater - Test Boring #1 - 57 feet
HF-GWDTB01-79	Hagen Farm - Groundwater - Test Boring #1 - 79 feet
HF-GWDTB01-97	Hagen Farm - Groundwater - Test Boring #1 - 97 feet
HF-GWDTB01-117	Hagen Farm - Groundwater - Test Boring #1 - 117 feet
HF-GWDTB01-137	Hagen Farm - Groundwater - Test Boring #1 - 137 feet
HF-GWDTB02-27	Hagen Farm - Groundwater - Test Boring #2 - 27 feet
HF-GWDTB02-37	Hagen Farm - Groundwater - Test Boring #2 - 37 feet
HF-GWDTB02-57	Hagen Farm - Groundwater - Test Boring #2 - 57 feet
HF-GWDTB02-74	Hagen Farm - Groundwater - Test Boring #2 - 74 feet
HF-GWDTB02-78	Hagen Farm - Groundwater - Test Boring #2 - 78 feet
HF-GWDTB02-94	Hagen Farm - Groundwater - Test Boring #2 - 94 feet
HF-GWDTB02-97	Hagen Farm - Groundwater - Test Boring #2 - 97 feet
HF-TB01	Hagen Farm - Trip Blank #1
HF-FB01	Hagen Farm - Field Blank #1
HF-GWDTB03-27	Hagen Farm - Groundwater - Test Boring #3 - 27 feet
HF-GWDTB03-47	Hagen Farm - Groundwater - Test Boring #3 - 47 feet
HF-GWDTB03-67	Hagen Farm - Groundwater - Test Boring #3 - 67 feet
HF-GWDTB03-87	Hagen Farm - Groundwater - Test Boring #3 - 87 feet
HF-GWDTB03-92	Hagen Farm - Groundwater - Test Boring #3 - 87 feet Duplicate
HF-GWDTB03-107	Hagen Farm - Groundwater - Test Boring #3 - 107 feet
HF-GWDTB03-127	Hagen Farm - Groundwater - Test Boring #3 - 127 feet
HF-GWDTB03-147	Hagen Farm - Groundwater - Test Boring #3 - 147 feet
HF-FB02	Hagen Farm - Field Blank #2
HF-FB03	Hagen Farm - Field Blank #3
HF-TB02	Hagen Farm - Trip Blank #2
HF-GWDTB04-47	Hagen Farm - Groundwater - Test Boring #4 - 47 feet
HF-GWDTB04-60	Hagen Farm - Groundwater - Test Boring #4 - 60 feet
HF-GWDTB04-75	Hagen Farm - Groundwater - Test Boring #4 - 75 feet
HF-GWDTB04-92	Hagen Farm - Groundwater - Test Boring #4 - 92 feet
HF-GWDTB04-104	Hagen Farm - Groundwater - Test Boring #4 - 104 feet
HF-GWDTB04-122	Hagen Farm - Groundwater - Test Boring #4 - 122 feet
HF-GWDTB04-134	Hagen Farm - Groundwater - Test Boring #4 - 134 feet
HF-GWDTB04-93	Hagen Farm - Groundwater - Test Boring #4 - 134 feet Duplicate
HF-TB04	Hagen Farm - Trip Blank #4

[sss-101-98b]



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VOLATILE ORGANIC COMPOUND RESULTS  
 WI LAB CERTIFICATION ID#: 113138300  
 PROJECT: HAGEN FARM RIFS  
 LOCATION: STOUGHTON, WISCONSIN  
 C#: 13452.89

PAGE 1 OF 3  
 CK'D: *AW* APP'D: *EG*  
 DATE ISSUED: 11/22/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	1946-001 HF-GWDTB01-22 11/12/90	1946-002 HF-GWDTB01-91 11/12/90
BENZENE	1.00	X	X
BROMOCHLOROMETHANE	1.00	X	X
BROMODICHLOROMETHANE	1.00	X	X
BROMOFORM	1.00	X	X
BROMOMETHANE	1.00	X	X
CARBON TETRACHLORIDE	1.00	X	X
CHLOROBENZENE	1.00	X	X
CHLORODIBROMOMETHANE	1.00	X	X
CHLOROETHANE	1.00	X	X
2-CHLOROETHYL VINYL ETHER	10.0	X	X
CHLOROFORM	1.00	X	X
CHLOROMETHANE	1.00	X	X
1,2-DIBROMO-3-CHLOROPROPANE	2.00	X	X
1,2-DICHLOROBENZENE	1.00	X	X
1,3-DICHLOROBENZENE	1.00	X	X
1,4-DICHLOROBENZENE	1.00	X	X
1,1-DICHLOROETHANE	1.00	X	X
1,2-DICHLOROETHANE	1.00	X	X
1,1-DICHLOROETHENE	1.00	X	X
CIS-1,2-DICHLOROETHENE	1.00	X	X
TRANS-1,2-DICHLOROETHENE	1.00	X	X
1,2-DICHLOROPROPANE	1.00	X	X
CIS-1,3-DICHLOROPROPENE	1.00	X	X
TRANS-1,3-DICHLOROPROPENE	1.00	X	X
ETHYL BENZENE	1.00	X	X
METHYLENE CHLORIDE	5.00	X	X
1,1,1,2-TETRACHLOROETHANE	1.00	X	X
1,1,2,2-TETRACHLOROETHANE	1.00	X	X
TETRACHLOROETHENE	1.00	X	X
TOLUENE	1.00	X	X
1,1,1-TRICHLOROETHANE	1.00	X	X
1,1,2-TRICHLOROETHANE	1.00	X	X
TRICHLOROETHENE	1.00	X	X
TRICHLOROFUOROMETHANE	1.00	X	X
VINYL CHLORIDE	1.00	X	X
XYLENES	3.00	BMQL	BMQL
TETRAHYDROFURAN	20.0	X	X



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VOLATILE ORGANIC COMPOUND RESULTS  
WI LAB CERTIFICATION ID#: 113138300  
PROJECT: HAGEN FARM RIFS  
LOCATION: STOUGHTON, WISCONSIN  
C#: 13452.89

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CK'D: *fw* APP'D: *fw*  
DATE ISSUED: 11-26-90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	1946-003 HF-GWDTB01-37 11/12/90
BENZENE	1.00	X
BROMOCHLOROMETHANE	1.00	X
BROMODICHLOROMETHANE	1.00	X
BROMOFORM	1.00	X
BROMOMETHANE	1.00	X
CARBON TETRACHLORIDE	1.00	X
CHLOROBENZENE	1.00	X
CHLORODIBROMOMETHANE	1.00	X
CHLOROETHANE	1.00	X
2-CHLOROETHYL VINYL ETHER	10.0	X
CHLOROFORM	1.00	X
CHLOROMETHANE	1.00	X
1,2-DIBROMO-3-CHLOROPROPANE	2.00	X
1,2-DICHLOROBENZENE	1.00	X
1,3-DICHLOROBENZENE	1.00	X
1,4-DICHLOROBENZENE	1.00	X
1,1-DICHLOROETHANE	1.00	X
1,2-DICHLOROETHANE	1.00	X
1,1-DICHLOROETHENE	1.00	X
CIS-1,2-DICHLOROETHENE	1.00	X
TRANS-1,2-DICHLOROETHENE	1.00	X
1,2-DICHLOROPROPANE	1.00	X
CIS-1,3-DICHLOROPROPENE	1.00	X
TRANS-1,3-DICHLOROPROPENE	1.00	X
ETHYL BENZENE	1.00	X
METHYLENE CHLORIDE	5.00	X
1,1,1,2-TETRACHLOROETHANE	1.00	X
1,1,2,2-TETRACHLOROETHANE	1.00	X
TETRACHLOROETHENE	1.00	X
TOLUENE	1.00	X
1,1,1-TRICHLOROETHANE	1.00	X
1,1,2-TRICHLOROETHANE	1.00	X
TRICHLOROETHENE	1.00	X
TRICHLOROFLUOROMETHANE	1.00	X
VINYL CHLORIDE	1.00	X
XYLENES	3.00	X
TETRAHYDROFURAN	20.0	X



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VOLATILE ORGANIC COMPOUND RESULTS  
WI LAB CERTIFICATION ID#: 113138300  
PROJECT: HAGEN FARM RIFS  
LOCATION: STOUGHTON, WISCONSIN  
C#: 13452.89

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CK'D: *aww* APP'D: *pg*  
DATE ISSUED: *1/20/90*

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.  
X - ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.



VOLATILE ORGANIC COMPOUND RESULTS  
 WI LAB CERTIFICATION ID#: 113138300  
 PROJECT: HAGEN FARM RIFS  
 LOCATION: STOUGHTON, WISCONSIN  
 C#: 13452.89

PAGE 1 OF 2  
 CK'D: *sw* APP'D: *PD*  
 DATE ISSUED: 11/17/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	1952-001 HF-GWDTB01-57 11/13/90
BENZENE	1.00	X
BROMOCHLOROMETHANE	1.00	X
BROMODICHLOROMETHANE	1.00	X
BROMOFORM	1.00	X
BROMOMETHANE	1.00	X
CARBON TETRACHLORIDE	1.00	X
CHLOROBENZENE	1.00	X
CHLORODIBROMOMETHANE	1.00	X
CHLOROETHANE	1.00	X
2-CHLOROETHYL VINYL ETHER	10.0	X
CHLOROFORM	1.00	X
CHLOROMETHANE	1.00	X
1,2-DIBROMO-3-CHLOROPROPANE	2.00	X
1,2-DICHLOROBENZENE	1.00	X
1,3-DICHLOROBENZENE	1.00	X
1,4-DICHLOROBENZENE	1.00	X
1,1-DICHLOROETHANE	1.00	X
1,2-DICHLOROETHANE	1.00	X
1,1-DICHLOROETHENE	1.00	X
CIS-1,2-DICHLOROETHENE	1.00	X
TRANS-1,2-DICHLOROETHENE	1.00	X
1,2-DICHLOROPROPANE	1.00	X
CIS-1,3-DICHLOROPROPENE	1.00	X
TRANS-1,3-DICHLOROPROPENE	1.00	X
ETHYL BENZENE	1.00	X
METHYLENE CHLORIDE	5.00	X
1,1,1,2-TETRACHLOROETHANE	1.00	X
1,1,2,2-TETRACHLOROETHANE	1.00	X
TETRACHLOROETHENE	1.00	X
TOLUENE	1.00	X
1,1,1-TRICHLOROETHANE	1.00	X
1,1,2-TRICHLOROETHANE	1.00	X
TRICHLOROETHENE	1.00	X
TRICHLOROFLUOROMETHANE	1.00	X
VINYL CHLORIDE	1.00	X
XYLENES	3.00	X
TETRAHYDROFURAN	20.0	X



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VOLATILE ORGANIC COMPOUND RESULTS  
WI LAB CERTIFICATION ID#: 113138300  
PROJECT: HAGEN FARM RIFS  
LOCATION: STOUGHTON, WISCONSIN  
C#: 13452.89

PAGE 2 OF 2  
CK'D: JWW APP'D: *JWW*  
DATE ISSUED: 4/17/90

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.  
X = ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.



VOLATILE ORGANIC COMPOUND RESULTS  
WI LAB CERTIFICATION ID#: 113138300  
PROJECT: HAGEN FARM RIFS  
LOCATION: STOUGHTON, WISCONSIN  
C#: 13452.89

PAGE 1 OF 3  
CK'D: *AW* APP'D: *AW*  
DATE ISSUED: 11/21/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	1957-001 HF-GWDTB01-79 11/14/90
BENZENE	1.00	X
BROMOCHLOROMETHANE	1.00	X
BROMODICHLOROMETHANE	1.00	X
BROMOFORM	1.00	X
BROMOMETHANE	1.00	X
CARBON TETRACHLORIDE	1.00	X
CHLOROBENZENE	1.00	X
CHLORODIBROMOMETHANE	1.00	X
CHLOROETHANE	1.00	X
2-CHLOROETHYL VINYL ETHER	10.0	X
CHLOROFORM	1.00	X
CHLOROMETHANE	1.00	X
1,2-DIBROMO-3-CHLOROPROPANE	2.00	X
1,2-DICHLOROBENZENE	1.00	X
1,3-DICHLOROBENZENE	1.00	X
1,4-DICHLOROBENZENE	1.00	X
1,1-DICHLOROETHANE	1.00	X
1,2-DICHLOROETHANE	1.00	X
1,1-DICHLOROETHENE	1.00	X
CIS-1,2-DICHLOROETHENE	1.00	X
TRANS-1,2-DICHLOROETHENE	1.00	X
1,2-DICHLOROPROPANE	1.00	X
CIS-1,3-DICHLOROPROPENE	1.00	X
TRANS-1,3-DICHLOROPROPENE	1.00	X
ETHYL BENZENE	1.00	X
METHYLENE CHLORIDE	5.00	X
1,1,1,2-TETRACHLOROETHANE	1.00	X
1,1,2,2-TETRACHLOROETHANE	1.00	X
TETRACHLOROETHENE	1.00	X
TOLUENE	1.00	X
1,1,1-TRICHLOROETHANE	1.00	X
1,1,2-TRICHLOROETHANE	1.00	X
TRICHLOROETHENE	1.00	X
TRICHLOROFLUOROMETHANE	1.00	X
VINYL CHLORIDE	1.00	X
XYLENES	3.00	X
TETRAHYDROFURAN	250	923



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VOLATILE ORGANIC COMPOUND RESULTS  
WI LAB CERTIFICATION ID#: 113138300  
PROJECT: HAGEN FARM RIFS  
LOCATION: STOUGHTON, WISCONSIN  
C#: 13452.89

PAGE 2 OF 3  
CK'D: *sw* APP'D: *ps*  
DATE ISSUED: 4/2/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	1957-002 HF-GWDTB01-97 11/14/90
BENZENE	1.00	X
BROMOCHLOROMETHANE	1.00	X
BROMODICHLOROMETHANE	1.00	X
BROMOFORM	1.00	X
BROMOMETHANE	1.00	X
CARBON TETRACHLORIDE	1.00	X
CHLOROBENZENE	1.00	X
CHLORODIBROMOMETHANE	1.00	X
CHLOROETHANE	1.00	X
2-CHLOROETHYL VINYL ETHER	10.0	X
CHLOROFORM	1.00	X
CHLOROMETHANE	1.00	X
1,2-DIBROMO-3-CHLOROPROPANE	2.00	X
1,2-DICHLOROBENZENE	1.00	X
1,3-DICHLOROBENZENE	1.00	X
1,4-DICHLOROBENZENE	1.00	X
1,1-DICHLOROETHANE	1.00	X
1,2-DICHLOROETHANE	1.00	X
1,1-DICHLOROETHENE	1.00	X
CIS-1,2-DICHLOROETHENE	1.00	X
TRANS-1,2-DICHLOROETHENE	1.00	X
1,2-DICHLOROPROPANE	1.00	X
CIS-1,3-DICHLOROPROPENE	1.00	X
TRANS-1,3-DICHLOROPROPENE	1.00	X
ETHYL BENZENE	1.00	X
METHYLENE CHLORIDE	5.00	X
1,1,1,2-TETRACHLOROETHANE	1.00	X
1,1,2,2-TETRACHLOROETHANE	1.00	X
TETRACHLOROETHENE	1.00	X
TOLUENE	1.00	X
1,1,1-TRICHLOROETHANE	1.00	X
1,1,2-TRICHLOROETHANE	1.00	X
TRICHLOROETHENE	1.00	X
TRICHLOROFLUOROMETHANE	1.00	X
VINYL CHLORIDE	1.00	X
XYLENES	3.00	X
TETRAHYDROFURAN	50.0	157



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VOLATILE ORGANIC COMPOUND RESULTS  
WI LAB CERTIFICATION ID#: 113138300  
PROJECT: HAGEN FARM RIFS  
LOCATION: STOUGHTON, WISCONSIN  
C#: 13452.89

PAGE 3 OF 3  
CK'D: *zw* APP'D: *PC*  
DATE ISSUED: 11/21/90

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.  
X - ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.



Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farms RI/FS  
Location: Stoughton, Wisconsin  
C#: 13452.98

Page 1 Of 3  
Ck'd: *mw* App'd: *PS*  
Date Issued: 12-26-90

Compound	Reportable Detection Limit (ug/L)	2047-001 HF-GWDTB01-117 12/6/90
Benzene	1.00	X
Bromodichloromethane	1.00	X
Bromoform	1.00	X
Bromomethane	1.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	1.00	X
2-Chloroethylvinyl Ether	10.0	X
Chloroform	1.00	X
Chloromethane	1.00	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	1.00	X
cis-1,2-Dichloroethene	1.00	X
trans-1,2-Dichloroethene	1.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	X
Methylene Chloride	5.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	1.00	X
Vinyl Chloride	1.00	X
Xylenes	3.00	X
Tetrahydrofuran	20.0	X

Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farms RI/FS  
Location: Stoughton, Wisconsin  
C#: 13452.98

Page 2 of 3  
Ck'd: ~~78~~ App'd: ~~KOS~~  
Date Issued: 12-26-90

Compound	Reportable Detection Limit (ug/L)	2047-002 HF-GWDTB01-137 12/6/90
Benzene	10.0	X
Bromodichloromethane	10.0	X
Bromoform	10.0	X
Bromomethane	10.0	X
Carbon Tetrachloride	10.0	X
Chlorobenzene	10.0	X
Chlorodibromomethane	10.0	X
Chloroethane	10.0	X
2-Chloroethylvinyl Ether	100	X
Chloroform	10.0	X
Chloromethane	10.0	X
1,2-Dichlorobenzene	10.0	X
1,3-Dichlorobenzene	10.0	X
1,4-Dichlorobenzene	10.0	X
1,1-Dichloroethane	10.0	X
1,2-Dichloroethane	10.0	X
1,1-Dichloroethene	10.0	X
cis-1,2-Dichloroethene	10.0	X
trans-1,2-Dichloroethene	10.0	X
1,2-Dichloropropane	10.0	X
cis-1,3-Dichloropropene	10.0	X
trans-1,3-Dichloropropene	10.0	X
Ethyl Benzene	10.0	X
Methylene Chloride	50.0	X
1,1,2,2-Tetrachloroethane	10.0	X
Tetrachloroethene	10.0	X
Toluene	10.0	X
1,1,1-Trichloroethane	10.0	X
1,1,2-Trichloroethane	10.0	X
Trichloroethene	10.0	X
Trichlorofluoromethane	10.0	X
Vinyl Chloride	10.0	X
Xylenes	30.0	X
Tetrahydrofuran	200	X



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Volatile Organic-Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farms RI/FS  
Location: Stoughton, Wisconsin  
C#: 13452.98

Page 3 of 3  
CK'd: ~~0~~ App'd: ~~0~~  
Date Issued: 12-26-90

X - analyzed, but not detected.

Method reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.



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VOLATILE ORGANIC COMPOUND RESULTS  
 WI LAB CERTIFICATION ID#: 113138300  
 PROJECT: HAGEN FARM RIFS  
 LOCATION: STOUGHTON, WISCONSIN  
 C#: 13452.89

PAGE 1 OF 2  
 CK'D: *AW* APP'D: *BS*  
 DATE ISSUED: 11-26-90

COMPOUND -----	REPORTABLE DETECTION LIMIT (UG/L) -----	1964-001 HF-GWDTB02-27 11/15/90 -----
BENZENE	1.00	X
BROMOCHLOROMETHANE	1.00	X
BROMODICHLOROMETHANE	1.00	X
BROMOFORM	1.00	X
BROMOMETHANE	1.00	X
CARBON TETRACHLORIDE	1.00	X
CHLOROBENZENE	1.00	X
CHLORODIBROMOMETHANE	1.00	X
CHLOROETHANE	1.00	X
2-CHLOROETHYL VINYL ETHER	10.0	X
CHLOROFORM	1.00	X
CHLOROMETHANE	1.00	X
1,2-DIBROMO-3-CHLOROPROPANE	2.00	X
1,2-DICHLOROBENZENE	1.00	X
1,3-DICHLOROBENZENE	1.00	X
1,4-DICHLOROBENZENE	1.00	X
1,1-DICHLOROETHANE	1.00	X
1,2-DICHLOROETHANE	1.00	X
1,1-DICHLOROETHENE	1.00	X
CIS-1,2-DICHLOROETHENE	1.00	X
TRANS-1,2-DICHLOROETHENE	1.00	X
1,2-DICHLOROPROPANE	1.00	X
CIS-1,3-DICHLOROPROPENE	1.00	X
TRANS-1,3-DICHLOROPROPENE	1.00	X
ETHYL BENZENE	1.00	X
METHYLENE CHLORIDE	5.00	X
1,1,1,2-TETRACHLOROETHANE	1.00	X
1,1,2,2-TETRACHLOROETHANE	1.00	X
TETRACHLOROETHENE	1.00	X
TOLUENE	1.00	X
1,1,1-TRICHLOROETHANE	1.00	X
1,1,2-TRICHLOROETHANE	1.00	X
TRICHLOROETHENE	1.00	X
TRICHLOROFLUOROMETHANE	1.00	X
VINYL CHLORIDE	1.00	X
XYLENES	3.00	X
TETRAHYDROFURAN	20.0	X



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VOLATILE ORGANIC COMPOUND RESULTS  
WI LAB CERTIFICATION ID#: 113138300  
PROJECT: HAGEN FARM RIFS  
LOCATION: STOUGHTON, WISCONSIN  
C#: 13452.89

PAGE 2 OF 2  
CK'D: *sw* APP'D: *AG*  
DATE ISSUED: 11-26-90

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.  
X = ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID  
WASTE", SEPTEMBER, 1986. METHODS 8010  
AND 8020 WITH MODIFICATIONS.



VOLATILE ORGANIC COMPOUND RESULTS  
 WI LAB CERTIFICATION ID#: 113138300  
 PROJECT: HAGEN FARM RI/FS  
 LOCATION: STOUGHTON, WISCONSIN  
 C#: 13452.89

PAGE 1 OF 3  
 CK'D: *mw* APP'D: *PS*  
 DATE ISSUED: 11/26/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	1971-001 HF-GWDTB02-37 11/16/90
BENZENE	1.00	X
BROMOCHLOROMETHANE	1.00	X
BROMODICHLOROMETHANE	1.00	X
BROMOFORM	1.00	X
BROMOMETHANE	1.00	X
CARBON TETRACHLORIDE	1.00	X
CHLOROBENZENE	1.00	X
CHLORODIBROMOMETHANE	1.00	X
CHLOROETHANE	1.00	X
2-CHLOROETHYL VINYL ETHER	10.0	X
CHLOROFORM	1.00	X
CHLOROMETHANE	1.00	X
1,2-DIBROMO-3-CHLOROPROPANE	2.00	X
1,2-DICHLOROBENZENE	1.00	X
1,3-DICHLOROBENZENE	1.00	X
1,4-DICHLOROBENZENE	1.00	X
1,1-DICHLOROETHANE	1.00	X
1,2-DICHLOROETHANE	1.00	X
1,1-DICHLOROETHENE	1.00	X
CIS-1,2-DICHLOROETHENE	1.00	X
TRANS-1,2-DICHLOROETHENE	1.00	X
1,2-DICHLOROPROPANE	1.00	X
CIS-1,3-DICHLOROPROPENE	1.00	X
TRANS-1,3-DICHLOROPROPENE	1.00	X
ETHYL BENZENE	1.00	X
METHYLENE CHLORIDE	5.00	X
1,1,1,2-TETRACHLOROETHANE	1.00	X
1,1,2,2-TETRACHLOROETHANE	1.00	X
TETRACHLOROETHENE	1.00	X
TOLUENE	1.00	X
1,1,1-TRICHLOROETHANE	1.00	X
1,1,2-TRICHLOROETHANE	1.00	X
TRICHLOROETHENE	1.00	X
TRICHLOROFLUOROMETHANE	1.00	X
VINYL CHLORIDE	1.00	X
XYLENES	3.00	X
TETRAHYDROFURAN	20.0	X



VOLATILE ORGANIC COMPOUND RESULTS  
 WI LAB CERTIFICATION ID#: 113138300  
 PROJECT: HAGEN FARM RI/FS  
 LOCATION: STOUGHTON, WISCONSIN  
 C#: 13452.89

PAGE 2 OF 3  
 CK'D: *gmw* APP'D: *PC*  
 DATE ISSUED: 4/26/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	1971-002 HF-GWDTB02-57 11/16/90
BENZENE	1.00	X
BROMOCHLOROMETHANE	1.00	X
BROMODICHLOROMETHANE	1.00	X
BROMOFORM	1.00	X
BROMOMETHANE	1.00	X
CARBON TETRACHLORIDE	1.00	X
CHLOROBENZENE	1.00	X
CHLORODIBROMOMETHANE	1.00	X
CHLOROETHANE	1.00	X
2-CHLOROETHYL VINYL ETHER	10.0	X
CHLOROFORM	1.00	X
CHLOROMETHANE	1.00	X
1,2-DIBROMO-3-CHLOROPROPANE	2.00	X
1,2-DICHLOROBENZENE	1.00	X
1,3-DICHLOROBENZENE	1.00	X
1,4-DICHLOROBENZENE	1.00	X
1,1-DICHLOROETHANE	1.00	X
1,2-DICHLOROETHANE	1.00	X
1,1-DICHLOROETHENE	1.00	X
CIS-1,2-DICHLOROETHENE	1.00	X
TRANS-1,2-DICHLOROETHENE	1.00	X
1,2-DICHLOROPROPANE	1.00	X
CIS-1,3-DICHLOROPROPENE	1.00	X
TRANS-1,3-DICHLOROPROPENE	1.00	X
ETHYL BENZENE	1.00	X
METHYLENE CHLORIDE	5.00	X
1,1,1,2-TETRACHLOROETHANE	1.00	X
1,1,2,2-TETRACHLOROETHANE	1.00	X
TETRACHLOROETHENE	1.00	X
TOLUENE	1.00	X
1,1,1-TRICHLOROETHANE	1.00	X
1,1,2-TRICHLOROETHANE	1.00	X
TRICHLOROETHENE	1.00	X
TRICHLOROFLUOROMETHANE	1.00	X
VINYL CHLORIDE	1.00	X
XYLENES	3.00	X
Tetrahydrofuran	20.0	X



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VOLATILE ORGANIC COMPOUND RESULTS  
WI LAB CERTIFICATION ID#: 113138300  
PROJECT: HAGEN FARM RI/FS  
LOCATION: STOUGHTON, WISCONSIN  
C#: 13452.89

PAGE 3 OF 3  
CK'D: *sw* APP'D: *ps*  
DATE ISSUED: 4/26/90

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.  
X - ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID  
WASTE", SEPTEMBER, 1986. METHODS 8010  
AND 8020 WITH MODIFICATIONS.



VOLATILE ORGANIC COMPOUND RESULTS  
WI LAB CERTIFICATION ID#: 113138300  
PROJECT: HAGEN FARM RIFS  
LOCATION: STOUGHTON, WISCONSIN  
C#: 13452.89

PAGE 1 OF 3  
CK'D: *mm* APP'D: KDS  
DATE ISSUED: 11/19/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	1977-001 HF-GWDTB02-78 11/19/90	1977-002 HF-FB01 11/19/90
BENZENE	1.00	X	X
BROMODICHLOROMETHANE	1.00	X	X
BROMOFORM	1.00	X	X
BROMOMETHANE	1.00	X	X
CARBON TETRACHLORIDE	1.00	X	X
CHLOROBENZENE	1.00	X	X
CHLORODIBROMOMETHANE	1.00	X	X
CHLOROETHANE	1.00	X	X
2-CHLOROETHYL VINYL ETHER	10.0	X	X
CHLOROFORM	1.00	X	X
CHLOROMETHANE	1.00	X	X
1,2-DICHLOROBENZENE	1.00	X	X
1,3-DICHLOROBENZENE	1.00	X	X
1,4-DICHLOROBENZENE	1.00	X	X
1,1-DICHLOROETHANE	1.00	X	X
1,2-DICHLOROETHANE	1.00	X	X
1,1-DICHLOROETHENE	1.00	X	X
CIS-1,2-DICHLOROETHENE	1.00	X	X
TRANS-1,2-DICHLOROETHENE	1.00	X	X
1,2-DICHLOROPROPANE	1.00	X	X
CIS-1,3-DICHLOROPROPENE	1.00	X	X
TRANS-1,3-DICHLOROPROPENE	1.00	X	X
ETHYL BENZENE	1.00	X	X
METHYLENE CHLORIDE	5.00	X	X
1,1,1,2-TETRACHLOROETHANE	1.00	X	X
1,1,2,2-TETRACHLOROETHANE	1.00	X	X
TETRACHLOROETHENE	1.00	X	X
TOLUENE	1.00	X	X
1,1,1-TRICHLOROETHANE	1.00	X	X
1,1,2-TRICHLOROETHANE	1.00	X	X
TRICHLOROETHENE	1.00	X	X
TRICHLOROFLUOROMETHANE	1.00	X	X
VINYL CHLORIDE	1.00	X	X
XYLENES	3.00	X	X
TETRAHYDROFURAN	20.0	X	X



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VOLATILE ORGANIC-COMPOUND RESULTS  
WI LAB CERTIFICATION ID#: 113138300  
PROJECT: HAGEN FARM RIFS  
LOCATION: STOUGHTON, WISCONSIN  
C#: 13452.89

PAGE 2 OF 3  
CK'D: *mm* APP'D: *KOS*  
DATE ISSUED: *4/27/90*

COMPOUND -----	REPORTABLE DETECTION LIMIT (UG/L) -----	1977-003 HF-TB01 11/19/90 -----
BENZENE	1.00	X
BROMODICHLOROMETHANE	1.00	X
BROMOFORM	1.00	X
BROMOMETHANE	1.00	X
CARBON TETRACHLORIDE	1.00	X
CHLOROBENZENE	1.00	X
CHLORODIBROMOMETHANE	1.00	X
CHLOROETHANE	1.00	X
2-CHLOROETHYL VINYL ETHER	10.0	X
CHLOROFORM	1.00	X
CHLOROMETHANE	1.00	X
1,2-DICHLOROBENZENE	1.00	X
1,3-DICHLOROBENZENE	1.00	X
1,4-DICHLOROBENZENE	1.00	X
1,1-DICHLOROETHANE	1.00	X
1,2-DICHLOROETHANE	1.00	X
1,1-DICHLOROETHENE	1.00	X
CIS-1,2-DICHLOROETHENE	1.00	X
TRANS-1,2-DICHLOROETHENE	1.00	X
1,2-DICHLOROPROPANE	1.00	X
CIS-1,3-DICHLOROPROPENE	1.00	X
TRANS-1,3-DICHLOROPROPENE	1.00	X
ETHYL BENZENE	1.00	X
METHYLENE CHLORIDE	5.00	X
1,1,1,2-TETRACHLOROETHANE	1.00	X
1,1,2,2-TETRACHLOROETHANE	1.00	X
TETRACHLOROETHENE	1.00	X
TOLUENE	1.00	X
1,1,1-TRICHLOROETHANE	1.00	X
1,1,2-TRICHLOROETHANE	1.00	X
TRICHLOROETHENE	1.00	X
TRICHLOROFLUOROMETHANE	1.00	X
VINYL CHLORIDE	1.00	X
XYLENES	3.00	X
TETRAHYDROFURAN	20.0	X



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VOLATILE ORGANIC COMPOUND RESULTS  
WI LAB CERTIFICATION ID#: 113138300  
PROJECT: HAGEN FARM RIFS  
LOCATION: STOUGHTON, WISCONSIN  
C#: 13452.89

PAGE 3 OF 3  
CK'D: *aw* APP'D: *KCS*  
DATE ISSUED: 1/29/90

BMQL - DETECTED, VALUE BELOW METHOD QUANTITATION LIMIT.  
X = ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID  
WASTE", SEPTEMBER, 1986. METHODS 8010  
AND 8020 WITH MODIFICATIONS.



Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farm RI/FS  
Location: Stoughton, Wisconsin  
C#: 13452.98

Page 1 Of 1  
Ck'd: *aw* App'd: *pf*  
Date Issued: 12/21/90

Compound	Reportable Detection Limit (ug/L)	2069-001 HF-GWDTB02-74 12/11/90
Benzene	1.00	X
Bromochloromethane	1.00	X
Bromodichloromethane	1.00	X
Bromoform	1.00	X
Bromomethane	1.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	1.00	X
2-Chloroethylvinyl Ether	10.0	X
Chloroform	1.00	X
Chloromethane	1.00	X
1,2-Dibromo-3-Chloropropane	2.00	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	1.00	X
cis-1,2-Dichloroethene	1.00	X
trans-1,2-Dichloroethene	1.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	X
Methylene Chloride	5.00	X
1,1,1,2-Tetrachloroethane	1.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	1.00	X
Vinyl Chloride	1.00	X
Xylenes	3.00	X
Tetrahydrofuran	10.0	X

X = analyzed, but not detected.

Method reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.



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Volatile Organic Compound Results  
 WI Lab Certification ID#: 113138300  
 Project: Hagen Farm RI/FS  
 Location: Town of Dunn, Wisconsin  
 C#: 13452.98

Page 1 of 2  
 Ck'd: *JW* App'd: *fg*  
 Date Issued: 12/21/90

Compound	Reportable Detection Limit (ug/L)	2062-001(1) HF-GWDTB02-94 12/10/90
Benzene	1.00	X
Bromochloromethane	1.00	X
Bromodichloromethane	1.00	X
Bromoform	1.00	X
Bromomethane	1.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	1.00	X
2-Chloroethylvinyl Ether	10.0	X
Chloroform	1.00	X
Chloromethane	1.00	X
1,2-Dibromo-3-Chloropropane	2.00	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	1.00	X
cis-1,2-Dichloroethene	1.00	X
trans-1,2-Dichloroethene	1.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	X
Methylene Chloride	5.00	X
1,1,1,2-Tetrachloroethane	1.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	1.00	X
Vinyl Chloride	1.00	X
Xylenes	3.00	X
Tetrahydrofuran	10.0	X

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WARZYN

Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farm RI/FS  
Location: Town of Dunn, Wisconsin  
C#: 13452.98

Page 2 of 2  
Ck'd: *sw* App'd: *fy*  
Date Issued: 12/21/90

X = analyzed, but not detected.

(1) Sample chromatogram contains unidentified compounds.

Method reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.



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VOLATILE ORGANIC COMPOUND RESULTS  
WI LAB CERTIFICATION ID#: 113138300  
PROJECT: HAGEN FARM RIFS  
LOCATION: STOUGHTON, WISCONSIN  
C#: 13452.89

PAGE 1 OF 1  
CK'D: *JW* APP'D: *PJ*  
DATE ISSUED: 11-20-90

COMPOUND *****	REPORTABLE DETECTION LIMIT (UG/L) *****	1982-001 HF-GWDTB02-97 11/20/90 *****
BENZENE	1.00	X
BROMODICHLOROMETHANE	1.00	X
BROMOFORM	1.00	X
BROMOMETHANE	1.00	X
CARBON TETRACHLORIDE	1.00	X
CHLOROBENZENE	1.00	X
CHLORODIBROMOMETHANE	1.00	X
CHLOROETHANE	1.00	X
2-CHLOROETHYL VINYL ETHER	10.0	X
CHLOROFORM	1.00	X
CHLOROMETHANE	1.00	X
1,2-DICHLOROBENZENE	1.00	X
1,3-DICHLOROBENZENE	1.00	X
1,4-DICHLOROBENZENE	1.00	X
1,1-DICHLOROETHANE	1.00	X
1,2-DICHLOROETHANE	1.00	X
1,1-DICHLOROETHENE	1.00	X
CIS-1,2-DICHLOROETHENE	1.00	X
TRANS-1,2-DICHLOROETHENE	1.00	X
1,2-DICHLOROPROPANE	1.00	X
CIS-1,3-DICHLOROPROPENE	1.00	X
TRANS-1,3-DICHLOROPROPENE	1.00	X
ETHYL BENZENE	1.00	X
METHYLENE CHLORIDE	5.00	X
1,1,1,2-TETRACHLOROETHANE	1.00	X
1,1,2,2-TETRACHLOROETHANE	1.00	X
TETRACHLOROETHENE	1.00	X
TOLUENE	1.00	X
1,1,1-TRICHLOROETHANE	1.00	X
1,1,2-TRICHLOROETHANE	1.00	X
TRICHLOROETHENE	1.00	X
TRICHLOROFLUOROMETHANE	1.00	X
VINYL CHLORIDE	1.00	X
XYLENES	3.00	X
TETRAHYDROFURAN	20.0	X

X = ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.



Volatile Organic Compound Results  
 WI Lab Certification ID#: 113138300  
 Project: Hagen Farms - RI/FS  
 Location: Town of Dunkirk, Wisconsin  
 C#: 13452.98

Page 1 of 5  
 Ck'd: *[Signature]* App'd: *[Signature]*  
 Date Issued: 12/12/90

Compound	Reportable Detection Limit (ug/L)	2002-001 HF-GWDTB03-67 11/27/90	2002-002 HF-FB02 11/27/90
Benzene	1.00	X	X
Bromodichloromethane	1.00	X	X
Bromoform	5.00	X	X
Bromomethane	5.00	X	X
Carbon Tetrachloride	1.00	X	X
Chlorobenzene	1.00	X	X
Chlorodibromomethane	1.00	X	X
Chloroethane	3.00	X	X
2-Chloroethylvinyl Ether	25.0	X	X
1,2-Dichlorobenzene	1.00	X	X
1,3-Dichlorobenzene	1.00	X	X
1,4-Dichlorobenzene	1.00	X	X
1,1-Dichloroethane	1.00	X	X
1,2-Dichloroethane	1.00	X	X
1,1-Dichloroethene	3.00	X	X
cis-1,2-Dichloroethene	3.00	X	X
trans-1,2-Dichloroethene	3.00	X	X
1,2-Dichloropropane	1.00	X	X
cis-1,3-Dichloropropene	1.00	X	X
trans-1,3-Dichloropropene	1.00	X	X
Ethyl Benzene	1.00	X	X
Methylene Chloride	5.00	X	6.76
1,1,2,2-Tetrachloroethane	1.00	X	X
Tetrachloroethene	1.00	X	X
Toluene	1.00	X	X
1,1,1-Trichloroethane	1.00	X	X
1,1,2-Trichloroethane	1.00	X	X
Trichloroethene	1.00	X	X
Trichlorofluoromethane	3.00	X	X
Vinyl Chloride	3.00	X	X
Xylenes	3.00	X	X
Tetrahydrofuran	20.0	X	X



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Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farms - RI/FS  
Location: Town of Dunkirk, Wisconsin  
C#: 13452.98

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CK'd: Jmw App'd: Rg  
Date Issued: 11/27/90

Compound	Reportable Detection Limit (ug/L)	2002-003 HF-GWDTB03-87 11/27/90
Benzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	5.00	X
Bromomethane	5.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	3.00	X
2-Chloroethylvinyl Ether	25.0	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	3.00	X
cis-1,2-Dichloroethene	3.00	X
trans-1,2-Dichloroethene	3.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
1,2,4-Trichlorobenzene	1.00	X
Methylene Chloride	5.00	X
1,1,1,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	3.00	X
Vinyl Chloride	3.00	X
Xylenes	3.00	X
Tetrahydrofuran	20.0	X



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Volatile Organic Compound Results  
 WI Lab Certification ID#: 113138300  
 Project: Hagen Farms - RI/FS  
 Location: Town of Dunkirk, Wisconsin  
 C#: 13452.98

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 Ck'd: *rw* App'd: *[Signature]*  
 Date Issued: 12/12/90

Reportable  
 Detection  
 Limit  
 (ug/L)

2002-004  
 HF-GWDTB03-92  
 11/27/90

Compound

Compound	Reportable Detection Limit (ug/L)	2002-004 HF-GWDTB03-92 11/27/90
Benzene	1.00	X
Bromodichloromethane	1.00	X
Bromoform	5.00	X
Bromomethane	5.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	3.00	X
2-Chloroethylvinyl Ether	25.0	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	3.00	X
cis-1,2-Dichloroethene	3.00	X
trans-1,2-Dichloroethene	3.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	X
Methylene Chloride	5.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	3.00	X
Vinyl Chloride	3.00	X
Xylenes	3.00	X
Tetrahydrofuran	20.0	X



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Volatile Organic Compound Results  
 WI Lab Certification ID#: 113138300  
 Project: Hagen Farms - RI/FS  
 Location: Town of Dunkirk, Wisconsin  
 C#: 13452.98

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 Ck'd: *rmw* App'd: *[Signature]*  
 Date Issued: 12/12/90

Compound	Reportable Detection Limit (ug/L)	2002-005 HF-FB03 11/27/90	2002-006(1) HF-TB02 11/27/90
Benzene	1.00	X	X
Bromodichloromethane	1.00	X	X
Bromoform	5.00	X	X
Bromomethane	5.00	X	X
Carbon Tetrachloride	1.00	X	X
Chlorobenzene	1.00	X	X
Chlorodibromomethane	1.00	X	X
Chloroethane	3.00	X	X
2-Chloroethylvinyl Ether	25.0	X	X
1,2-Dichlorobenzene	1.00	X	X
1,3-Dichlorobenzene	1.00	X	X
1,4-Dichlorobenzene	1.00	X	X
1,1-Dichloroethane	1.00	X	X
1,2-Dichloroethane	1.00	X	X
1,1-Dichloroethene	3.00	X	X
cis-1,2-Dichloroethene	3.00	X	X
trans-1,2-Dichloroethene	3.00	X	X
1,2-Dichloropropane	1.00	X	X
cis-1,3-Dichloropropene	1.00	X	X
trans-1,3-Dichloropropene	1.00	X	X
Ethyl Benzene	1.00	X	X
Methylene Chloride	5.00	5.85	X
1,1,2,2-Tetrachloroethane	1.00	X	X
Tetrachloroethene	1.00	X	X
Toluene	1.00	X	X
1,1,1-Trichloroethane	1.00	X	X
1,1,2-Trichloroethane	1.00	X	X
Trichloroethene	1.00	X	X
Trichlorofluoromethane	3.00	X	X
Vinyl Chloride	3.00	X	X
Xylenes	3.00	X	X
Tetrahydrofuran	20.0	X	X



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Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farms - RI/FS  
Location: Town of Dunkirk, Wisconsin  
C#: 13452.98

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Ck'd: *smw* App'd: *pg*  
Date Issued: 12/12/90

X = analyzed, but not detected.

(1) Sample chromatogram contains unidentified compounds.

Method reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.



VOLATILE ORGANIC COMPOUND RESULTS  
 WI LAB CERTIFICATION ID#: 113138300  
 PROJECT: HAGEN FARM RI/FS  
 LOCATION: STOUGHTON, WISCONSIN  
 C#: 13452.89

PAGE 1 OF 1  
 CK'D: *jm* APP'D: *gj*  
 DATE ISSUED: 12/4/90

COMPOUND	REPORTABLE DETECTION LIMIT (UG/L)	1998-001(1) HF-GWDTB03-27 11/26/90	1998-002(1) HF-GWDTB03-47 11/26/90
BENZENE	1.00	X	X
BROMODICHLOROMETHANE	1.00	X	X
BROMOFORM	1.00	X	X
BROMOMETHANE	1.00	X	X
CARBON TETRACHLORIDE	1.00	X	X
CHLOROBENZENE	1.00	X	X
CHLORODIBROMOMETHANE	1.00	X	X
CHLOROETHANE	1.00	X	X
2-CHLOROETHYL VINYL ETHER	10.0	X	X
CHLOROFORM	1.00	X	X
CHLOROMETHANE	1.00	X	X
1,2-DICHLOROBENZENE	1.00	X	X
1,3-DICHLOROBENZENE	1.00	X	X
1,4-DICHLOROBENZENE	1.00	X	X
1,1-DICHLOROETHANE	1.00	X	X
1,2-DICHLOROETHANE	1.00	X	X
1,1-DICHLOROETHENE	1.00	X	X
CIS-1,2-DICHLOROETHENE	1.00	X	X
TRANS-1,2-DICHLOROETHENE	1.00	X	X
1,2-DICHLOROPROPANE	1.00	X	X
CIS-1,3-DICHLOROPROPENE	1.00	X	X
TRANS-1,3-DICHLOROPROPENE	1.00	X	X
ETHYL BENZENE	1.00	X	X
METHYLENE CHLORIDE	5.00	X	X
1,1,1,2-TETRACHLOROETHANE	1.00	X	X
1,1,2,2-TETRACHLOROETHANE	1.00	X	X
TETRACHLOROETHENE	1.00	X	X
TOLUENE	1.00	X	X
1,1,1-TRICHLOROETHANE	1.00	X	X
1,1,2-TRICHLOROETHANE	1.00	X	X
TRICHLOROETHENE	1.00	X	X
TRICHLOROFLUOROMETHANE	1.00	X	X
VINYL CHLORIDE	1.00	X	X
XYLENES	3.00	X	X
TETRAHYDROFURAN	20.0	X	X

X = ANALYZED, BUT NOT DETECTED.

METHOD REFERENCE: SW846, "TEST METHODS FOR EVALUATING SOLID WASTE", SEPTEMBER, 1986. METHODS 8010 AND 8020 WITH MODIFICATIONS.

(1) SAMPLE CHROMATOGRAM CONTAINS UNIDENTIFIED COMPOUNDS.



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Volatile Organic Compound Results  
 WI Lab Certification ID#: 113138300  
 Project: Hagen Farms - RI/FS  
 Location: Town of Dunkirk, Wisconsin  
 C#: 13452.98

Page 1 of 2  
 Ck'd: *rw*/App'd: *fg*  
 Date Issued: 12/14/90

Compound -----	Reportable Detection Limit (ug/L) -----	2007-001 HF-GWDTB03-107 11/28/90 -----
Benzene	1.00	X
Bromodichloromethane	1.00	X
Bromoform	5.00	X
Bromomethane	5.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	3.00	X
2-Chloroethylvinyl Ether	25.0	X
1,2-Dibromo-3-Chloropropane	2.00	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	3.00	X
cis-1,2-Dichloroethene	3.00	X
trans-1,2-Dichloroethene	3.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	X
Methylene Chloride	5.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	3.00	X
Vinyl Chloride	3.00	X
Xylenes	3.00	X
Tetrahydrofuran	20.0	X

X = analyzed, but not detected.

Method reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.



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Volatile Organic Compound Results  
 WI Lab Certification ID#: 113138300  
 Project: Hagen Farms - RI/FS  
 Location: Town of Dunkirk, Wisconsin  
 C#: 13452.98

Page 2 of 2  
 CK'd: *mm* App'd: *PA*  
 Date Issued: 12/12/90

Compound	Reportable Detection Limit (ug/L)	2007-002 HF-GWDTB03-127 11/28/90
Benzene	1.00	X
Bromodichloromethane	1.00	X
Bromoform	5.00	X
Bromomethane	5.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	3.00	X
2-Chloroethylvinyl Ether	25.0	X
1,2-Dibromo-3-Chloropropane	2.00	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	3.00	X
cis-1,2-Dichloroethene	3.00	X
trans-1,2-Dichloroethene	3.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	X
Methylene Chloride	5.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	3.00	X
Vinyl Chloride	3.00	X
Xylenes	3.00	X
Tetrahydrofuran	20.0	X

X = analyzed, but not detected.

Method reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.



Volatile Organic Compound Results  
 WI Lab Certification ID#: 113138300  
 Project: Hagen Farms - RI/FS  
 Location: Town of Dunkirk, Wisconsin  
 C#: 13452.98

Page 1 Of 1  
 Ck'd: *aww* App'd: *PS*  
 Date Issued: 12/12/90

Compound -----	Reportable Detection Limit (ug/L) -----	2016-001 HF-GWDTB03-147 11/29/90 -----
Benzene	1.00	X
1,1-Dichloroethane	1.00	X
Bromodichloromethane	1.00	X
Bromoform	5.00	X
Bromomethane	5.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	3.00	X
2-Chloroethylvinyl Ether	25.0	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	3.00	X
cis-1,2-Dichloroethene	3.00	X
trans-1,2-Dichloroethene	3.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	X
Methylene Chloride	5.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	3.00	X
Vinyl Chloride	3.00	X
Xylenes	3.00	X
Tetrahydrofuran	20.0	X

X = analyzed, but not detected.

Method reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.



Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farm RI/FS  
Location: Stoughton, Wisconsin  
C#: 13452.98

Page 1 Of 2  
Ck'd: *ms* App'd: *plg*  
Date Issued: 12/21/90

Compound -----	Reportable Detection Limit (ug/L) -----	2090-001(1) HF-GWDTB04-75 12/13/90 -----
Benzene	1.00	X
Bromochloromethane	1.00	X
Bromodichloromethane	1.00	X
Bromoform	1.00	X
Bromomethane	1.00	X
Carbon Tetrachloride	1.00	X
Chlorobenzene	1.00	X
Chlorodibromomethane	1.00	X
Chloroethane	1.00	X
2-Chloroethylvinyl Ether	10.0	X
Chloroform	1.00	X
Chloromethane	1.00	X
1,2-Dibromo-3-Chloropropane	2.00	X
1,2-Dichlorobenzene	1.00	X
1,3-Dichlorobenzene	1.00	X
1,4-Dichlorobenzene	1.00	X
1,1-Dichloroethane	1.00	X
1,2-Dichloroethane	1.00	X
1,1-Dichloroethene	1.00	X
cis-1,2-Dichloroethene	1.00	X
trans-1,2-Dichloroethene	1.00	X
1,2-Dichloropropane	1.00	X
cis-1,3-Dichloropropene	1.00	X
trans-1,3-Dichloropropene	1.00	X
Ethyl Benzene	1.00	X
Methylene Chloride	5.00	X
1,1,1,2-Tetrachloroethane	1.00	X
1,1,2,2-Tetrachloroethane	1.00	X
Tetrachloroethene	1.00	X
Toluene	1.00	X
1,1,1-Trichloroethane	1.00	X
1,1,2-Trichloroethane	1.00	X
Trichloroethene	1.00	X
Trichlorofluoromethane	1.00	X
Vinyl Chloride	1.00	X
Xylenes	3.00	X
Tetrahydrofuran	10.0	X



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Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farm RI/FS  
Location: Stoughton, Wisconsin  
C#: 13452.98

Page 2 of 2  
Ck'd: *mm* App'd: *pg*  
Date Issued: 12/21/90

X - analyzed, but not detected.

(1) Sample chromatogram contains unidentified compounds.

Method reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.



Volatile Organic Compound Results  
 WI Lab Certification ID#: 113138300  
 Project: Hagen Farm RI/FS  
 Location: Stoughton, Wisconsin  
 C#: 13452.98

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 Ck'd: *Jmw* App'd: *gll*  
 Date Issued: 12/28/90

Compound	Reportable Detection Limit (ug/L)	2122-001	2122-002	2122-003
		HF-GWD TB04-134 12/18/90	HF-GWD TB04-93 12/18/90	HF-GWD TB04-122 12/18/90
Benzene	1.00	X	X	X
Bromochloromethane	1.00	X	X	X
Bromodichloromethane	1.00	X	X	X
Bromoform	1.00	X	X	X
Bromomethane	1.00	X	X	X
Carbon Tetrachloride	1.00	X	X	X
Chlorobenzene	1.00	X	X	X
Chlorodibromomethane	1.00	X	X	X
Chloroethane	1.00	X	X	X
2-Chloroethylvinyl Ether	10.0	X	X	X
Chloroform	1.00	X	X	X
Chloromethane	1.00	X	X	X
1,2-Dibromo-3-Chloropropane	2.00	X	X	X
1,2-Dichlorobenzene	1.00	X	X	X
1,3-Dichlorobenzene	1.00	X	X	X
1,4-Dichlorobenzene	1.00	X	X	X
1,1-Dichloroethane	1.00	X	X	X
1,2-Dichloroethane	1.00	X	X	X
1,1-Dichloroethene	1.00	X	X	X
cis-1,2-Dichloroethene	1.00	X	X	X
trans-1,2-Dichloroethene	1.00	X	X	X
1,2-Dichloropropane	1.00	X	X	X
cis-1,3-Dichloropropene	1.00	X	X	X
trans-1,3-Dichloropropene	1.00	X	X	X
Ethyl Benzene	1.00	X	X	X
Methylene Chloride	5.00	X	X	X
1,1,1,2-Tetrachloroethane	1.00	X	X	X
1,1,2,2-Tetrachloroethane	1.00	X	X	X
Tetrachloroethene	1.00	X	X	X
Toluene	1.00	X	X	X
1,1,1-Trichloroethane	1.00	X	X	X
1,1,2-Trichloroethane	1.00	X	X	X
Trichloroethene	1.00	X	X	X
Trichlorofluoromethane	1.00	X	X	X
Vinyl Chloride	1.00	X	X	X
Xylenes	4.00	X	X	X
Tetrahydrofuran	10.0	X	X	X



Volatile Organic Compound Results  
 WI Lab Certification ID#: 113138300  
 Project: Hagen Farm RI/FS  
 Location: Stoughton, Wisconsin  
 C#: 13452.98

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 Ck'd: *mm* App'd: *AK*  
 Date Issued: 12/24/90

Compound	Reportable Detection Limit (ug/L)	2122-004	2122-005	
		HF-GWD TB04-104 12/18/90	HF-GWD TB04-92 12/18/90	2122-006 HF-TB04 12/18/90
Benzene	1.00	X	X	X
Bromochloromethane	1.00	X	X	X
Bromodichloromethane	1.00	X	X	X
Bromoform	1.00	X	X	X
Bromomethane	1.00	X	X	X
Carbon Tetrachloride	1.00	X	X	X
Chlorobenzene	1.00	X	X	X
Chlorodibromomethane	1.00	X	X	X
Chloroethane	1.00	X	X	X
2-Chloroethylvinyl Ether	10.0	X	X	X
Chloroform	1.00	X	X	X
Chloromethane	1.00	X	X	X
1,2-Dibromo-3-Chloropropane	2.00	X	X	X
1,2-Dichlorobenzene	1.00	X	X	X
1,3-Dichlorobenzene	1.00	X	X	X
1,4-Dichlorobenzene	1.00	X	X	X
1,1-Dichloroethane	1.00	X	X	X
1,2-Dichloroethane	1.00	X	X	X
1,1-Dichloroethene	1.00	X	X	X
cis-1,2-Dichloroethene	1.00	X	X	X
trans-1,2-Dichloroethene	1.00	X	X	X
1,2-Dichloropropane	1.00	X	X	X
cis-1,3-Dichloropropene	1.00	X	X	X
trans-1,3-Dichloropropene	1.00	X	X	X
Ethyl Benzene	1.00	X	X	X
Methylene Chloride	5.00	X	X	X
1,1,1,2-Tetrachloroethane	1.00	X	X	X
1,1,2,2-Tetrachloroethane	1.00	X	X	X
Tetrachloroethene	1.00	X	X	X
Toluene	1.00	X	X	X
1,1,1-Trichloroethane	1.00	X	X	X
1,1,2-Trichloroethane	1.00	X	X	X
Trichloroethene	1.00	X	X	X
Trichlorofluoromethane	1.00	X	X	X
Vinyl Chloride	1.00	X	X	X
Xylenes	4.00	X	X	X
Tetrahydrofuran	10.0	X	X	X



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Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farm RI/FS  
Location: Stoughton, Wisconsin  
C#: 13452.98

Page 3 Of 3  
CK'd: *rw* App'd: *[Signature]*  
Date Issued: *12/26/90*

X = analyzed, but not detected.

Method reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.



Volatile Organic Compound Results  
WI Lab Certification ID#: 113138300  
Project: Hagen Farm RI/FS  
Location: Stoughton, Wisconsin  
C#: 13452.98

Page 1 of 2  
Ck'd: ~~JW~~ App'd: MJL  
Date Issued: 1/3/91

Compound -----	Reportable Detection Limit (ug/L) -----	2142-001	2142-002
		HF-GWD TB05-60 12/20/90 -----	HF-GWD TB05-47 12/20/90 -----
Benzene	1.00	X	X
Bromodichloromethane	1.00	X	X
Bromoform	1.00	X	X
Bromomethane	1.00	X	X
Carbon Tetrachloride	1.00	X	X
Chlorobenzene	1.00	X	X
Chlorodibromomethane	1.00	X	X
Chloroethane	1.00	X	X
2-Chloroethylvinyl Ether	10.0	X	X
Chloroform	1.00	X	X
Chloromethane	1.00	X	X
1,2-Dichlorobenzene	1.00	X	X
1,3-Dichlorobenzene	1.00	X	X
1,4-Dichlorobenzene	1.00	X	X
1,1-Dichloroethane	1.00	X	X
1,2-Dichloroethane	1.00	X	X
1,1-Dichloroethene	1.00	X	X
cis-1,2-Dichloroethene	1.00	X	X
trans-1,2-Dichloroethene	1.00	X	X
1,2-Dichloropropane	1.00	X	X
cis-1,3-Dichloropropene	1.00	X	X
trans-1,3-Dichloropropene	1.00	X	X
Ethyl Benzene	1.00	X	X
Methylene Chloride	5.00	X	X
1,1,2,2-Tetrachloroethane	1.00	X	X
Tetrachloroethene	1.00	X	X
Toluene	1.00	X	X
1,1,1-Trichloroethane	1.00	X	X
1,1,2-Trichloroethane	1.00	X	X
Trichloroethene	1.00	X	X
Trichlorofluoromethane	1.00	X	X
Vinyl Chloride	1.00	X	X
Xylenes	3.00	X	X
Tetrahydrofuran	10.0	X	X



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Volatile Organic Compound Results  
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Project: Hagen Farm RI/FS  
Location: Stoughton, Wisconsin  
C#: 13452.98

Page 2 Of 2  
Ck'd: *smw* App'd: *MTA*  
Date Issued: 1/3/91

X = analyzed, but not detected.

Method reference: SW846, "Test Methods for Evaluating Solid Waste", September, 1986. Methods 8010 and 8020 with modifications.