

**CON 12-15**  
**Doc #16493**

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June 11, 1998

Mr. Lavoy Haage  
Solid Waste Division  
Iowa Department of National Resources  
502 E. 9<sup>th</sup>  
Des Moines, IA 50309

RE: Henke Manufacturing Liquidating Trust - Waverly, Iowa Real Estate

Dear Mr. Haage:

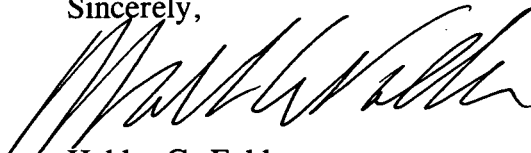
I am the liquidating trustee for the above Trust which was established in 1993 by the Order of the bankruptcy court to sell a building and surrounding land in Waverly, Iowa. Henke Manufacturing was a company that made snowplows and related equipment. They went into a Chapter 11 in the early 1990's and eventually the machinery and name was sold off to pay the creditors.

The building site, which has a very large building, was left. It was, and still is, rented to GMT Corporation. A fight developed over the liens and the former trustees did nothing to resolve the problem. They simply collected the rent. I was appointed last summer. Since then, we have resolved the lien fight and I ordered and paid for a second environmental study. A copy of that is enclosed.

It looks like there is some topsoil contamination of lead and chromium. Mr. Alhaus informed me there is no immediate danger to anyone but that it needs to be investigated further. He advised me to contact your office.

I would appreciate talking with you or a staff member and discussing what I need to do next. Please give me a call.

Sincerely,



Habbo G. Fokkena

HGF:dkl

Enclosure

1980 JUN 12 P 4: 04

DEPT. OF  
NATURAL RESOURCES

**PHASE II  
ENVIRONMENTAL SITE ASSESSMENT  
OF**

**FORMER HENKE MANUFACTURING  
2105 EAST BREMER  
WAVERLY, IOWA**

**MAXIM REPORT NO. 9857562**

**MAXIM TECHNOLOGIES, INC.**

**2213 LaPorte Road  
Waterloo, IA 50702  
(319) 232-6591**

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APPENDIX A - SCALED SITE MAP  
APPENDIX B - BORING LOGS  
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FORMER HENKE MANUFACTURING  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
2105 EAST BREMER  
WAVERLY, IOWA  
Maxim Technologies, Inc. Project# 9857562

1.0 INTRODUCTION

Maxim Technologies, Inc. (Maxim) is pleased to submit this Phase II Environmental Site Assessment (ESA) Report for the referenced site. In a December 1996 Phase I ESA prepared for the referenced site by Maxim, potential environmental concerns were identified which warranted a recommendation for intrusive soil and groundwater analytical testing. Specific areas of environmental concern identified in the Phase I ESA included the past history of the site which indicated that prior to the Henke Manufacturing Corporation, the site was occupied by United Hydraulics (currently a subsidiary of Cessna Aircraft, owned by Textron). United Hydraulics is a manufacturer of hydraulic cylinders. United Hydraulics has a documented history of environmental problems at another facility located in Iowa, after vacating the Henke site location.

In addition, as of the Phase I ESA report date, and the date of subsequent intrusive testing conducted by Maxim for this Phase II ESA, numerous empty 55 gallon drum are located around the south and east exterior of the site building. It was noted during a site walk through for the Phase I ESA, that one drum along the south exterior wall on the south side of the building was leaking a small amount of oil onto the concrete apron of an elevated loading dock. Several drums containing what appeared to be oil, or an oil like substance, were located in a small shed along the northern property line. To the east of the small shed, a drainage well was identified. No information concerning the year of construction or well depth was found in a government database search. To the west of the small shed are approximately six (6) concrete Aboveground Storage Tank (AST) cradles. A review of a 1971 aerial photograph suggested no tank(s) were on the cradles as of the photograph date. Recollections of a professional with the Bremer County Engineer's Office and Mr. Jon Bruns of GMT Corporation indicated the AST(s) could have contained liquid propane (unconfirmed).

A review of a 1991 aerial photograph of the site indicates that numerous drums, likely 55 gallon capacity, were located at several points along the northern, eastern and southeastern fenced boundary of the site. The aerial photograph also indicated general

storage of materials/goods throughout the remainder of the site.

Based upon the presence of potential environmental concerns, Maxim's recommendations for intrusive testing included the following items by area of concern:

ON SITE DRAINAGE WELL

- 1) Determine the depth of the drainage well located along the northern property boundary of the site.
- 2) Determine static water level in the well and sample the well for *Volatile Organic Compounds* and the *8 RCRA Metals*.
- 3) Abandon the drainage well according to Iowa Code after groundwater sample collection.

PAST SITE DRUM STORAGE

- 1) Collect a soil sample from each drum storage area noted on the 1991 aerial photograph. The soil samples will be collected from a depth not to exceed one foot and each sample will be analyzed for *Volatile Organic Compounds* and the *8 RCRA Metals*.

FORMER AST(S) LOCATION

- 1) Advance one soil boring to groundwater immediately south of the central position of the existing AST cradles. A single soil sample shall be collected from the soil boring at a depth corresponding to the soil/groundwater, or soil/bedrock interface, or at any interval exhibiting possible contamination. A groundwater sample shall also be collected from the boring to determine if potential adverse impact to groundwater has occurred. Both soil and groundwater samples shall be analyzed for *Volatile Organic Compounds* and the *8 RCRA Metals*.

#### OTHER AREA OF CONCERN

- 1) Two soil borings will be advanced to groundwater on the south side of the site building. One boring will be advanced off the southwest corner of the building and the other will be advanced south of the loading dock area. A soil sample shall be collected from each soil boring at a depth corresponding to the soil/groundwater, or soil/bedrock interface, or at any interval exhibiting possible contamination. A groundwater sample shall also be collected from each boring to determine if potential adverse impact to groundwater has occurred. Both soil and groundwater samples shall be analyzed for *Volatile Organic Compounds* and the *8 RCRA Metals*.

#### 2.0 SITE ASSESSMENT FIELD ACTIVITIES

On March 13, 1998, Maxim personnel removed the plastic protective cover from the drainage well located on the north side of the site grounds. After removal of the protective cover it was determined the drainage well consisted of the perforated plastic casing which extended to a depth of approximately ten feet below grade. The plastic casing was open at the bottom and it was determined the well discharged directly onto bedrock and no groundwater was present. Maxim personnel removed the plastic casing material and back filled the open bore with bentonite sealer material to the surface.

On March 13, 16, & 17, 1998, Maxim environmental personnel and drill rig and crew were on site to advance three deep soil/bedrock borings and install temporary groundwater monitoring wells per recommendations made in the Maxim Phase I ESA. The deep borings were positioned to provide soil and groundwater quality data at potential points of environmental concern located on site. Boring/temporary well B-1/TMW-1 was positioned to the center and immediate south of the former AST(s) cradles located to the north of the main site building. Boring/temporary well B-2/TMW-2 was positioned near the center and to the immediate south of the large loading dock area located by the southeast corner of the site building. Boring/temporary well B-3/TMW-3 was positioned to the immediate south of the southwest corner of the site building. See the Scaled Site Map included in Appendix A for sample locations.

As the borings were advanced, soil cuttings were visually and manually classified by the crew chief in general accordance with ASTM:D2487 and ASTM:D2488. Representative portions of the soil cuttings were collected and returned to the Maxim Waterloo office for verification of the field classification. Logs of the borings indicating the depth and identification of the various strata encountered, and water level information are included in Appendix A. Charts illustrating the soil classification procedure, the descriptive terminology and symbols used on the boring logs are also included in Appendix B.

As each boring was advanced, soil was collected from the 0 to 2 foot below grade interval and containerized for laboratory analysis. On March 20, 1998, each of the three temporary groundwater monitoring wells were surveyed to a temporary bench mark established on the concrete loading dock located on the southeast side of the site building. After establishment of the reference elevations, depth to groundwater measurements were taken and recorded, and the temporary wells were sampled (See Appendix A - Scaled Site Map for water levels and gradient determination). After both soil and groundwater sample collection, a chain of custody log was initiated and shipped with the samples to a State of Iowa Accredited Laboratory (Maxim Technologies, Inc. - Sioux Falls, South Dakota). The chain of custody recorded the following information: project name, work order number, shipped by, shipped to, suspected hazard, sampling point, location, field ID number, date and time taken, sample type, number of containers, analysis required, and sampler(s) signature(s), etc.

Each soil and groundwater sample collected from the deep soil/bedrock borings/temporary groundwater monitoring wells were sent to the laboratory and analyzed for the following target compound groupings:

    Volatile Organic Compounds (EPA Method 8021 - MNDH Method 465D)

    Total RCRA Metals (TCLP - EPA Method 1311 - Various Target Metal Methodologies)

On March 20, 1998, a Maxim Environmental Professional collected composite near surface soil samples for laboratory analysis from three locations on the site grounds. Composite soil sample H1 was collected from a point 12 feet north and 126 feet east of the northeast corner of the site building. The H1 sample location is in an area identified on a 1991 aerial photograph as containing probable 55 gallon drums.

Composite soil sample H2 was collected from a point 63 feet south and 13 feet east of the northeast corner of the site building. The H2 sample location is in an area which currently contains 55 gallon drums. A cursory check of the drums in the area indicated most appear empty, although some contain fluid.

Composite soil sample H3 was collected from a point 63 feet north and 45 feet west of the northeast corner of the site building. The H3 sample location is in an area identified on a 1991 aerial photograph as containing probable 55 gallon drums.

Composite soil sample H4 was collected from a point 180 feet east and 92 feet south of the northeast corner of the site building. The H4 sample location is in an area identified on a 1991 aerial photograph as containing probable 55 gallon drums.

Composite soil sample H5 was collected from a point 166 feet east and 153 feet south of the northeast corner of the site building. The H5 sample location is in an area identified on a 1991 aerial photograph as containing probable 55 gallon drums.

Composite soil sample H6 was collected from a point 126 feet east and 284 feet south of the northeast corner of the site building. The H6 sample location is in an area identified on a 1991 aerial photograph as containing probable 55 gallon drums.

### 3.0 ANALYTICAL RESULTS

Table One depicts Total Toxicity Characteristic Leaching Procedure (TCLP) 8 RCRA Metals analytical results obtained on soil samples collected during this investigation. Soil analytical results are reported in Parts Per Million (ppm). Also noted in the table are corresponding United States Environmental Protection Agency (USEPA) regulatory limits for hazardous waste. Analytical results in excess of regulatory limits are highlighted.

SOIL	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
USEPA TCLP Limit	<b>5.0 ppm</b>	<b>100 ppm</b>	<b>1.0 ppm</b>	<b>5.0 ppm</b>	<b>5.0 ppm</b>	<b>0.2 ppm</b>	<b>1.0 ppm</b>	<b>5.0 ppm</b>
B-1	2.8	72	<0.1	<b>12</b>	<b>6.6</b>	<0.2	0.15	<0.2
B-2	1.8	52	<0.1	<b>14</b>	4.6	<0.2	0.15	<0.2
B-3	3.7	83	<0.1	<b>12</b>	4.4	<0.2	0.24	<0.2

SOIL	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
H1	1.3	52	<0.1	10	4.7	<0.2	0.067	<0.2
H2	2.3	53	<0.1	33	25	<0.2	<0.2	<0.2
H3	0.72	24	4.8	17	39	<0.2	<0.02	<0.2
H4	5.2	61	<0.1	11	6.0	<0.2	0.20	<0.2
H5	3.6	93	<0.1	10	9.5	<0.2	0.72	<0.2
H6	3.7	77	<0.1	10	6.8	<0.2	0.72	<0.2

Analytical results indicate all soil sample locations exceed USEPA regulatory limits for chromium. Boring B-1 and samples H2 through H6 exceed USEPA regulatory limits for lead. In addition, sample H3 exceeds the USEPA regulatory limit for cadmium and H5 exceeds the USEPA regulatory limit for arsenic.

Table Two depicts Total Toxicity Characteristic Leaching Procedure (TCLP) 8 RCRA Metals analytical results obtained on groundwater samples collected during this investigation with reported detection of target contaminants in excess of method detection limits. Groundwater analytical results are reported in Parts Per Billion (ppb). Also noted in the table are corresponding United States Environmental Protection Agency (USEPA) regulatory limits based on drinking water standards.

GROUND WATER	Arsenic	Barium
USEPA TCLP Limit	0.05 <del>ppb</del> PPM	2.0 <del>ppb</del> PPM
B-1/TMW-1	0.0021	0.16
B-2/TMW-2	0.0029	0.29
B-3/TMW-3	0.0023	0.20

PPM NOT PPB

Analytical results indicate the groundwater samples collected during this investigation do not exceed USEPA regulatory limits for the target metals.

VOCs were detected in both soil and groundwater samples collected on site. All identified soil and groundwater contaminants occurred at concentrations below 1.5 ppb, with most concentrations below 1 ppb. Based on an examination of USEPA drinking water standards, no identified groundwater contaminant exceeds water quality standards. Based on a review of waste standards contained in 40 - Code of Federal Regulations (CFR), identified contaminant concentrations in soil are not at sufficient levels to be classified as hazardous.

Appendix C - Analytical Results provides a detailed breakdown of the target compounds by sample location and analytical test methodologies.

#### 4.0 CONCLUSIONS

Based on the TCLP metals analysis conducted on site soils, it appears near surface, low grade lead and chromium contamination is widespread. In addition, localized, near surface, low grade arsenic and cadmium contamination occurs on site. Per the scope of this assessment only near surface soil samples were collected for laboratory analyses, so the full vertical extent of identified soil contamination is not known. Likewise, the full lateral extent of identified soil contamination is not known.

VOCs were also identified in site soils, but at concentrations not exceeding 1.4 ppb for any one individual compound. Identified VOC contaminants do not appear to represent an environmental concern at this time.

Based on the metals and VOC analyses conducted on three groundwater samples collected from the site, both contaminant groups are present, but at sufficiently low concentrations to not represent an environmental concern at this time.

#### 5.0 REMARKS

The findings of this report indicate the presence of metal contaminants in soil on site which exceed regulatory limits. It is recommended that a copy of the report be forwarded to the Iowa Department of Natural Resources (IDNR) for their review and comment. The address for the IDNR is :

Solid Waste Section  
Iowa Department of Natural Resources  
Wallace State Office Building  
Des Moines, IA 50319-0034

#### 6.0 STANDARD OF CARE & LIMITATIONS

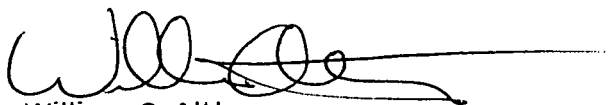
This report represents our professional opinions and is based on site specific field data acquired as part of this project. These opinions were arrived at in accordance with

currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.


This report is not a comprehensive site characterization and should not be construed as such. The data presented in this report are based upon findings derived from the advancement of three soil borings/temporary groundwater monitoring wells and the collection of six near surface soil samples. Specifically, Maxim does not and cannot represent that the site contains no hazardous or toxic materials, products, or other latent conditions beyond the target compounds analyzed, in locations removed from the sample location points.

**MAXIM TECHNOLOGIES, INC.**

Prepared By:

  
William C. Althaus  
Environmental Project Manager  
CGP #1610

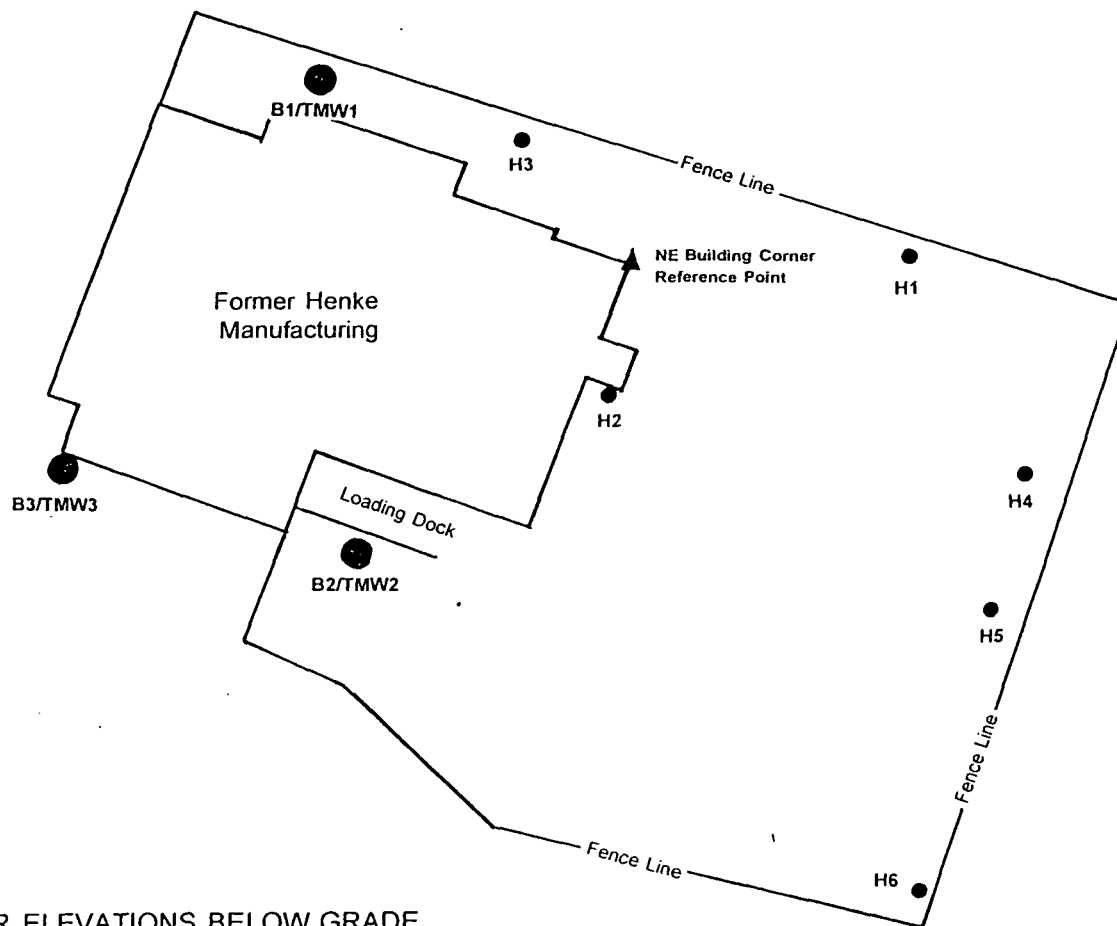
Reviewed By:

  
Gaylen D. Hiesterman  
Environmental Geologist  
CGP #1619

APPENDIX A - SCALED SITE MAP

FORMER HENKE MANUFACTURING  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
2105 EAST BREMER  
WAVERLY, IOWA

Maxim Technologies, Inc. Project# 9857562



GROUNDWATER ELEVATIONS BELOW GRADE  
3/20/98

B1/TMW1 - 43.77'  
B2/TMW2 - 44.08'  
B3/TMW3 - 44.21'

FORMER HENKE MANUFACTURING  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
2105 EAST BREMER  
WAVERLY, IOWA

**MAXIM**  
TECHNOLOGIES INC

PROJECT #: 9857562

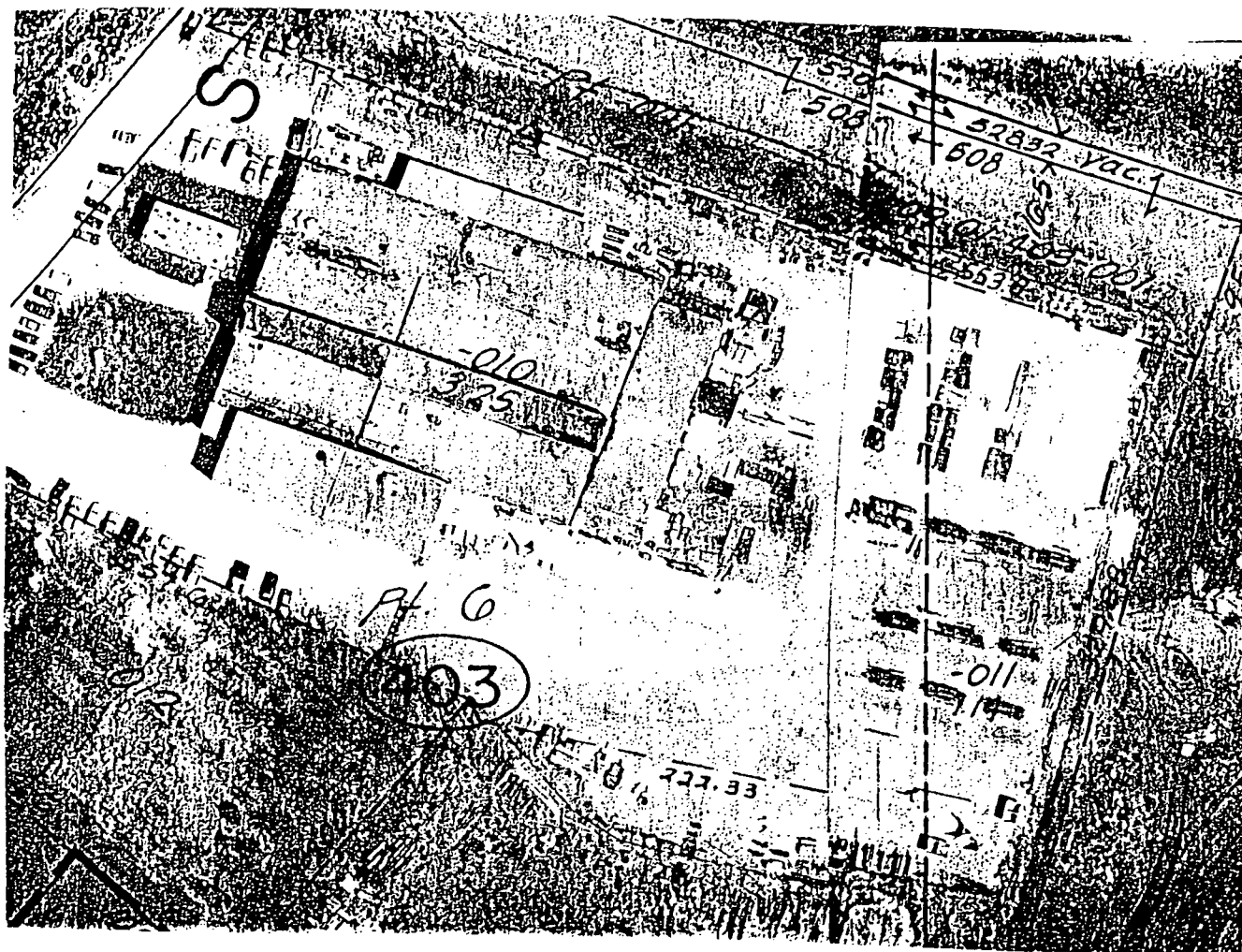
FIGURE:

DRAWN BY: WCA

REVIEWED BY:

DATE: 4/14/98

SCALE: 1" = 90'



1991 AERIAL PHOTOGRAPH

FORMER HENKE MANUFACTURING  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
2105 EAST BREMER  
WAVERLY, IOWA

**MAXIM**  
TECHNOLOGIES INC

PROJECT #: 9857562

FIGURE:

DRAWN BY:

REVIEWED BY:

DATE: 4/14/98

SCALE: 1' = 90'

APPENDIX B - BORING LOGS

FORMER HENKE MANUFACTURING  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
2105 EAST BREMER  
WAVERLY, IOWA

Maxim Technologies, Inc. Project# 9857562

# SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring/Well # B1/TMW1	Facility Name Former Henke Plant 9857562	Facility Address 2105 East Bremer Waverly, Iowa
Boring Depth (Feet) x Diameter (Inches) 72 X 4		Drilling Method HSA/AIR
Well Contractor Name: Registration #: 40451		Logged by: W. Althaus
Ground Surface Elevation (ASL) 98.6		8" HSA to 10'- Air to 72'
Date & Time Start 3-13-98 10:00	Date & Time End 3-16-98 10:00	

Depth in Feet	Well Construction Details	Blow Count <small>If Applicable</small>	Sample No.	Type *	PID/FID Reading	Rock Formations, Soil Color and Classifications, Observations (moisture, etc.)
5				HSA	0 ppm2.0	<div style="border: 1px solid black; padding: 2px;">                     FILL, mostly SILTY CLAY, dark brown, w/road rock at the surface                 </div> <div style="border: 1px solid black; padding: 2px;">                     SANDY CLAY, dark brown (CL)                 </div> <div style="border: 1px solid black; padding: 2px;">                     SILTY CLAY, brown (CL-ML)                 </div> <div style="border: 1px solid black; padding: 2px;">                     LIMESTONE, hard, light brown to gray cuttings                 </div>
				SS	0 ppm	
				SS	0 ppm	
10				SS	0 ppm9.0	
				SS	0 ppm10.0	
15						
20						
25						
30						
35						
40						
45						
50						
55						
60						
65						
70						
					72.0	END OF BORING

\*SS (split spoon) HS (hollow stem auger) FA (flight auger) HA (hand auger) AR (air)

OBSERVATIONS:	Date :	3/20/98					
WATER LEVELS--Measured from Top of Casing	Level :	43.77'					
Static Water Level Symbol	Time :	9:10					

# SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring/Well # B2/TMW2	Facility Name Former Henke Plant 9857562	Facility Address 2105 East Bremer Waverly, Iowa
Boring Depth (Feet) x Diameter (Inches) 70 X 4		Drilling Method HSA/AIR
Well Contractor Name: Registration #: 40451		Logged by: W. Althaus
Ground Surface Elevation (ASL) 95.0		8" HSA to 12' - Air to 70'
Date & Time Start 3-16-98 13:00	Date & Time End 3-17-98 11:30	

Depth in Feet	Well Construction Details	Blow Count <small>If Applicable</small>	Sample No.	Type*	PID/FID Reading	Rock Formations, Soil Color and Classifications, Observations (moisture, etc.)
5				HSA	0 ppm	FILL, mostly SAND, w/road rock at the surface
				SS	0 ppm	
				SS	0 ppm	
				SS	0 ppm	
				SS	0 ppm	
10				SS	0 ppm	SANDY LEAN CLAY, dark brown, w/trace of gravel (CL)
				SS	0 ppm	
15						FAT CLAY, mottled brown and gray, w/limestone fragments (CH)
20						LIMESTONE, hard, brown to gray cuttings
25						
30						
35						
40						
45						
50						
55						
60						
65						
70						END OF BORING

\*SS (split spoon) HS (hollow stem auger) FA (flight auger) HA (hand auger) AR (air)

OBSERVATIONS:	Date :	3/20/98					
WATER LEVELS--Measured from Top of Casing	Level :	44.08'					
Static Water Level Symbol	Time :	10:10					

# SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring/Well # <b>B3/TMW3</b>		Facility Name <b>Former Henke Plant 9857562</b>		Facility Address <b>2105 East Bremer Waverly, Iowa</b>	
Boring Depth (Feet) x Diameter (Inches) <b>64 X 4</b>				Drilling Method <b>HSA/AIR</b>	
Well Contractor Name: Registration #: <b>40451</b>				Logged by: <b>W. Althaus</b>	
Ground Surface Elevation (ASL) <b>92.9</b>				8" HSA to 8' - Air to 64'	
Date & Time Start <b>3-17-98 12:30</b>		Date & Time End <b>3-17-98 17:30</b>			

Depth in Feet	Well Construction Details	Blow Count <small>If Applicable</small>	Sample No.	Type*	PID/FID Reading	Rock Formations, Soil Color and Classifications, Observations (moisture, etc.)
				HSA	0 ppm2.0	<div style="border: 1px solid black; padding: 2px;">  FILL, mostly SILTY                 </div> <div style="border: 1px solid black; padding: 2px;">  CLAY, very dark brown, w/road rock at the surface                 </div>
5				SS	0 ppm	
				SS	0 ppm7.0	
				SS	0 ppm8.0	
10						<div style="border: 1px solid black; padding: 2px;">  SANDY LEAN CLAY, dark brown, w/trace of gravel (CL)                 </div>
15						<div style="border: 1px solid black; padding: 2px;">  FAT CLAY, dark brown, w/limestone fragments (CH)                 </div>
20						LIMESTONE, hard, light brown to gray cuttings
25						
30						
35						
40						
45						
50						
55						
60						
64.0					64.0	END OF BORING

\*SS (split spoon) HS (hollow stem auger) FA (flight auger) HA (hand auger) AR (air)

OBSERVATIONS:	Date :	3/20/98					
WATER LEVELS--Measured from Top of Casing	Level :	44.21'					
Static Water Level Symbol	Time :	9:00					

APPENDIX C - ANALYTICAL RESULTS

FORMER HENKE MANUFACTURING  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
2105 EAST BREMER  
WAVERLY, IOWA

Maxim Technologies, Inc. Project# 9857562

**REPORT OF: CHEMICAL ANALYSIS****PROJECT:** FORMER HENKE MANUFACTURING **DATE:** March 30, 1998**REPORTED TO:** Maxim Technologies, Inc.  
Attn: Bill Althaus  
2213 LaPorte Road  
Waterloo, IA 50702**LABORATORY NO:** 98-57562

Date Received: 3-20-98

Date Sampled: 3-17-98

Authorization: 3-20-98

The results of the TCLP 8 RCRA metals analysis are listed in Table 1. The results of the VOCs analysis are listed in Table 2.

**TABLE 1**  
**TOTAL RCRA METALS**

<u>Parameter</u>	<u>B-1, 0-2'</u> 0317981000 98-1126*	<u>B-2, 0-2'</u> 0317981215 98-1127*	<u>B-3, 0-2'</u> 0317981505 98-1128*	<u>Lower</u> <u>Detectable</u> <u>Limit, ppm</u>	<u>Method**</u>	<u>Date</u> <u>Analyzed</u>
Arsenic	2.8	1.8	3.7	0.02	206.2	3-24
Barium	72	52	83	2.0	208.1	3-25
Cadmium	<0.1	<0.1	<0.1	0.1	231.1	3-25
Chromium	12	14	12	0.6	218.1	3-25
Lead	6.6	4.6	4.4	2.0	239.1	3-23
Mercury	<0.2	<0.2	<0.2	0.2	245.1	3-27
Selenium	0.15	0.13	0.24	0.02	270.2	3-25
Silver	<0.2	<0.2	<0.2	0.2	272.1	3-24

LDL - Lower Detectable Limit

\* All results are in milligrams per kilogram.

\*\* USEPA Methods Manual SW846, Method 1311.

**LABORATORY QUALITY CONTROL**ACCURACY DATAPRECISION DATA

<u>Parameter</u>	<u>Sample #</u>	<u>Matrix Spike</u> <u>Percent Recovery</u>	<u>Matrix Spike Duplicate</u> <u>Percent Recovery</u>	<u>Relative</u> <u>Percent Difference</u>
Arsenic	Standard Addition Run			
Barium	98-1127	76%	75%	0.5%
Cadmium	98-1127	100%	102%	1.7%
Chromium	98-1127	106%	105%	0.4%
Lead	98-1127	104%	107%	2.0%
Silver	98-1127	100%	100%	1.0%
Mercury	98-1126	90%	90%	1.1%
Selenium	Standard Addition Run			



**TABLE 2**  
**VOLATILE ORGANIC COMPOUNDS**  
**MNDH METHOD 465D**  
 (All values are in ug/kg which is equal/equivalent to parts-per-billion)

Client ID:	B-1, 0-2' 0317981000 98-1126	B-2, 0-2' 0317981215 98-1127	B-3, 0-2' 0317981505 98-1128	PQL
Compound:				
Acetone	< 12	< 12	< 12	12
Allyl Chloride	< 2	< 2	< 2	2
Benzene	< 0.3	< 0.3	< 0.3	0.3
Bromobenzene	< 0.1	< 0.1	< 0.1	0.1
Bromochloromethane	< 0.2	< 0.2	< 0.2	0.2
Bromodichloromethane	< 0.3	< 0.3	< 0.3	0.3
Bromoform	< 0.1	< 0.1	< 0.1	0.1
Bromomethane	< 0.7	< 0.7	< 0.7	0.7
n-Butylbenzene	< 0.4	< 0.4	< 0.4	0.4
sec-Butylbenzene	< 0.3	< 0.3	< 0.3	0.3
tert-Butylbenzene	< 0.5	< 0.5	< 0.5	0.5
Carbon tetrachloride	< 0.3	< 0.3	< 0.3	0.3
Chlorobenzene	< 0.3	< 0.3	< 0.3	0.3
Chloroethane	< 0.2	< 0.2	< 0.2	0.2
Chloroform	< 0.3	< 0.3	< 0.3	0.3
Chloromethane	< 0.9	< 0.9	< 0.9	0.9
2-Chlorotoluene	< 0.3	< 0.3	< 0.3	0.3
4-Chlorotoluene	< 0.4	< 0.4	< 0.4	0.4
1,2-Dibromo-3-chloropropane	< 0.3	< 0.3	< 0.3	0.3
Dibromochloromethane	< 0.3	< 0.3	< 0.3	0.3
1,2-Dibromoethane	< 0.1	< 0.1	< 0.1	0.1
Dibromomethane	< 0.1	< 0.1	< 0.1	0.1
1,2-Dichlorobenzene	< 0.3	1.3	0.39	0.3
1,3-Dichlorobenzene	< 0.2	0.38	< 0.2	0.2
1,4-Dichlorobenzene	< 0.3	< 0.3	< 0.3	0.3
Dichlorodifluoromethane	< 0.2	< 0.2	< 0.2	0.4
1,1-Dichloroethane	< 0.3	< 0.3	< 0.3	0.3
1,2-Dichloroethane	< 0.1	< 0.1	< 0.1	0.1
1,1-Dichloroethene	< 0.4	< 0.4	< 0.4	0.4
cis-1,2-Dichloroethene	< 0.2	< 0.2	< 0.2	0.2
trans-1,2-Dichloroethene	< 0.2	< 0.2	< 0.2	0.2
Dichlorofluoromethane	< 0.3	< 0.3	< 0.3	0.3
1,2-Dichloropropane	< 0.9	< 0.9	< 0.9	0.9
1,3-Dichloropropane	< 0.3	< 0.3	< 0.3	0.3
2,2-Dichloropropane	< 0.2	< 0.2	< 0.2	0.2
1,1-Dichloropropene	< 0.2	< 0.2	< 0.2	0.2
cis-1,3-Dichloropropene	0.23	0.23	0.22	0.2
trans-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	0.5
Ethyl Ether	< 0.3	< 0.3	< 0.3	0.3
Ethylbenzene	< 0.2	< 0.2	< 0.2	0.2
Hexachlorobutadiene	< 0.5	< 0.5	< 0.5	0.5
Isopropylbenzene	< 0.3	< 0.3	< 0.3	0.3

PQL = Practical Quantitation Limit

**TABLE 2 (cont)**  
**VOLATILE ORGANIC COMPOUNDS**  
**MNDH METHOD 465D**

(All values are in ug/kg which is equal/equivalent to parts-per-billion)

Client ID:	B-1, 0-2' 0317981000 98-1126	B-2, 0-2' 0317981215 98-1127	B-3, 0-2' 0317981505 98-1128	PQL
<b>Compound:</b>				
p-Isopropyltoluene	<0.3	<0.3	<0.3	0.3
Methyl Ethyl Ketone	<3	<3	<3	3
Methyl Isobutyl Ketone	<5	<5	<5	5
Methyl-tert-Butyl Ether	<0.8	0.8	<0.8	0.8
Methylene chloride	<1	<1	<1	1
Naphthalene	<0.1	<0.1	<0.1	0.1
n-Propylbenzene	0.32	<0.3	<0.3	0.3
1,1,1,2-Tetrachloroethane	<0.3	<0.3	<0.3	0.3
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<0.5	0.5
Tetrachloroethene	<0.3	<0.3	<0.3	0.3
Tetrahydrofuran	<10	<10	<10	10
Toluene	<0.7	<0.7	<0.7	0.7
1,2,3-Trichlorobenzene	1.4	<0.3	1.4	0.3
1,2,4-Trichlorobenzene	<0.2	<0.2	0.77	0.2
1,1,1-Trichloroethane	<1	<1	<1	1
1,1,2-Trichloroethane	<0.3	<0.3	<0.3	0.3
Trichloroethene	<0.2	<0.2	<0.2	0.2
Trichlorofluoromethane	<0.3	<0.3	<0.3	0.3
1,2,3-Trichloropropane	<0.5	<0.5	<0.5	0.5
Trichlorotrifluoroethane	<0.2	<0.2	<0.2	0.2
1,2,4-Trimethylbenzene	<2	<2	<2	2
1,3,5-Trimethylbenzene	<0.5	<0.5	<0.5	0.5
Vinyl chloride	<0.4	<0.4	<0.4	0.4
o-Xylene, Styrene <sup>1</sup>	<0.7	<0.7	<0.7	0.7
m-p-Xylenes <sup>1</sup>	<0.6	<0.6	<0.6	0.6
<b>Surrogate Recoveries for PID:</b>				
Fluorobenzene	100%	93%	95%	
4-Fluorochlorobenzene	102%	93%	94%	
2-Fluorochlorobenzene	107%	98%	99%	
<b>Surrogate Recoveries for ECLD:</b>				
1-1,Dichloropropane	98%	83%	92%	
4-Fluorochlorobenzene	101%	77%	93%	
2-Fluorochlorobenzene	82%	75%	87%	

<sup>1</sup> Compounds not separated by this method

PQL=Practical Quantitation Limit

Date Analyzed: 3-23-98

Method: Minnesota Department of Health, Method 465.

**MAXIM TECHNOLOGIES, INC.**

*Virginia VerMulm*  
 Virginia VerMulm  
 Laboratory Supervisor

Technical Review: 

*Dan T. Hanson*  
 Dan T. Hanson  
 Chemistry Manager

**MAXIM**

**SAMPLE IDENTIFICATION/FIELD CHAIN OF CUSTODY RECORD**

Lab Project No. \_\_\_\_\_

Client <u>Heute Liquidating Trust</u>	P.O. No. _____	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> VOCs Soils Total 8 RCRA Metals </div> <div style="border: 1px solid black; width: 100%; height: 100%;"></div> </div>					
Address <u>C/O Habbo Fokkena, Attorney</u>	Project No. <u>9857562</u>						
<u>109 North Main St. Clarksville Ia 50619</u>	Project Name <u>Former Heute Manufacturing</u>						
Client Contact <u>Habbo Fokkena</u>	Project Location						
Phone/Fax <u>(319) 278 - 4766</u> <u>(319) 278 - 4605</u>	<u>2105 East Bremer</u> <u>Waverly, Iowa</u>						
Maxim Contact <u>B. H. Alhaus</u>	Sampled By <u>B. H. Alhaus</u>						
Comments <u>Former Manufacturing Plant</u>							

Sample I.D.	Sample Depth	Time Sampled	Date Sampled	Sample Type	No. of containers													Lab I.D.
1. B-1	0-2'	10:00	3/17/98	Soil	3	X	X											1126
2. B-2	0-2'	12:15	3/17/98	Soil	3	X	X											1127
3. B-3	0-2'	15:05	3/17/98	Soil	3	X	X											1128
4.																		
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time	Hazardous Material Suspected?	Yes / (No)
<u>[Signature]</u>	<u>3/19/98 12:00</u>	<u>[Signature]</u>	<u>3/20/98 0830</u>	Disposal by Lab?	(Yes) / No
				Shipment Method:	<u>Airborne</u>
				Expected turnaround time:	<u>2 weeks</u>

Received for lab by (signature) [Signature] Date/Time 3-20-98 NO Preservation other than cooling.

RECEIVING LABORATORY: Please return original after signing for receipt of samples.

**MAXIM TECHNOLOGIES, INC.**

**REPORT OF: CHEMICAL ANALYSIS****PROJECT:** FORMER HENKE MANUFACTURING **DATE:** April 1, 1998**REPORTED TO:** Maxim Technologies, Inc.  
Attn: Bill Althaus  
2213 LaPorte Road  
Waterloo, IA 50702**LABORATORY NO:** 98-57562Date Received: 3-25-98  
Date Sampled: 3-20, 3-24-98  
Authorization: 3-25-98

The results of the TCLP 8 RCRA metals analysis for the soil samples are listed in Table 1. The results of the TCLP 8 RCRA metals analysis for the water samples are listed in Table 2. The results of the VOCs analysis for the soil samples are listed in Table 3. The results of VOCs analysis for the water samples are listed in Table 4.

**TABLE 1**  
**TOTAL RCRA METALS**

<u>Parameter</u>	<u>H4, 0-1'</u> 0324980840 98-1253*	<u>H5, 0-1'</u> 0324980850 98-1254*	<u>H6, 6"-18"</u> 0324980903 98-1255*	<u>Lower Detectable Limit, ppm</u>	<u>Method**</u>	<u>Date Analyzed</u>
Arsenic	5.2	3.6	3.7	0.02	206.2	3-28
Barium	61	93	77	2.0	208.1	3-30
Cadmium	<0.1	<0.1	<0.1	0.1	231.1	3-26
Chromium	11	10	10	0.6	218.1	3-27
Lead	6.0	9.5	6.8	2.0	239.1	3-26
Mercury	<0.2	<0.2	<0.2	0.2	245.1	3-27
Selenium	0.20	0.72	0.72	0.02	270.2	3-30
Silver	<0.2	<0.2	<0.2	0.2	272.1	3-26

LDL - Lower Detectable Limit

\* All results are in milligrams per kilogram.

\*\* USEPA Methods Manual SW846, Method 1311.

**LABORATORY QUALITY CONTROL**ACCURACY DATAPRECISION DATA

<u>Parameter</u>	<u>Sample #</u>	<u>Matrix Spike Percent Recovery</u>	<u>Matrix Spike Duplicate Percent Recovery</u>	<u>Relative Percent Difference</u>
Arsenic	Standard Addition Run			
Barium	98-1261	89%	92%	2.0%
Cadmium	98-1261	100%	96%	2.7%
Chromium	98-1261	100%	100%	0.0%
Lead	98-1261	80%	80%	0.0%
Silver	98-1261	95%	95%	0.0%
Mercury	98-1261	95%	96%	1.1%
Selenium	Standard Addition Run			



**TABLE 1 (Cont.)  
TOTAL RCRA METALS**

<u>Parameter</u>	<u>H1, 0-1'</u> <u>0320981100</u> <u>98-1259*</u>	<u>H2, Surface</u> <u>0320981125</u> <u>98-1260*</u>	<u>H3, Surface</u> <u>0320981135</u> <u>98-1261*</u>	<u>Lower</u> <u>Detectable</u> <u>Limit, ppm</u>	<u>Method**</u>	<u>Date</u> <u>Analyzed</u>
Arsenic	1.3	2.3	0.72	0.02	206.2	3-28
Barium	52	53	24	2.0	208.1	3-30
Cadmium	<0.1	<0.1	4.8	0.1	231.1	3-26
Chromium	10	33	17	0.6	218.1	3-27
Lead	4.7	25	39	2.0	239.1	3-26
Mercury	<0.2	<0.2	<0.2	0.2	245.1	3-27
Selenium	0.067	<0.2†	<0.02	0.02	270.2	3-30
Silver	<0.2	<0.2	<0.2	0.2	272.1	3-26

LDL - Lower Detectable Limit

\* All results are in milligrams per kilogram.

\*\* USEPA Methods Manual SW846, Method 1311.

† Selenium LDL for sample 98-1260 is 0.2.

**LABORATORY QUALITY CONTROL**

ACCURACY DATA

PRECISION DATA

<u>Parameter</u>	<u>Sample #</u>	<u>Matrix Spike</u> <u>Percent Recovery</u>	<u>Matrix Spike Duplicate</u> <u>Percent Recovery</u>	<u>Relative</u> <u>Percent Difference</u>
Arsenic	Standard Addition Run			
Barium	98-1261	89%	92%	2.0%
Cadmium	98-1261	100%	96%	2.7%
Chromium	98-1261	100%	100%	0.0%
Lead	98-1261	80%	80%	0.0%
Silver	98-1261	95%	95%	0.0%
Mercury	98-1261	95%	96%	1.1%
Selenium	Standard Addition Run			

**TABLE 2**  
**TOTAL RCRA METALS**

<u>Parameter</u>	<u>B-1, TMW-1</u> <u>0320980928</u> <u>98-1256*</u>	<u>B-2, TMW-2</u> <u>0320980945</u> <u>98-1267*</u>	<u>B-3, TMW-3</u> <u>0320981040</u> <u>98-1268*</u>	<u>Lower</u> <u>Detectable</u> <u>Limit, ppm</u>	<u>Method**</u>	<u>Date</u> <u>Analyzed</u>
Arsenic	0.0021	0.0029	0.0023	0.001	206.2	3-28
Barium	0.16	0.29	0.20	0.1	208.1	3-30
Cadmium	<0.005	<0.005	<0.005	0.005	231.1	3-26
Chromium	<0.03	<0.03	<0.03	0.03	218.1	3-27
Lead	<0.1	<0.1	<0.1	0.1	239.1	3-26
Mercury	<0.0002	<0.0002	<0.0002	0.0002	245.1	3-27
Selenium	<0.0010	<0.0010	<0.0010	0.0010	270.2	3-30
Silver	<0.01	<0.01	<0.01	0.01	272.1	3-26

LDL - Lower Detectable Limit

\* All results are in milligrams per liter.

\*\* USEPA Methods Manual SW846, Method 1311.

**LABORATORY QUALITY CONTROL**

ACCURACY DATA

PRECISION DATA

<u>Parameter</u>	<u>Sample #</u>	<u>Matrix Spike</u> <u>Percent Recovery</u>	<u>Matrix Spike Duplicate</u> <u>Percent Recovery</u>	<u>Relative</u> <u>Percent Difference</u>
Arsenic	Standard Addition Run			
Barium	98-1256	84%	89%	---
Cadmium	98-1256	98%	100%	2.0%
Chromium	98-1256	112%	114%	1.8%
Lead	98-1256	94%	90%	4.3%
Silver	98-1257	104%	102%	1.9%
Mercury	98-1256	96%	99%	3.1%
Selenium	Standard Addition Run			

**TABLE 3**  
**VOLATILE ORGANIC COMPOUNDS**  
**MNDH METHOD 465D**

(All values are in ug/kg which is equal/equivalent to parts-per-billion)

	H4, 0-1' 0324980840	H5, 0-1' 0324980850	H6, 6"-18" 0324980903	
Client ID:	98-1253	98-1254	98-1255	PQL
Compound:				
Acetone	<12	<12	<12	12
Allyl Chloride	<2	<2	<2	2
Benzene	<0.3	<0.3	<0.3	0.3
Bromobenzene	<0.1	<0.1	<0.1	0.1
Bromochloromethane	<0.2	<0.2	<0.2	0.2
Bromodichloromethane	<0.3	<0.3	<0.3	0.3
Bromoform	<0.1	<0.1	<0.1	0.1
Bromomethane	<0.7	<0.7	<0.7	0.7
n-Butylbenzene	<0.4	<0.4	<0.4	0.4
sec-Butylbenzene	<0.3	<0.3	<0.3	0.3
tert-Butylbenzene	<0.5	<0.5	<0.5	0.5
Carbon tetrachloride	<0.3	<0.3	<0.3	0.3
Chlorobenzene	<0.3	<0.3	<0.3	0.3
Chloroethane	<0.2	<0.2	<0.2	0.2
Chloroform	<0.3	<0.3	<0.3	0.3
Chloromethane	<0.9	<0.9	<0.9	0.9
2-Chlorotoluene	<0.3	<0.3	<0.3	0.3
4-Chlorotoluene	<0.4	<0.4	<0.4	0.4
1,2-Dibromo-3-chloropropane	<0.3	<0.3	<0.3	0.3
Dibromochloromethane	<0.3	<0.3	<0.3	0.3
1,2-Dibromoethane	<0.1	<0.1	<0.1	0.1
Dibromomethane	<0.1	<0.1	<0.1	0.1
1,2-Dichlorobenzene	<0.3	<0.3	<0.3	0.3
1,3-Dichlorobenzene	<0.2	<0.2	<0.2	0.2
1,4-Dichlorobenzene	<0.3	<0.3	<0.3	0.3
Dichlorodifluoromethane	<0.2	<0.2	<0.2	0.4
1,1-Dichloroethane	<0.3	<0.3	<0.3	0.3
1,2-Dichloroethane	<0.1	<0.1	<0.1	0.1
1,1-Dichloroethene	<0.4	<0.4	<0.4	0.4
cis-1,2-Dichloroethene	<0.2	<0.2	<0.2	0.2
trans-1,2-Dichloroethene	<0.2	<0.2	<0.2	0.2
Dichlorofluoromethane	<0.3	<0.3	<0.3	0.3
1,2-Dichloropropane	<0.9	<0.9	<0.9	0.9
1,3-Dichloropropane	<0.3	<0.3	<0.3	0.3
2,2-Dichloropropane	<0.2	<0.2	<0.2	0.2
1,1-Dichloropropene	<0.2	<0.2	<0.2	0.2
cis-1,3-Dichloropropene	0.23	<0.2	<0.2	0.2
trans-1,3-Dichloropropene	<0.5	<0.5	<0.5	0.5
Ethyl Ether	<0.3	<0.3	<0.3	0.3
Ethylbenzene	<0.2	<0.2	<0.2	0.2
Hexachlorobutadiene	<0.5	<0.5	<0.5	0.5
Isopropylbenzene	0.32	<0.3	<0.3	0.3

PQL = Practical Quantitation Limit

**TABLE 3 (cont)**  
**VOLATILE ORGANIC COMPOUNDS**  
**MNDH METHOD 465D**

(All values are in ug/kg which is equal/equivalent to parts-per-billion)

	H4, 0-1' 0324980840	H5, 0-1' 0324980850	H6, 6"-18" 0324980903	PQL
<b>Client ID:</b>	98-1253	98-1254	98-1255	
<b>Compound:</b>				
p-Isopropyltoluene	<0.3	<0.3	<0.3	0.3
Methyl Ethyl Ketone	<3	<3	<3	3
Methyl Isobutyl Ketone	<5	<5	<5	5
Methyl-tert-Butyl Ether	1.4	1.4	1.4	0.8
Methylene chloride	<1	<1	<1	1
Naphthalene	0.86	<0.1	<0.1	0.1
n-Propylbenzene	<0.3	<0.3	<0.3	0.3
1,1,1,2-Tetrachloroethane	<0.3	<0.3	<0.3	0.3
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<0.5	0.5
Tetrachloroethene	<0.3	<0.3	<0.3	0.3
Tetrahydrofuran	<10	<10	<10	10
Toluene	<0.7	<0.7	<0.7	0.7
1,2,3-Trichlorobenzene	1.4	1.4	<0.3	0.3
1,2,4-Trichlorobenzene	<0.2	0.50	<0.2	0.2
1,1,1-Trichloroethane	<1	<1	<1	1
1,1,2-Trichloroethane	<0.3	<0.3	<0.3	0.3
Trichloroethene	<0.2	<0.2	<0.2	0.2
Trichlorofluoromethane	<0.3	<0.3	<0.3	0.3
1,2,3-Trichloropropane	<0.5	<0.5	<0.5	0.5
Trichlorotrifluoroethane	<0.2	<0.2	<0.2	0.2
1,2,4-Trimethylbenzene	<2	<2	<2	2
1,3,5-Trimethylbenzene	<0.5	<0.5	<0.5	0.5
Vinyl chloride	<0.4	<0.4	<0.4	0.4
o-Xylene, Styrene <sup>1</sup>	<0.7	<0.7	<0.7	0.7
m-p-Xylenes <sup>1</sup>	<0.6	<0.6	<0.6	0.6
<b>Surrogate Recoveries for PID:</b>				
Fluorobenzene	101%	83%	74%	
4-Fluorochlorobenzene	96%	78%	66%	
2-Fluorochlorobenzene	101%	82%	69%	
<b>Surrogate Recoveries for ECLD:</b>				
1-1,Dichloropropane	112%	90%	70%	
4-Fluorochlorobenzene	110%	71%	58%	
2-Fluorochlorobenzene	107%	62%	57%	

<sup>1</sup> Compounds not separated by this method

PQL=Practical Quantitation Limit

Date Analyzed: 3-26-98

Method: Minnesota Department of Health, Method 465.

**MAXIM**

TABLE 3 (cont)  
VOLATILE ORGANIC COMPOUNDS  
MNDH METHOD 465D

(All values are in ug/kg which is equal/equivalent to parts-per-billion)

Client ID:	H1, 0-1' 0320981100 98-1259	H2, Surface 0320981125 98-1260	H3, Surface 0320981135 98-1261	PQL
Compound:				
Acetone	< 12	< 12	< 12	12
Allyl Chloride	< 2	< 2	< 2	2
Benzene	< 0.3	< 0.3	< 0.3	0.3
Bromobenzene	< 0.1	< 0.1	< 0.1	0.1
Bromochloromethane	< 0.2	< 0.2	< 0.2	0.2
Bromodichloromethane	< 0.3	< 0.3	0.61	0.3
Bromoform	< 0.1	< 0.1	< 0.1	0.1
Bromomethane	< 0.7	< 0.7	< 0.7	0.7
n-Butylbenzene	< 0.4	< 0.4	< 0.4	0.4
sec-Butylbenzene	< 0.3	0.33	< 0.3	0.3
tert-Butylbenzene	< 0.5	< 0.5	< 0.5	0.5
Carbon tetrachloride	< 0.3	< 0.3	< 0.3	0.3
Chlorobenzene	< 0.3	< 0.3	< 0.3	0.3
Chloroethane	< 0.2	< 0.2	< 0.2	0.2
Chloroform	< 0.3	< 0.3	0.69	0.3
Chloromethane	< 0.9	< 0.9	< 0.9	0.9
2-Chlorotoluene	< 0.3	< 0.3	< 0.3	0.3
4-Chlorotoluene	< 0.4	< 0.4	< 0.4	0.4
1,2-Dibromo-3-chloropropane	< 0.3	< 0.3	< 0.3	0.3
Dibromochloromethane	< 0.3	< 0.3	< 0.3	0.3
1,2-Dibromoethane	< 0.1	< 0.1	< 0.1	0.1
Dibromomethane	< 0.1	< 0.1	1.6	0.1
1,2-Dichlorobenzene	0.39	0.39	0.39	0.3
1,3-Dichlorobenzene	< 0.2	< 0.2	< 0.2	0.2
1,4-Dichlorobenzene	< 0.3	< 0.3	< 0.3	0.3
Dichlorodifluoromethane	< 0.2	< 0.2	< 0.2	0.4
1,1-Dichloroethane	< 0.3	< 0.3	< 0.3	0.3
1,2-Dichloroethane	< 0.1	< 0.1	< 0.1	0.1
1,1-Dichloroethene	< 0.4	< 0.4	< 0.4	0.4
cis-1,2-Dichloroethene	< 0.2	< 0.2	< 0.2	0.2
trans-1,2-Dichloroethene	< 0.2	< 0.2	< 0.2	0.2
Dichlorofluoromethane	< 0.3	< 0.3	< 0.3	0.3
1,2-Dichloropropane	< 0.9	< 0.9	< 0.9	0.9
1,3-Dichloropropane	< 0.3	< 0.3	< 0.3	0.3
2,2-Dichloropropane	< 0.2	< 0.2	< 0.2	0.2
1,1-Dichloropropene	< 0.2	< 0.2	0.32	0.2
cis-1,3-Dichloropropene	0.24	< 0.2	< 0.2	0.2
trans-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	0.5
Ethyl Ether	< 0.3	< 0.3	< 0.3	0.3
Ethylbenzene	< 0.2	< 0.2	< 0.2	0.2
Hexachlorobutadiene	< 0.5	< 0.5	< 0.5	0.5
Isopropylbenzene	0.32	< 0.3	0.32	0.3

PQL = Practical Quantitation Limit

**MAXIM**

**TABLE 3 (cont)**  
**VOLATILE ORGANIC COMPOUNDS**  
**MNDH METHOD 465D**  
 (All values are in ug/kg which is equal/equivalent to parts-per-billion)

Client ID:	H1, 0-1' 0320981100 98-1259	H2, Surface 0320981125 98-1260	H3, Surface 0320981135 98-1261	PQL
Compound:				
p-Isopropyltoluene	<0.3	<0.3	<0.3	0.3
Methyl Ethyl Ketone	<3	<3	<3	3
Methyl Isobutyl Ketone	<5	<5	<5	5
Methyl-tert-Butyl Ether	<0.8	1.4	<0.8	0.8
Methylene chloride	<1	<1	<1	1
Naphthalene	<0.1	<0.1	<0.1	0.1
n-Propylbenzene	<0.3	<0.3	<0.3	0.3
1,1,1,2-Tetrachloroethane	<0.3	<0.3	<0.3	0.3
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<0.5	0.5
Tetrachloroethene	<0.3	<0.3	<0.3	0.3
Tetrahydrofuran	<10	<10	<10	10
Toluene	<0.7	<0.7	<0.7	0.7
1,2,3-Trichlorobenzene	<0.3	<0.3	1.4	0.3
1,2,4-Trichlorobenzene	<0.2	<0.2	<0.2	0.2
1,1,1-Trichloroethane	<1	<1	<1	1
1,1,2-Trichloroethane	<0.3	<0.3	<0.3	0.3
Trichloroethene	<0.2	<0.2	<0.2	0.2
Trichlorofluoromethane	<0.3	<0.3	<0.3	0.3
1,2,3-Trichloropropane	<0.5	<0.5	<0.5	0.5
Trichlorotrifluoroethane	<0.2	<0.2	<0.2	0.2
1,2,4-Trimethylbenzene	<2	<2	<2	2
1,3,5-Trimethylbenzene	<0.5	<0.5	<0.5	0.5
Vinyl chloride	<0.4	<0.4	<0.4	0.4
o-Xylene, Styrene <sup>1</sup>	<0.7	<0.7	<0.7	0.7
m-p-Xylenes <sup>1</sup>	<0.6	<0.6	<0.6	0.6
Surrogate Recoveries for PID:				
Fluorobenzene	102%	94%	85%	
4-Fluorochlorobenzene	96%	89%	78%	
2-Fluorochlorobenzene	100%	93%	82%	
Surrogate Recoveries for ECLD:				
1-1,Dichloropropane	108%	77%	79%	
4-Fluorochlorobenzene	94%	68%	79%	
2-Fluorochlorobenzene	96%	67%	74%	

<sup>1</sup> Compounds not separated by this method

PQL=Practical Quantitation Limit

Date Analyzed: 3-26-98

Method: Minnesota Department of Health, Method 465.

**MAXIM**

**TABLE 4**  
**VOLATILE ORGANIC COMPOUNDS**  
**MNDH METHOD 465D**

(All values are in ug/L which is equal/equivalent to parts-per-billion)

Client ID:	B-1, TMW-1 0320980928 98-1256	B-2, TMW-2 0320980945 98-1257	B-3, TMW-3 0320981040 98-1258	PQL
Compound:				
Acetone	< 12	< 12	< 12	12
Allyl Chloride	< 2	< 2	< 2	2
Benzene	< 0.3	< 0.3	< 0.3	0.3
Bromobenzene	< 0.1	< 0.1	< 0.1	0.1
Bromochloromethane	< 0.2	< 0.2	< 0.2	0.2
Bromodichloromethane	< 0.3	< 0.3	0.33	0.3
Bromoform	< 0.1	< 0.1	< 0.1	0.1
Bromomethane	< 0.7	< 0.7	< 0.7	0.7
n-Butylbenzene	< 0.4	< 0.4	< 0.4	0.4
sec-Butylbenzene	0.33	< 0.3	< 0.3	0.3
tert-Butylbenzene	< 0.5	< 0.5	< 0.5	0.5
Carbon tetrachloride	< 0.3	< 0.3	< 0.3	0.3
Chlorobenzene	< 0.3	< 0.3	< 0.3	0.3
Chloroethane	< 0.2	< 0.2	< 0.2	0.2
Chloroform	< 0.3	< 0.3	< 0.3	0.3
Chloromethane	< 0.9	< 0.9	< 0.9	0.9
2-Chlorotoluene	< 0.3	< 0.3	< 0.3	0.3
4-Chlorotoluene	< 0.4	< 0.4	< 0.4	0.4
1,2-Dibromo-3-chloropropane	< 0.3	< 0.3	< 0.3	0.3
Dibromochloromethane	1.1	< 0.3	< 0.3	0.3
1,2-Dibromoethane	< 0.1	< 0.1	< 0.1	0.1
Dibromomethane	< 0.1	< 0.1	1.1	0.1
1,2-Dichlorobenzene	< 0.3	< 0.3	< 0.3	0.3
1,3-Dichlorobenzene	0.38	0.42	< 0.2	0.2
1,4-Dichlorobenzene	< 0.3	< 0.3	< 0.3	0.3
Dichlorodifluoromethane	< 0.2	< 0.2	< 0.2	0.4
1,1-Dichloroethane	< 0.3	< 0.3	< 0.3	0.3
1,2-Dichloroethane	< 0.1	< 0.1	< 0.1	0.1
1,1-Dichloroethene	< 0.4	< 0.4	< 0.4	0.4
cis-1,2-Dichloroethene	< 0.2	< 0.2	< 0.2	0.2
trans-1,2-Dichloroethene	< 0.2	< 0.2	< 0.2	0.2
Dichlorofluoromethane	< 0.3	< 0.3	< 0.3	0.3
1,2-Dichloropropane	< 0.9	< 0.9	< 0.9	0.9
1,3-Dichloropropane	< 0.3	< 0.3	< 0.3	0.3
2,2-Dichloropropane	< 0.2	< 0.2	< 0.2	0.2
1,1-Dichloropropene	< 0.2	< 0.2	< 0.2	0.2
cis-1,3-Dichloropropene	0.24	< 0.2	< 0.2	0.2
trans-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	0.5
Ethyl Ether	< 0.3	< 0.3	< 0.3	0.3
Ethylbenzene	< 0.2	< 0.2	< 0.2	0.2
Hexachlorobutadiene	0.50	< 0.5	< 0.5	0.5
Isopropylbenzene	< 0.3	< 0.3	< 0.3	0.3

PQL=Practical Quantitation Limit

**TABLE 4 (cont)**  
**VOLATILE ORGANIC COMPOUNDS**  
**MNDH METHOD 465D**

(All values are in ug/L which is equal/equivalent to parts-per-billion)

Client ID:	B-1, TMW-1 0320980928 98-1256	B-2, TMW-2 0320980945 98-1257	B-3, TMW-3 0320981040 98-1258	PQL
Compound:				
p-Isopropyltoluene	<0.3	<0.3	<0.3	0.3
Methyl Ethyl Ketone	<3	<3	<3	3
Methyl Isobutyl Ketone	<5	<5	<5	5
Methyl-tert-Butyl Ether	<0.8	<0.8	<0.8	0.8
Methylene chloride	<1	<1	<1	1
Naphthalene	0.87	<0.1	<0.1	0.1
n-Propylbenzene	<0.3	<0.3	<0.3	0.3
1,1,1,2-Tetrachloroethane	<0.3	<0.3	<0.3	0.3
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<0.5	0.5
Tetrachloroethene	<0.3	<0.3	<0.3	0.3
Tetrahydrofuran	<10	<10	<10	10
Toluene	<0.7	<0.7	<0.7	0.7
1,2,3-Trichlorobenzene	1.4	1.5	<0.3	0.3
1,2,4-Trichlorobenzene	<0.2	<0.2	<0.2	0.2
1,1,1-Trichloroethane	<1	<1	<1	1
1,1,2-Trichloroethane	<0.3	<0.3	<0.3	0.3
Trichloroethene	<0.2	<0.2	<0.2	0.2
Trichlorofluoromethane	<0.3	<0.3	<0.3	0.3
1,2,3-Trichloropropane	<0.5	<0.5	<0.5	0.5
Trichlorotrifluoroethane	<0.2	<0.2	<0.2	0.2
1,2,4-Trimethylbenzene	<2	<2	<2	2
1,3,5-Trimethylbenzene	<0.5	<0.5	<0.5	0.5
Vinyl chloride	<0.4	<0.4	<0.4	0.4
o-Xylene, Styrene <sup>1</sup>	<0.7	<0.7	<0.7	0.7
m-p-Xylenes <sup>1</sup>	<0.6	<0.6	<0.6	0.6

**Surrogate Recoveries for PID:**

Fluorobenzene	100%	103%	105%
4-Fluorochlorobenzene	100%	103%	103%
2-Fluorochlorobenzene	105%	109%	109%

**Surrogate Recoveries for ECLD:**


1-1,Dichloropropane	70%	69%	81%
4-Fluorochlorobenzene	81%	65%	91%
2-Fluorochlorobenzene	80%	58%	76%

<sup>1</sup> Compounds not separated by this method

PQL = Practical Quantitation Limit

Date Analyzed: 3-26-98

Method: Minnesota Department of Health, Method 465.

Technical Review: 

**MAXIM TECHNOLOGIES, INC.**

*Virginia VerMullen*  
 Virginia VerMullen  
 Laboratory Supervisor

*ch - 5/1*  
 Dan T. Hanson  
 Chemistry Manager

**MAXIM**

Lab Project No. \_\_\_\_\_

Client <u>Hucke Liquidating Trust</u>			P.O. No.			<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">JOC</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Total 8 Repts. 10/1/05</div> </div>											
Address <u>109 North Main ST.</u>			Project No. <u>9857562</u>														
<u>Clarksville, Iowa 50619</u>			Project Name <u>Formattable Manufacturing</u>														
Client Contact <u>Habbo G. Fokkema</u>			Project Location														
Phone/Fax <u>(319) 278 - 4766</u>			<u>2105 East Blauer</u>														
<u>(319) 278 - 4605</u>			<u>Waverly, Iowa</u>														
Maxim Contact <u>B. H. A. Huns (319) 232-6591</u>			Sampled By <u>R. H. Huns</u>														
Comments <u>Former Manufacturing Plant</u>																	

Sample I.D.	Sample Depth	Time Sampled	Date Sampled	Sample Type	No. of containers														Lab I.D.
1. <u>H4</u>	<u>0-1'</u>	<u>840</u>	<u>3/24/08</u>	<u>SOIL</u>	<u>3</u>	<u>X</u>	<u>X</u>											<u>1253</u>	
2. <u>H5</u>	<u>0-1'</u>	<u>850</u>	<u>3/24/08</u>	<u>( )</u>	<u>3</u>	<u>X</u>	<u>X</u>											<u>1254</u>	
3. <u>H6</u>	<u>6"-18"</u>	<u>903</u>	<u>3/24/08</u>	<u>( )</u>	<u>3</u>	<u>X</u>	<u>X</u>											<u>1255</u>	
4.																			
5.																			
6.																			
7.																			
8.																			
9.																			
10.																			

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time	Hazardous Material Suspected?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<u>[Signature]</u>	<u>3/25/08</u>			Disposal by Lab?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
				Shipment Method:	<u>Speedo Delivery</u>
				Expected turnaround time:	<u>2 weeks</u>

Received for lab by (signature) [Signature] Date/Time 3/25/08 12:00

RECEIVING LABORATORY: Please return original after signing for receipt of samples.

**MAXIM TECHNOLOGIES, INC.**

**SAMPLE IDENTIFICATION/FIELD CHAIN OF CUSTODY RECORD**

Lab Project No. \_\_\_\_\_

Client <u>Henke Ligandating Trust</u>		P.O. No.		<b>ANALYSIS</b>											
Address <u>109 North Main St.</u>		Project No. <u>9857562</u>													
<u>Clarksville, Iowa 50619</u>		Project Name <u>Former Henke Manufacturing</u>		<div style="display: flex; flex-direction: column; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">VOC's</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TOTAL GROUNDWATER</div> </div>											
Client Contact <u>Habbo G. Fokken</u>		Project Location													
Phone/Fax <u>(319) 278-4766</u>		<u>2105 East Bremer</u>													
<u>(319) 278-4605</u>		<u>Waverly, Iowa</u>													
Maxim Contact <u>William A. Haus (319) 232-6541</u>		Sampled By <u>[Signature]</u>													
Comments <u>Former Manufacturing Plant</u>															

Sample I.D.	Sample Depth	Time Sampled	Date Sampled	Sample Type	No. of containers														Lab I.D.
1B-1/TW-1	NA	9:28	3/20/98	Water	2	X	X											1256	
2B-2/TW-2	NA	9:45	~	Water	2	X	X											1257	
3B-3/TW-3	NA	10:40		Water	2	X	X											1258	
4. H1	0-1'	11:06		SOIL	3	X	X											1259	
5. H2	Surface	11:25	~	SOIL	3	X	X											1260	
6. H3	Surface	11:35		SOIL	3	X	X											1261	
7.																			
8.																			
9.																			
10.																			

Relinquished by: (signature) <u>[Signature]</u>	Date/Time <u>3/23/98 0900</u>	Received by: (signature)	Date/Time	Hazardous Material Suspected? <span style="float:right">Yes / <u>No</u></span>
				Disposal by Lab? <span style="float:right"><u>Yes</u> / No</span>
				Shipment Method: <u>Special Delivery</u>
				Expected turnaround time: <u>2 Weeks</u>

Received for lab by (signature) [Signature]

Date/Time 3/25/98 12:00

RECEIVING LABORATORY: Please return original after signing for receipt of samples.

**MAXIM TECHNOLOGIES, INC.**