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Charlotte, NC 28217

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August 29, 2003

South Carolina Department of Health
and Environmental Control
Groundwater Quality Section
Bureau of Water
2600 Bull Street
Columbia, South Carolina 29201

Attn: Ms. Jennifer Boynton

Re: Ground Water Assessment
Delavan Spray Technologies Site
Bamberg, South Carolina
Site ID #02211
H&H Job No. GDR-06

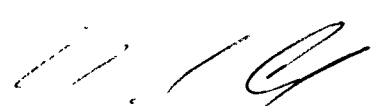
Dear Jennifer:

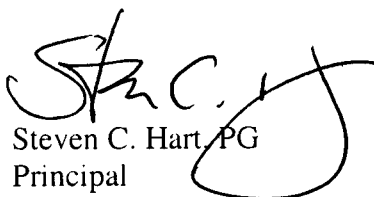
On behalf of Delavan Spray Technologies, Hart & Hickman, PC (H&H) is submitting this assessment report in accordance with our April 29, 2003 work plan and your May 5, 2003 approval letter.

Should you have any questions or require any additional information, please feel free to contact us at (704) 586-0007.

Very truly yours,

Hart & Hickman, PC


Michael S. Crouch, PG
Project Manager


Steven C. Hart, PG
Principal

Attachments

cc: Mr. Richard Kearse
Mr. Bruce Amig

RECEIVED

SEP 2 2003

Water Monitoring, Assessment &
Protection Division

AI

**Ground Water Assessment Report
Delavan Spray
Technologies Facility
Bamberg, South Carolina**

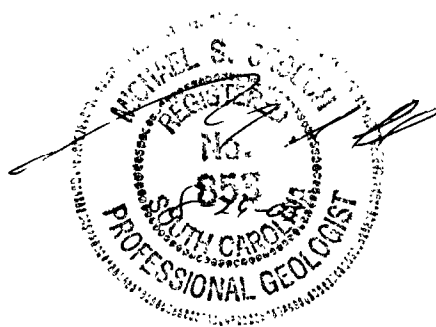
H&H Job No. GDR-06

August 29, 2003

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**Water Monitoring, Assessment &
Protection Division**



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**Ground Water Assessment Report
Delavan Spray Technologies Facility
Bamberg, South Carolina**

1.0 Introduction

This report presents the methods and results of ground water assessment conducted by Hart & Hickman, PC (H&H) at the Delavan Spray Technologies (Delavan) facility located on Highway 301 South in Bamberg, Bamberg County, South Carolina (Figure 1). Delavan manufactures fuel metering equipment and various nozzles at the facility. The Delavan property comprises approximately 20 acres of which approximately five are fenced (Figure 2). The remaining 15 acres is wooded to the north and west and grass-covered to the east.

This assessment was conducted in response to the results of a preliminary environmental assessment conducted in December 2002 that indicated tetrachloroethene (PCE) in ground water in the central and eastern portions of the fenced area of the site.

2.0 Background Information

2.1 Site Description

The site is located on Highway 301 South in Bamberg, Bamberg County, South Carolina, approximately one mile south of downtown Bamberg. A site location map is provided as Figure 1, and a site plan is included as Figure 2.

The topography of the site is relatively flat. Drainage at the site is generally radial. Drainage in the central and eastern portions of the fenced area of the site are generally toward the north and northeast with discharge into a drainage ditch located in the northeastern portion of the site. The ditch flows west across the site and discharges into an intermittent stream in the northwestern portion of the site. The intermittent stream then flows to the southwest toward Halfmoon Branch, an intermittent tributary of Lemon Creek. Lemon Creek is the closest perennial surface water body and is located approximately 4,400 ft southwest of the site at its closest location (as measured to center channel). No other perennial surface water bodies were noted within 1.0 mile of the site with the exception of a manmade sewage disposal pond located approximately 1,300 ft northwest of the site. Numerous topographic depressions, known as Carolina Bays, are located in the vicinity of the plant as indicated on Figure 1.

2.2 Previous Assessment

On December 10, 2002, H&H oversaw the installation of eleven direct push technology (DPT) temporary borings in order to collect ground water samples. The ground water sampling locations are indicated on the attached Figure 3. The assessment was conducted in the vicinity of a former containment area used for storage of PCE. The ground water samples were analyzed for PCE in the field using a portable gas chromatograph (GC). The field GC data indicated PCE in ground water at concentrations up to 5,288 micrograms per liter ($\mu\text{g/l}$) as indicated on Figure 3. This information was

reported to the South Carolina Department of Environmental Control (DHEC) in correspondence dated February 14, 2003.

Based on the results of the temporary well sampling, Delavan initiated additional ground water assessment activities. The following sections present the methods and results of the additional ground water assessment activities conducted on behalf of Delavan at the site.

3.0 Assessment Activities

Assessment activities were initiated in June 2003 in accordance with H&H's April 29, 2003 Ground Water Assessment Work Plan, incorporating comments in DHEC's May 5, 2003 approval correspondence. The scope of work included installation and sampling of six permanent on-site monitor wells and collection and analysis of one surface water sample.

Six permanent Type II shallow monitoring wells were installed using the hollow-stem auger method on June 3 and 4, 2003. The locations of the wells, labeled MW-1 through MW-6, are indicated on Figure 4. The well locations were selected based on data from the temporary well sampling taking accessibility issues into account. Prior to installation of the wells H&H obtained a well construction permit from DHEC.

The six monitor wells were installed to depths ranging from 14 to 18 ft below ground level. During boring advancement, soil samples were collected and screened with an organic vapor analyzer (OVA). Elevated OVA readings were not encountered in any of the soil borings and no visual indicators of soil impact were observed in the soil samples with the exception of MW-1 where slightly elevated OVA readings were encountered below the water table. Each well is constructed of 2-inch diameter PVC casing and 10 or 15-ft sections of well screen. Monitor well construction data including total well depth and screen interval are presented in Table 1. Boring logs and monitor well construction records are included in Appendix A.

Following installation, H&H developed and purged each of the monitoring wells using a bailer until pH, temperature, and conductivity stabilized. Ground water purging and sampling were conducted with new, disposable bailers on June 4, 2003. Additionally, a surface water sample (SW-1) was collected on June 5, 2003 from the drainage feature located north of the site as indicated on Figure 5. The surface water sample was collected by placing the laboratory-supplied bottles into the water and allowing the bottles to fill. The ground water and surface

water samples were analyzed for VOCs by EPA Method 8260 by Environmental Science Corporation (ESC), a South Carolina certified laboratory.

Sample bottles were provided by ESC, and the samples were submitted under chain-of-custody documentation in iced coolers. The laboratory analytical data sheets are provided in Appendix B. The analytical results are discussed in Sections 4.2 and 4.3.

The top of casing elevations of the monitor wells were determined by survey techniques referenced to an assumed site datum of 100.00 ft for the top of casing elevation of MW-1. The water levels in the wells were measured on June 5, 2003 and also on July 9, 2003. Monitor well top of casing elevation and water level data are presented in Table 1 and discussed in Section 4.1.

4.0 Results and Conclusions

4.1 Hydrogeologic Conditions

The boring logs for the monitor wells are provided in Appendix A. Soils encountered at the site consist of surficial silts and sands underlain by sandy clay with some sand lenses.

Water level data obtained from the site wells are presented in Table 1. Depths to water ranged from approximately 2 ft to 11 ft below grade. The initial water levels measurements in June were collected during a period of heavy precipitation; therefore additional water level measurements were collected on July 9 during a drier period. The measured ground water elevations are indicated on Figure 4.

Determination of ground water flow direction and gradient is indeterminate at this time based on the two rounds of water level measurements. Due to the uncertainty resulting from the water level data, ground water elevation iso-contours have not been constructed at this time.

4.2 Ground Water Analyses

The results of the ground water analyses are summarized in Table 2 and Figure 5. PCE was the only target compound detected with the exception of chloromethane (140 µg/l) in MW-1. PCE was detected in 3 of the 6 monitor wells at concentrations ranging from 74 to 15,000 µg/l. The highest concentration of PCE (15,000 µg/l) was detected in MW-1, located in proximity to the former PCE containment area. PCE was also detected in MW-3 (74 µg/l), located south of MW-1 just inside the southern fence line, and in MW-5 (160 µg/l), located along the northern fence line and northwest of another containment area used for storage of PCE. No PCE or other target analytes were detected in the samples from the following monitor wells:

- MW-2 (located south of the manufacturing building and west of MW-1),

- MW-4 (located near the eastern property boundary), and
- MW-6 (located along the northern fence and west of another former containment area).

4.3 Surface Water Analyses

A surface water sample (SW-1) was collected from the intermittent stream located in the northwestern portion of the site. This stream is fed by on-site and off-site storm water drainage. The sample did not contain any detectable target analytes with the exception of 1 µg/l of cis-1,2-dichloroethene (c-1,2-DCE). The source of the c-1,2-DCE is indeterminate at this time. The laboratory report is included in Appendix B.

4.4 Conclusions

Results of analysis of ground water samples collected from the permanent site monitor wells confirm the presence of PCE in ground water at the site. Delavan proposes preparation of a work plan outlining additional assessment activities for DHEC's approval. The objectives of the assessment will be to provide additional data on ground water flow and to evaluate the extent and potential source of PCE in ground water.

Table 1
Monitoring Well Construction and Ground Water Elevation Data
Delavan Spray Technologies
Bamberg, South Carolina

Well No.	Total Depth	Screen Interval (ft bgl)	Top of Casing Elevation	6/5/2003		7/9/2003	
				Depth to Water	Elevation	Depth to Water	Elevation
MW-1	18	3-18	100.00	9.70	90.30	8.42	91.58
MW-2	18	3-18	100.45	5.81	94.64	4.76	95.69
MW-3	18	3-18	100.90	11.41	89.49	9.20	91.70
MW-4	14	4-14	99.99	4.11	95.88	3.59	96.40
MW-5	14	4-14	98.52	4.72	93.80	3.68	94.84
MW-6	14	4-14	96.25	2.40	93.85	2.30	93.95

Notes:

bgl-below ground level

Depth to water measured relative to top of casing.

Elevations referenced to an assumed datum of 100.00 ft at the top of casing elevation of MW-1.

Table 2
Ground Water and Surface Water Analytical Detections
Delavan Spray Technologies
Bamberg, South Carolina

Well No.	Sample Date	Chlormethane Concentration ($\mu\text{g/l}$)	cis-1,2-DCE Concentration ($\mu\text{g/l}$)	PCE Concentration ($\mu\text{g/l}$)
Ground Water Samples				
MW-1	6/4/2003	140	<1.0	15,000
MW-2	6/4/2003	<1.0	<1.0	<1.0
MW-3	6/4/2003	<1.0	<1.0	74
MW-4	6/4/2003	<1.0	<1.0	<1.0
MW-5	6/4/2003	<1.0	<1.0	160
MW-6	6/4/2003	<1.0	<1.0	<1.0
MCL		NS	70	5

Surface Water Sample				
SW-1	6/5/2003	<1.0	1.0	<1.0

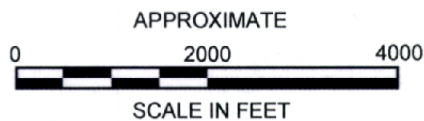
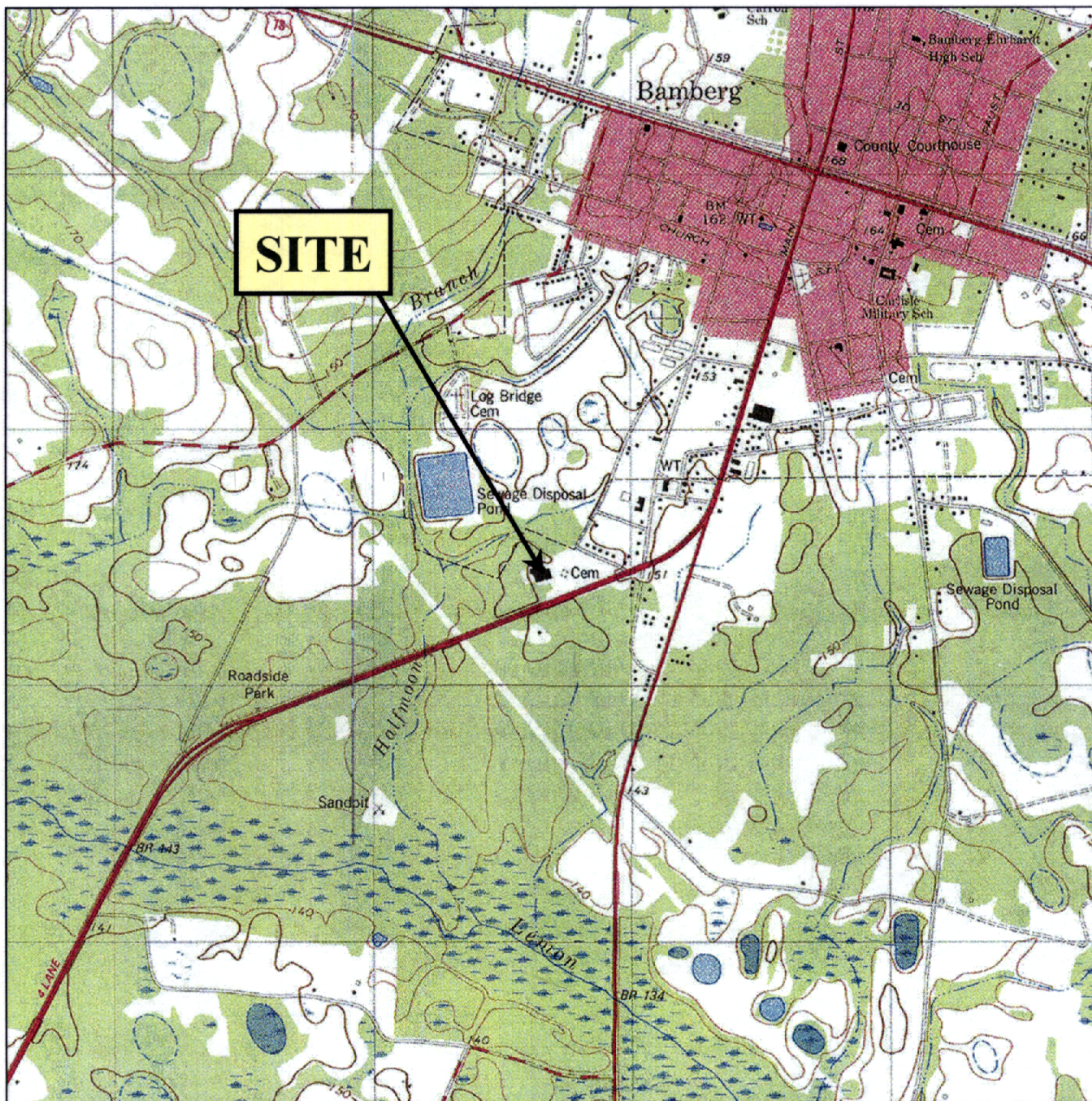
Notes:

Samples analyzed using EPA Method 8260

Only analytes detected in at least one sample indicated

Bold indicates concentration exceeds MCL


NS = Not Specified; MCL = DHEC Maximum Concentration Limit

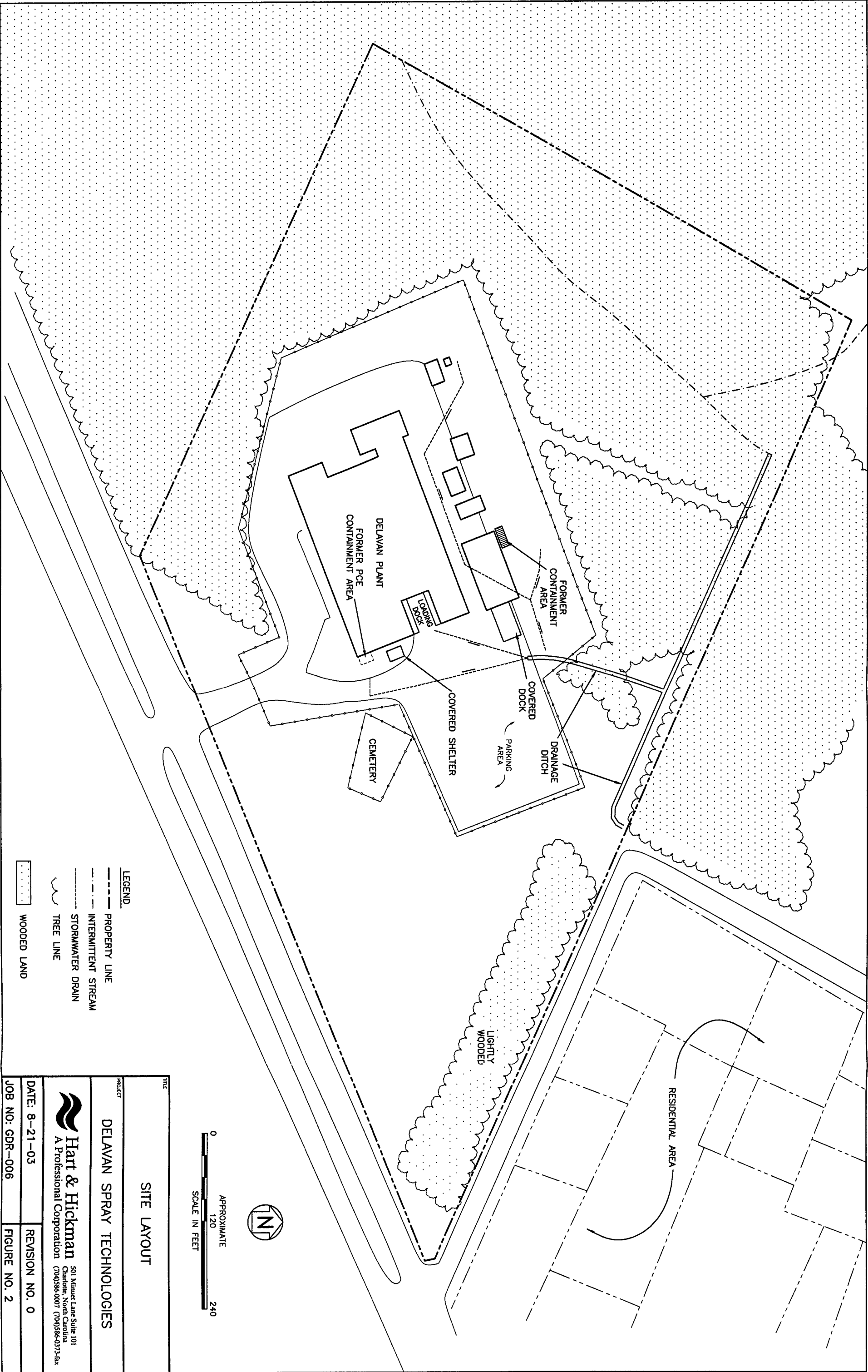


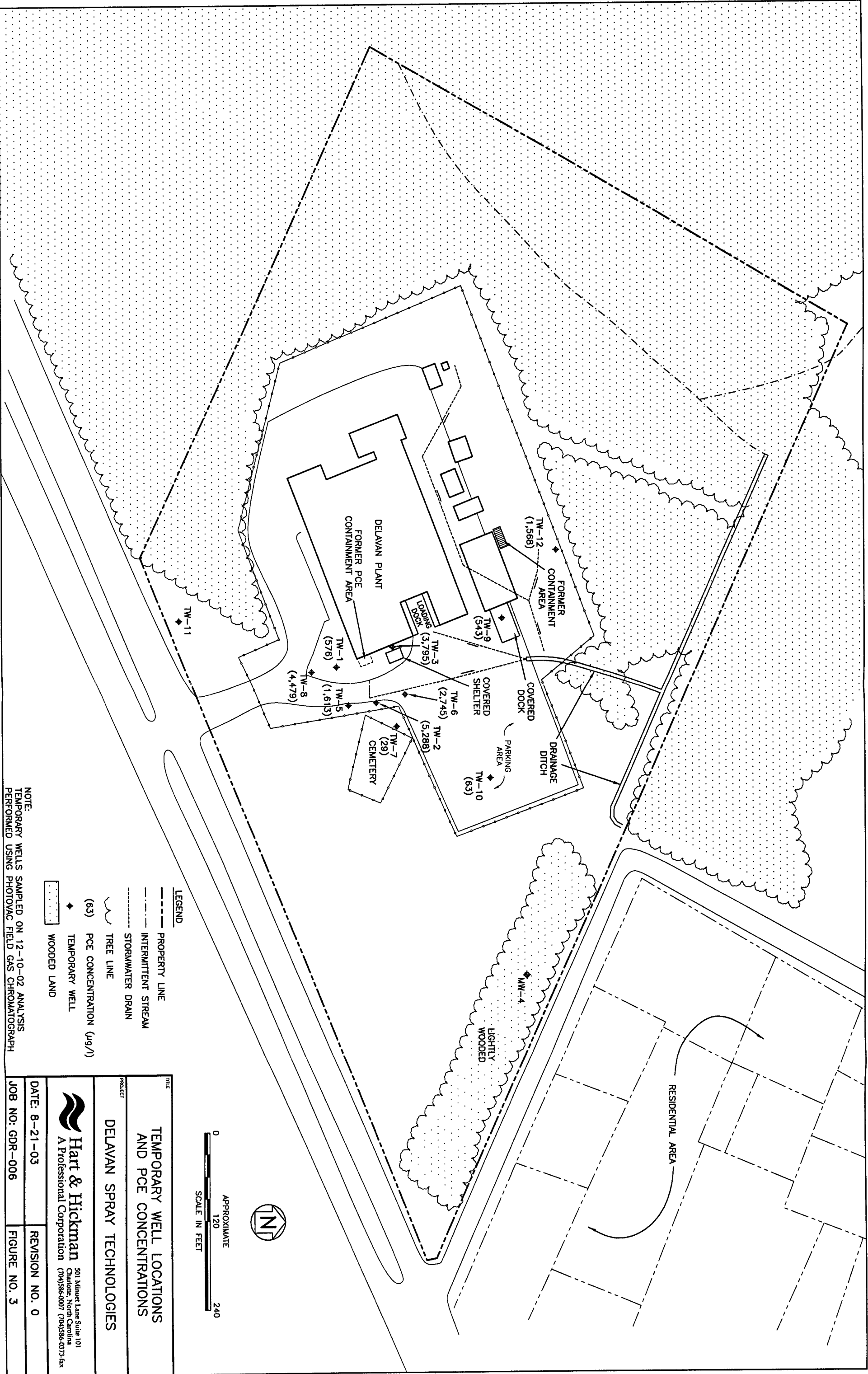
U.S.G.S. QUADRANGLE MAP

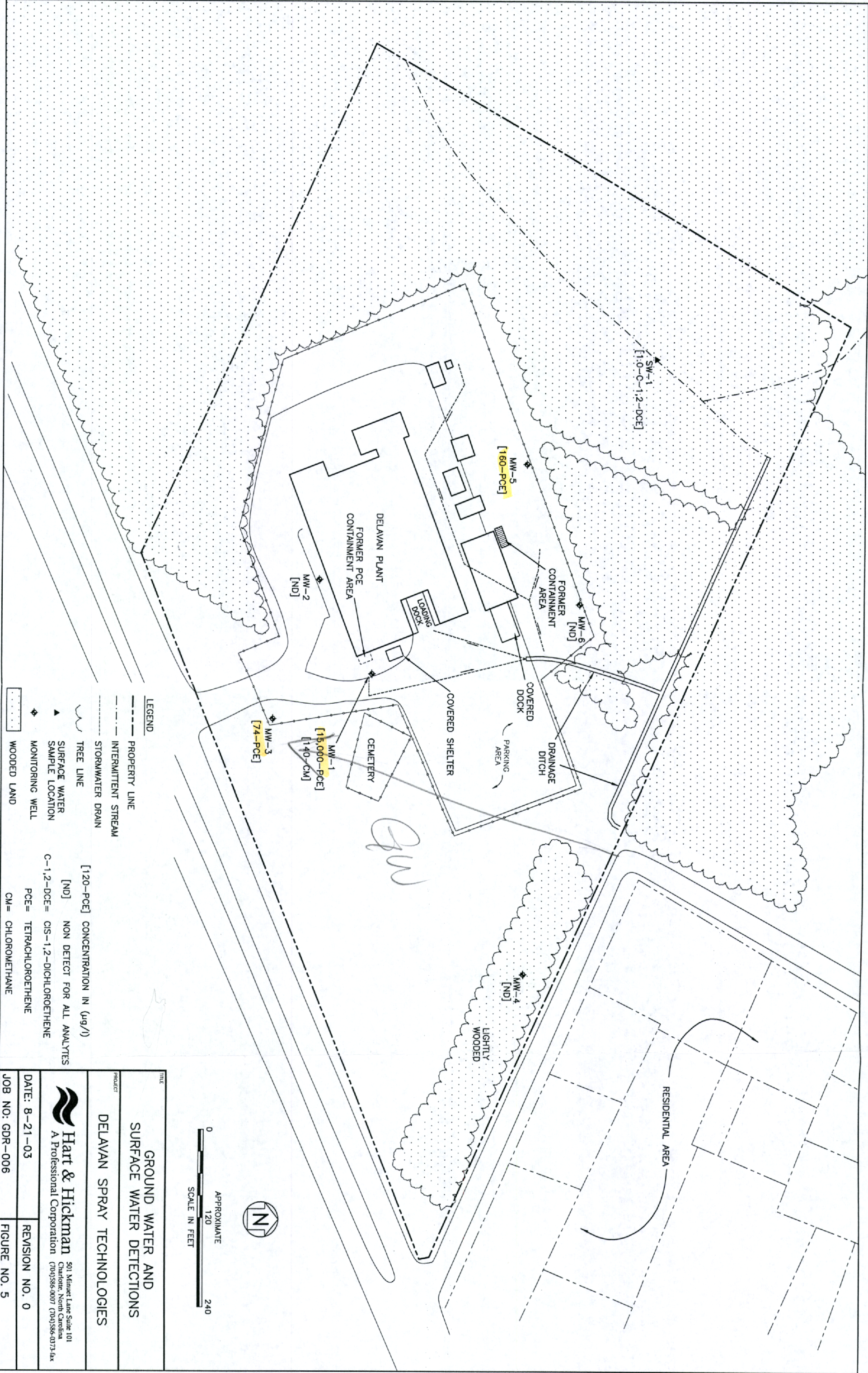
BAMBERG, SC 1979 (PHOTO REVISED 1987)

QUADRANGLE
7.5 MINUTE SERIES (TOPOGRAPHIC)

TITLE		SITE LOCATION MAP	
PROJECT		DELAVAN SPRAY TECHNOLOGIES BAMBERG, SOUTH CAROLINA	
		 Hart & Hickman 501 Minuet Lane-Suite 101 Charlotte, North Carolina 28217 A Professional Corporation (704)-586-0007 (704)-586-0373 fax	
DATE:	11-15-02	REVISION NO:	0
JOB NO:	GDR-06	FIGURE NO:	1







Appendix A
Boring Logs and Monitor Well Construction Records



Hart & Hickman
A Professional Corporation

501 Minuet Lane Suite 101
Charlotte, North Carolina
(704)586-0007 (704)586-0373-fax

LOG OF BORING: MW-1

Sheet 1 of 1

(10:15-12:30)

Project: Goodrich-Delavan
Job No: GDR-006
Location: Bamberg, South Carolina

Surface Elev: 100.36 FT
Top of Casing Elev: 100.00 FT Relative to a 100.00 FT Datum Point
Drilling Rig/Method: Dietrich D-50/Track Rig/HSA 4.25"
Sampling Method: Split-Spoon Sampler

Elevation, feet	Depth, feet	Sampler Graphics	USCS Symbol	Recovery %	MATERIAL DESCRIPTION <small>(The stratification lines represent approximate boundaries. The transition may be gradual.)</small>	SPT, Blow Counts	BKG.	FID (ppm) SAMP.	WELL DIAGRAM
	0		SM	100%	DRY TO MOIST, DARK BROWN TO LIGHT BROWN SILTY FINE SAND				<p>FLUSH MOUNTED WELL HEAD WITH WATER TIGHT LOCKING WELL CAP</p> <p>GROUT</p> <p>BENTONITE SEAL</p> <p>2" SCH 40 PVC 0.010" SLOTTED WELL SCREEN</p> <p>SAND PACK</p> <p>8" DIAMETER BOREHOLE</p>
	5		CL	100%	DRY TO MOIST, SOFT TO STIFF, ORANGISH-BROWN TO LIGHT GRAY FINE SANDY CLAY, SOME BROWN FINE SAND	2-3-7-10 (4-6')	0.0	1.9	
(9.70)	10		SC	100%	MOIST, SOFT TO STIFF, ORANGISH-BROWN CLAYEY FINE SAND	2-7-9-10 (9-11')	0.0	2.5	
	15		CL	100%	MOIST, SOFT TO MEDIUM STIFF, ORANGISH-BROWN TO LIGHT GRAY FINE SANDY CLAY, SOME WHITE FINE SAND LENSES	2-2-4-58 (14-16')	0.0	16.4	
	20				BORING TERMINATED @ 18 FT				
	25								

Completion Depth: 18 FT Date Boring Started: 6-4-03 Date Boring Completed: 6-4-03 Engineer/Geologist: SHANNON L. COTTRILL Drilling Contractor: SAEDACCO, INC.						Remarks.					
0	BNR	7/14/03	SLC	MSC							
Revision	DrawnBy	Date	Checked	Approved							

S:\AA-Master Projects\Goodrich\GDR-06_Bamberg\FIGURES\Boring Log\MW-1.dwg, 1:1



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A Professional Corporation

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Charlotte, North Carolina
(704)586-0007 (704)586-0373-fax

LOG OF BORING: MW-2

(9:00-10:15)

Project: Goodrich-Delavan
Job No: GDR-006
Location: Bamberg, South Carolina

Surface Elev: 100.65 FT
Top of Casing Elev. 100.45 FT Relative to a 100.00 FT Datum Point
Drilling Rig/Method: Dietrich D-50/Track Rig/HSA 4.25"
Sampling Method: Split-Spoon Sampler

Elevation, feet	Depth, feet	Sampler Graphics	USCS Symbol	Recovery %	MATERIAL DESCRIPTION (The stratification lines represent approximate boundaries. The transition may be gradual.)	SPT, Blow Counts	BKG.	FID (ppm)	SAMP.	WELL DIAGRAM
	0		SM		DRY TO MOIST, DARK BROWN TO LIGHT BROWN SILTY FINE SAND					FLUSH MOUNTED WELL HEAD WITH WATER TIGHT LOCKING WELL CAP
(5.81)	5		CL	100%	DRY TO MOIST, SOFT, BROWN TO ORANGISH-BROWN CLAYEY FINE SAND TO FINE TO MEDIUM SANDY CLAY	1-1-2-4 (4-6')	0.0	1.2		GROUT
	10		CL	100%	MOIST, SOFT TO MEDIUM STIFF, BROWN TO ORANGISH-BROWN CLAYEY FINE TO MEDIUM SAND, SOME FINE SANDY CLAY	1-5-7-8 (9-11')	0.0	2.0		BENTONITE SEAL
	15		SC	100%	WET, MEDIUM STIFF TO STIFF, BROWN TO ORANGISH-BROWN CLAYEY FINE SAND, SOME WHITE FINE SANDY CLAY LENSES, REDDISH-BROWN/BROWN MOTTLING	6-8-8-10 (14-16')	0.0	0.5		2" SCH 40 PVC 0.010" SLOTTED WELL SCREEN
	18				BORING TERMINATED @ 18 FT					SAND PACK
	20									8" DIAMETER BOREHOLE
	25									

Completion Depth: 18 FT
Date Boring Started: 6-4-03
Date Boring Completed: 6-4-03
Engineer/Geologist: SHANNON L. COTTRILL
Drilling Contractor: SAEDACCO, INC.

Remarks.

0	BNR	7/14/03	SLC	MSC
Revision	DrawnBy	Date	Checked	Approved



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LOG OF BORING: MW-3

Sheet 1 of 1

(15:35-16:40)

Project: Goodrich-Delavan
Job No. GDR-006
Location: Bamberg, South Carolina

Surface Elev: 101.11 FT
Top of Casing Elev: 100.90 FT Relative to a 100.00 FT Datum Point
Drilling Rig/Method: Dietrich D-50/Track Rig/HSA 4.25"
Sampling Method: Split-Spoon Sampler

Elevation, feet	Depth, feet	Sampler Graphics	USCS Symbol	Recovery %	MATERIAL DESCRIPTION (The stratification lines represent approximate boundaries. The transition may be gradual.)	SPT, Blow Counts	BKG.	FID (ppm)	SAMP.	WELL DIAGRAM
	0		SM		DRY, SOFT TO MEDIUM SOFT, BROWN FINE SAND, SOME DARK SILT (ORGANIC)					FLUSH MOUNTED WELL HEAD WITH WATER TIGHT LOCKING WELL CAP
	5		CL	100%	DRY TO MOIST, BROWN TO LIGHT GRAY FINE SAND GRADING TO LIGHT GRAY FINE TO MEDIUM SANDY CLAY	2-4-5-8 (4-6')	0.0	1.3		GROUT
	10		CL	100%	DRY TO MOIST, BROWN TO ORANGISH-BROWN FINE SAND GRADING TO FINE TO MEDIUM SANDY CLAY, SOME WHITE FINE SAND LENSES	4-7-7-9 (9-11')	0.0	2.1		BENTONITE SEAL
	15		CL		BECOMING WET @ 16 FT	(14-16')				2" SCH 40 PVC 0.010" SLOTTED WELL SCREEN
	20				BORING TERMINATED @ 18 FT					SAND PACK
	25									8" DIAMETER BOREHOLE

Completion Depth: 18 FT
Date Boring Started: 6-3-03
Date Boring Completed: 6-4-03
Engineer/Geologist: SHANNON L. COTTRILL
Drilling Contractor: SAEDACCO, INC.

Remarks.

0	BNR	7/14/03	SLC	MSC	
Revision	DrawnBy	Date	Checked	Approved	



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Charlotte, North Carolina
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LOG OF BORING: MW-4

(14:00-14:45)

Project: Goodrich-Delavan
Job No GDR-006
Location: Bamberg, South Carolina

Surface Elev: 100.29 FT
Top of Casing Elev: 99.99 FT Relative to a 100.00 FT Datum Point
Drilling Rig/Method: Dietrich D-50/Track Rig/HSA 4.25"
Sampling Method: Split-Spoon Sampler

Elevation, feet	Depth, feet	Sampler Graphics	USCS Symbol	Recovery %	MATERIAL DESCRIPTION (The stratification lines represent approximate boundaries. The transition may be gradual.)	SPT, Blow Counts	BKG.	FID (ppm)	SAMP.	WELL DIAGRAM
	0		SM		DRY, SOFT, DARK BROWN TO BROWN SILTY FINE SAND					
(4.11)	5		SC	90%	DRY TO MOIST, SOFT TO MEDIUM STIFF, BROWN TO LIGHT GRAY FINE TO MEDIUM SANDY CLAY GRADING TO CLAYEY FINE SAND	2-6-11-10 (4-6')	0.0	1.3		
	10		CL	100%	DRY TO MOIST, SOFT TO MEDIUM STIFF, BROWN TO LIGHT GRAY FINE TO MEDIUM SANDY CLAY, SOME BROWN AND GRAY FINE SAND LENSES	1-5-5-8 (9-11')	0.0	3.8		
	15				BORING TERMINATED @ 14 FT					
	20									
	25									

Completion Depth: 14 FT
Date Boring Started: 6-3-03
Date Boring Completed: 6-4-03
Engineer/Geologist: SHANNON L. COTTRILL
Drilling Contractor SAEDACCO, INC.

Remarks

0	BNR	7/14/03	SLC	MSC	
Revision	DrawnBy	Date	Checked	Approved	



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A Professional Corporation

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Charlotte, North Carolina
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LOG OF BORING: MW-5

Sheet 1 of 1

(11:40-12:20)

Project: Goodrich-Delavan
Job No: GDR-006
Location: Bamberg, South Carolina

Surface Elev: 98.88 FT
Top of Casing Elev: 98.52 FT Relative to a 100.00 FT Datum Point
Drilling Rig/Method: Dietrich D-50/Track Rig/HSA 4.25"
Sampling Method: Split-Spoon Sampler

Elevation, feet	Depth, feet	Sampler Graphics	USCS Symbol	Recovery %	MATERIAL DESCRIPTION (The stratification lines represent approximate boundaries. The transition may be gradual.)	SPT, Blow Counts	BKG.	FID (ppm)	SAMP.	WELL DIAGRAM
(4.72)	0		SM		DRY, BROWNISH-YELLOW FINE TO MEDIUM SAND, SOME DARK BROWN SILT (ORGANIC)					FLUSH MOUNTED WELL HEAD WITH WATER TIGHT LOCKING WELL CAP
	5		SC	90%	DRY TO MOIST, SOFT TO MEDIUM STIFF, ORANGISH-BROWN FINE TO MEDIUM SANDY CLAY GRADING CLAYEY FINE TO MEDIUM SAND	1-3-5-8 (4-6')	0.0	1.2		GROUT
	10		CL	100%	MOIST, SOFT TO MEDIUM STIFF, ORANGISH-BROWN FINE TO MEDIUM SANDY CLAY, SOME WHITE FINE SAND LENSES	2-5-6-8 (9-11')	0.0	0.8		BENTONITE SEAL
	15				BORING TERMINATED @ 14 FT					2" SCH 40 PVC 0.010" SLOTTED WELL SCREEN
	20									SAND PACK
	25									8" DIAMETER BOREHOLE

Completion Depth: 14 FT
Date Boring Started: 6-3-03
Date Boring Completed: 6-4-03
Engineer/Geologist: SHANNON L. COTTRILL
Drilling Contractor: SAEDACCO, INC

Remarks

0	BNR	7/14/03	SLC	MSC	
Revision	DrawnBy	Date	Checked	Approved	

S:\AAA\Master Projects\Goodrich\GDR-006_Bamberg\FIGURES\Boring Logs\MW-5.dwg, 1.1



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A Professional Corporation

501 Minuet Lane Suite 101
Charlotte, North Carolina
(704)586-0007 (704)586-0373-fax

LOG OF BORING: MW-6

Sheet 1 of 1

(10:10-11:30)

Project: Goodrich-Delavan
Job No: GDR-006
Location: Bamberg, South Carolina

Surface Elev: 96.51 FT
Top of Casing Elev: 96.25 FT Relative to a 100.00 FT Datum Point
Drilling Rig/Method: Dietrich D-50/Track Rig/HSA 4.25"
Sampling Method: Split-Spoon Sampler

Elevation, feet	Depth, feet	Sampler Graphics	USCS Symbol	Recovery %	MATERIAL DESCRIPTION (The stratification lines represent approximate boundaries. The transition may be gradual.)	SPT, Blow Counts	BKG.	FID (ppm)	SAMP.	WELL DIAGRAM
(2.40)	0		SM		DRY, BROWNISH-YELLOW FINE TO MEDIUM SAND, SOME SILT (ORGANIC)					FLUSH MOUNTED WELL HEAD WITH WATER TIGHT LOCKING WELL CAP
	5		SC	95%	DRY TO MOIST, SOFT TO MEDIUM STIFF, ORANGISH-BROWN FINE SANDY CLAY TO CLAYEY FINE TO MEDIUM SAND, SOME WHITE SAND LENSES	4-7-8-8 (4-6')	0.0	0.0		GROUT
	10		SM	80%	WET, SOFT, ORANGISH-BROWN MEDIUM SAND	3-5-4-3 (9-11')	0.0	0.0		BENTONITE SEAL
	15		SC	90%	WET TO MOIST, SOFT, ORANGISH-BROWN MEDIUM SAND GRADING TO WHITE FINE SANDY CLAY, SOME REDDISH-BROWN VEINS APPARENT	1-1-2-2 (9-11')	0.0	1.2		2" SCH 40 PVC 0.010" SLOTTED WELL SCREEN
					BORING TERMINATED @ 16 FT					SAND PACK
	20									8" DIAMETER BOREHOLE
	25									

Completion Depth: 14 FT
Date Boring Started: 6-3-03
Date Boring Completed: 6-4-03
Engineer/Geologist: SHANNON L. COTTRILL
Drilling Contractor: SAEDACCO, INC.

Remarks.

0	BNR	7/14/03	SLC	MSC	
Revision	DrawnBy	Date	Checked	Approved	

INSTRUCTIONS

Water Well Record

This form is to be completed by an SC Certified Water Well Driller within thirty days of completion of the well. One copy is to be submitted to SCDHEC, another is intended for the well owner, and the final copy is for the well driller. In most cases, well location, owner, driller and other administrative information can be obtained from the Notice of Intent form. If additional comments are necessary, attach those on a separate sheet.

1. Include the name and present mailing address and telephone number of the well owner. This can be a tract owner or developer in the case of a new subdivision.
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6. Insert the eight-digit number assigned when the Notice of Intent was submitted for a residential or irrigation well. This space can also be used for the SCDHEC site identification number.
7. Check box indicating use.
8. Indicate the total depth in the space provided; fill in the requested dates.
9. Check the box indicating the drilling method.
10. Check appropriate boxes and complete the information requested for the casing.
11. Complete the information requested for the screen; check the appropriate box.
12. Measure the static water level 24 hours after well completion and provide the measurement in the space.
13. Provide pumping level, time, and rates in the appropriate spaces.
14. Indicate whether these analyses were run.
15. Provide the requested information on filter pack.
16. Check the appropriate boxes and provide the type and depth of the grout.
17. Complete the requested information concerning the nearest source of possible contamination.
18. If installed, provide the information requested concerning the pump.
19. Indicate name, SC certification number, address and business or mobile (or both) telephone number and fax number for the well driller.
20. Sign and date the form.

The completed Form 1903 should be submitted to the SCDHEC, Bureau of Water, Private Well Program, 2600 Bull Street, Columbia, SC 29201-1708.



Water Well Record Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:

Name: Delavan Spray Technology
(last) (first)

Address: Hwy 301 South

City: Bamberg State: SC Zip: _____

Telephone: Work: _____

Home: _____

2. LOCATION OF WELL:

COUNTY:

Name: Delavan Spray Technology

Street Address: Hwy 301 South

City: Bamberg Zip: _____

Latitude: _____

Longitude: _____

3. PUBLIC SYSTEM NAME:

PUBLIC SYSTEM NUMBER:

4. ABANDONMENT:

☐ Yes ☒ No

Grouted Depth: from _____ ft. to _____ ft.

Formation Description

*Thickness
of
Stratum

Depth to
Bottom of
Stratum

Sandy Clay

18'

18'

*Indicate Water Bearing Zones

(Use a 2nd sheet if needed)

5. REMARKS:

6. PERMIT NUMBER:

7. USE:

☐ Residential

☐ Public Supply

☐ Process

☐ Irrigation

☐ Air Conditioning

☐ Emergency

☐ Test Well

☐ Monitor Well

☐ Replacement

8. WELL DEPTH (completed)

Date Started: 6-4-03

18 ft.

Date Completed: 6-4-03

9. TYPE

☐ Mud Rotary

☐ Jetted

☒ Bored

☐ Dug

☐ Air Rotary

☐ Driven

☐ Cable tool

☐ Other

10. CASING:

☐ Threaded

☐ Welded

Diam.: 2

Type: ☒ PVC

☐ Galvanized

☐ Steel

☐ Other

0 in. to 3 ft. depth

 in. to ft. depth

Height: Above/Below

Surface _____ ft.

Weight _____ lb./ft.

Drive Shoe? ☐ Yes ☐ No

11. SCREEN

Type: PVC

Diam.: 2"

Slot/Gauge: 0.10

Length: 15'

Set Between: 3 ft. and 4 ft.

 ft. and ft.

NOTE: MULTIPLE SCREENS

USE SECOND SHEET

Sieve Analysis ☐ Yes (please enclose) ☐ No

12. STATIC WATER LEVEL

5 ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.

 ft. after hrs. Pumping G.P.M.

Pumping Test: ☐ Yes (please enclose) ☐ No

Yield: _____

14. WATER QUALITY

Chemical Analysis ☐ Yes ☐ No

Bacterial Analysis ☐ Yes ☐ No

Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack)

☐ Yes ☒ No

Installed from 2 ft. to 18 ft.

Effective size #20

Uniformity Coefficient

16. WELL GROUTED?

☒ Yes ☐ No

☐ Neat Cement

☐ Bentonite

☐ Bentonite/Cement

☐ Other

Depth: From 0 ft. to 1 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:

 ft. direction

Type

Well Disinfected ☐ Yes ☐ No

Type:

Amount:

18. PUMP: Date installed:

Not installed ☐

Mfr. Name:

Model No.:

H.P.

Volts

Length of drop pipe ft.

Capacity gpm

TYPE: ☐ Submersible

☐ Jet (shallow)

☐ Turbine

☐ Jet (deep)

☐ Reciprocating

☐ Centrifugal

19. WELL DRILLER:

Gary Skoglund

CERT. NO.: B01403

Address: 10401 John Price Rd

Charlotte NC 28273

Telephone No. 8008490353

Fax No.:

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under

my direction and this report is true to the best of my knowledge and belief.

Signed: [Signature]

Authorized Representative

Date: 6-4-03

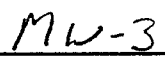
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2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC 1903 (03/2002) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

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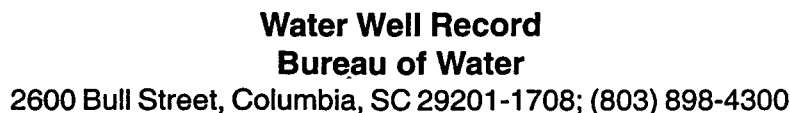
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Appendix B

Laboratory Analytical Data



ENVIRONMENTAL SCIENCE CORP.

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Shannon Cottrill
Hart & Hickman, PC
501 Minuet Lane #101
Charlotte, NC 28217

June 10, 2003

Date Received : June 06, 2003
Description : Goodrich Delavan
Sample ID : MW-1
Collected By : Shannon Cottrill
Collection Date : 06/04/03 18:15

ESC Sample # : L116524-01

Site ID : SC

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	2500	ug/l	8260B	06/08/03	50
Acrolein	BDL	2500	ug/l	8260B	06/08/03	50
Acrylonitrile	BDL	2500	ug/l	8260B	06/08/03	50
Benzene	BDL	50.	ug/l	8260B	06/08/03	50
Bromobenzene	BDL	50.	ug/l	8260B	06/08/03	50
Bromodichloromethane	BDL	50.	ug/l	8260B	06/08/03	50
Bromoform	BDL	50.	ug/l	8260B	06/08/03	50
Bromomethane	BDL	50.	ug/l	8260B	06/08/03	50
n-Butylbenzene	BDL	50.	ug/l	8260B	06/08/03	50
sec-Butylbenzene	BDL	50.	ug/l	8260B	06/08/03	50
tert-Butylbenzene	BDL	50.	ug/l	8260B	06/08/03	50
Carbon tetrachloride	BDL	50.	ug/l	8260B	06/08/03	50
Chlorobenzene	BDL	50.	ug/l	8260B	06/08/03	50
Chlorodibromomethane	BDL	50.	ug/l	8260B	06/08/03	50
Chloroethane	BDL	50.	ug/l	8260B	06/08/03	50
2-Chloroethyl vinyl ether	BDL	2500	ug/l	8260B	06/08/03	50
Chloroform	BDL	250	ug/l	8260B	06/08/03	50
Chloromethane	140	50.	ug/l	8260B	06/08/03	50
2-Chlorotoluene	BDL	50.	ug/l	8260B	06/08/03	50
4-Chlorotoluene	BDL	50.	ug/l	8260B	06/08/03	50
1,2-Dibromo-3-Chloropropane	BDL	100	ug/l	8260B	06/08/03	50
1,2-Dibromoethane	BDL	50.	ug/l	8260B	06/08/03	50
Dibromomethane	BDL	50.	ug/l	8260B	06/08/03	50
1,2-Dichlorobenzene	BDL	50.	ug/l	8260B	06/08/03	50
1,3-Dichlorobenzene	BDL	50.	ug/l	8260B	06/08/03	50
1,4-Dichlorobenzene	BDL	50.	ug/l	8260B	06/08/03	50
Dichlorodifluoromethane	BDL	50.	ug/l	8260B	06/08/03	50
1,1-Dichloroethane	BDL	50.	ug/l	8260B	06/08/03	50
1,2-Dichloroethane	BDL	50.	ug/l	8260B	06/08/03	50
1,1-Dichloroethene	BDL	50.	ug/l	8260B	06/08/03	50
cis-1,2-Dichloroethene	BDL	50.	ug/l	8260B	06/08/03	50
trans-1,2-Dichloroethene	BDL	50.	ug/l	8260B	06/08/03	50
1,2-Dichloropropane	BDL	50.	ug/l	8260B	06/08/03	50
1,1-Dichloropropene	BDL	50.	ug/l	8260B	06/08/03	50
1,3-Dichloropropane	BDL	50.	ug/l	8260B	06/08/03	50
cis-1,3-Dichloropropene	BDL	50.	ug/l	8260B	06/08/03	50
trans-1,3-Dichloropropene	BDL	50.	ug/l	8260B	06/08/03	50
2,2-Dichloropropane	BDL	50.	ug/l	8260B	06/08/03	50

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Laboratory Certification Numbers:

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233



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Mr. Shannon Cottrill
Hart & Hickman, PC
501 Minuet Lane #101
Charlotte, NC 28217

June 10, 2003

Date Received : June 06, 2003
Description : Goodrich Delavan

ESC Sample # : L116524-01

Sample ID : MW-1

Site ID : SC

Collected By : Shannon Cottrill
Collection Date : 06/04/03 18:15

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	50.	ug/l	8260B	06/08/03	50
Ethylbenzene	BDL	50.	ug/l	8260B	06/08/03	50
Hexachlorobutadiene	BDL	50.	ug/l	8260B	06/08/03	50
Isopropylbenzene	BDL	50.	ug/l	8260B	06/08/03	50
p-Isopropyltoluene	BDL	50.	ug/l	8260B	06/08/03	50
2-Butanone (MEK)	BDL	2500	ug/l	8260B	06/08/03	50
Methylene Chloride	BDL	250	ug/l	8260B	06/08/03	50
4-Methyl-2-pentanone (MIBK)	BDL	2500	ug/l	8260B	06/08/03	50
Methyl tert-butyl ether	BDL	50.	ug/l	8260B	06/08/03	50
Naphthalene	BDL	250	ug/l	8260B	06/08/03	50
n-Propylbenzene	BDL	50.	ug/l	8260B	06/08/03	50
Styrene	BDL	50.	ug/l	8260B	06/08/03	50
1,1,1,2-Tetrachloroethane	BDL	50.	ug/l	8260B	06/08/03	50
1,1,2,2-Tetrachloroethane	BDL	50.	ug/l	8260B	06/08/03	50
Tetrachloroethene	15000	50.	ug/l	8260B	06/08/03	50
Toluene	BDL	250	ug/l	8260B	06/08/03	50
1,2,3-Trichlorobenzene	BDL	50.	ug/l	8260B	06/08/03	50
1,2,4-Trichlorobenzene	BDL	50.	ug/l	8260B	06/08/03	50
1,1,1-Trichloroethane	BDL	50.	ug/l	8260B	06/08/03	50
1,1,2-Trichloroethane	BDL	50.	ug/l	8260B	06/08/03	50
Trichloroethene	BDL	50.	ug/l	8260B	06/08/03	50
Trichlorofluoromethane	BDL	50.	ug/l	8260B	06/08/03	50
1,2,3-Trichloropropane	BDL	50.	ug/l	8260B	06/08/03	50
1,2,4-Trimethylbenzene	BDL	50.	ug/l	8260B	06/08/03	50
1,3,5-Trimethylbenzene	BDL	50.	ug/l	8260B	06/08/03	50
Vinyl chloride	BDL	50.	ug/l	8260B	06/08/03	50
Xylenes, Total	BDL	150	ug/l	8260B	06/08/03	50
Surrogate Recovery						
Toluene-d8	99.		% Rec.	8260B	06/08/03	50
Dibromofluoromethane	98.		% Rec.	8260B	06/08/03	50
4-Bromofluorobenzene	110		% Rec.	8260B	06/08/03	50


Terrie Fudge, ESC Representative

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Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/10/03 15:40 Printed: 06/10/03 15:40



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Charlotte, NC 28217

June 10, 2003

Date Received : June 06, 2003
Description : Goodrich Delavan

Sample ID : MW-2

Collected By : Shannon Cottrill
Collection Date : 06/04/03 19:30

ESC Sample # : L116524-02

Site ID : SC

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	06/09/03	1
Acrolein	BDL	50.	ug/l	8260B	06/09/03	1
Acrylonitrile	BDL	50.	ug/l	8260B	06/09/03	1
Benzene	BDL	1.0	ug/l	8260B	06/09/03	1
Bromobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	06/09/03	1
Bromoform	BDL	1.0	ug/l	8260B	06/09/03	1
Bromomethane	BDL	1.0	ug/l	8260B	06/09/03	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	06/09/03	1
Chlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	06/09/03	1
Chloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	06/09/03	1
Chloroform	BDL	5.0	ug/l	8260B	06/09/03	1
Chloromethane	BDL	1.0	ug/l	8260B	06/09/03	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	06/09/03	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dibromo-3-Chloropropane	BDL	2.0	ug/l	8260B	06/09/03	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	06/09/03	1
Dibromomethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Dichlorodifluoromethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	06/09/03	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	06/09/03	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	06/09/03	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Laboratory Certification Numbers:

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

June 10, 2003

Mr. Shannon Cottrill
Hart & Hickman, PC
501 Minuet Lane #101
Charlotte, NC 28217

Date Received : June 06, 2003
Description : Goodrich Delavan

Sample ID : MW-2

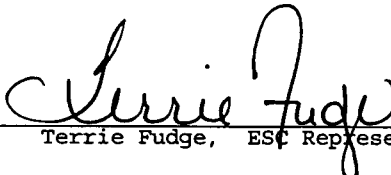
Collected By : Shannon Cottrill
Collection Date : 06/04/03 19:30

ESC Sample # : L116524-02

Site ID : SC

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	1.0	ug/l	8260B	06/09/03	1
Ethylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Hexachlorobutadiene	BDL	1.0	ug/l	8260B	06/09/03	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	06/09/03	1
2-Butanone (MEK)	BDL	50.	ug/l	8260B	06/09/03	1
Methylene Chloride	BDL	5.0	ug/l	8260B	06/09/03	1
4-Methyl-2-pentanone (MIBK)	BDL	50.	ug/l	8260B	06/09/03	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	06/09/03	1
Naphthalene	BDL	5.0	ug/l	8260B	06/09/03	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Styrene	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
Toluene	BDL	5.0	ug/l	8260B	06/09/03	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
Trichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
Trichlorofluoromethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Vinyl chloride	BDL	1.0	ug/l	8260B	06/09/03	1
Xylenes, Total	BDL	3.0	ug/l	8260B	06/09/03	1
Surrogate Recovery						
Toluene-d8	100		% Rec.	8260B	06/09/03	1
Dibromofluoromethane	100		% Rec.	8260B	06/09/03	1
4-Bromofluorobenzene	100		% Rec.	8260B	06/09/03	1


Terrie Fudge, ESC Representative

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Laboratory Certification Numbers:

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Shannon Cottrill
Hart & Hickman, PC
501 Minuet Lane #101
Charlotte, NC 28217

June 10, 2003

Date Received : June 06, 2003
Description : Goodrich Delavan
Sample ID : MW-3
Collected By : Shannon Cottrill
Collection Date : 06/04/03 18:50

ESC Sample # : L116524-03

Site ID : SC

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	06/08/03	1
Acrolein	BDL	50.	ug/l	8260B	06/08/03	1
Acrylonitrile	BDL	50.	ug/l	8260B	06/08/03	1
Benzene	BDL	1.0	ug/l	8260B	06/08/03	1
Bromobenzene	BDL	1.0	ug/l	8260B	06/08/03	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	06/08/03	1
Bromoform	BDL	1.0	ug/l	8260B	06/08/03	1
Bromomethane	BDL	1.0	ug/l	8260B	06/08/03	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	06/08/03	1
Chlorobenzene	BDL	1.0	ug/l	8260B	06/08/03	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	06/08/03	1
Chloroethane	BDL	1.0	ug/l	8260B	06/08/03	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	06/08/03	1
Chloroform	BDL	5.0	ug/l	8260B	06/08/03	1
Chloromethane	BDL	1.0	ug/l	8260B	06/08/03	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	06/08/03	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	06/08/03	1
1,2-Dibromo-3-Chloropropane	BDL	2.0	ug/l	8260B	06/08/03	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	06/08/03	1
Dibromomethane	BDL	1.0	ug/l	8260B	06/08/03	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/08/03	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/08/03	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/08/03	1
Dichlorodifluoromethane	BDL	1.0	ug/l	8260B	06/08/03	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	06/08/03	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	06/08/03	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	06/08/03	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	06/08/03	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	06/08/03	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	06/08/03	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	06/08/03	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	06/08/03	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	06/08/03	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	06/08/03	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	06/08/03	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Laboratory Certification Numbers:

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233



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REPORT OF ANALYSIS

Mr. Shannon Cottrill
Hart & Hickman, PC
501 Minuet Lane #101
Charlotte, NC 28217

June 10, 2003

Date Received : June 06, 2003
Description : Goodrich Delavan

Sample ID : MW-3

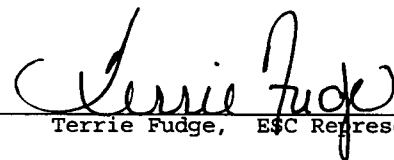
Collected By : Shannon Cottrill
Collection Date : 06/04/03 18:50

ESC Sample # : L116524-03

Site ID : SC

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	1.0	ug/l	8260B	06/08/03	1
Ethylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
Hexachlorobutadiene	BDL	1.0	ug/l	8260B	06/08/03	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	06/08/03	1
2-Butanone (MEK)	BDL	50.	ug/l	8260B	06/08/03	1
Methylene Chloride	BDL	5.0	ug/l	8260B	06/08/03	1
4-Methyl-2-pentanone (MIBK)	BDL	50.	ug/l	8260B	06/08/03	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	06/08/03	1
Naphthalene	BDL	5.0	ug/l	8260B	06/08/03	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
Styrene	BDL	1.0	ug/l	8260B	06/08/03	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	06/08/03	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	06/08/03	1
Tetrachloroethene	74.	1.0	ug/l	8260B	06/08/03	1
Toluene	BDL	5.0	ug/l	8260B	06/08/03	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	06/08/03	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	06/08/03	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	06/08/03	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	06/08/03	1
Trichloroethene	BDL	1.0	ug/l	8260B	06/08/03	1
Trichlorofluoromethane	BDL	1.0	ug/l	8260B	06/08/03	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	06/08/03	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
Vinyl chloride	BDL	1.0	ug/l	8260B	06/08/03	1
Xylenes, Total	BDL	3.0	ug/l	8260B	06/08/03	1
Surrogate Recovery						
Toluene-d8	99.		% Rec.	8260B	06/08/03	1
Dibromofluoromethane	99.		% Rec.	8260B	06/08/03	1
4-Bromofluorobenzene	100		% Rec.	8260B	06/08/03	1



Terrie Fudge, ESC Representative

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Laboratory Certification Numbers:

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Shannon Cottrill
Hart & Hickman, PC
501 Minuet Lane #101
Charlotte, NC 28217

June 10, 2003

Date Received : June 06, 2003
Description : Goodrich Delavan

Sample ID : MW-4

Collected By : Shannon Cottrill
Collection Date : 06/04/03 15:45

ESC Sample # : L116524-04

Site ID : SC

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	06/09/03	1
Acrolein	BDL	50.	ug/l	8260B	06/09/03	1
Acrylonitrile	BDL	50.	ug/l	8260B	06/09/03	1
Benzene	BDL	1.0	ug/l	8260B	06/09/03	1
Bromobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	06/09/03	1
Bromoform	BDL	1.0	ug/l	8260B	06/09/03	1
Bromomethane	BDL	1.0	ug/l	8260B	06/09/03	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	06/09/03	1
Chlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	06/09/03	1
Chloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	06/09/03	1
Chloroform	BDL	5.0	ug/l	8260B	06/09/03	1
Chloromethane	BDL	1.0	ug/l	8260B	06/09/03	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	06/09/03	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dibromo-3-Chloropropane	BDL	2.0	ug/l	8260B	06/09/03	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	06/09/03	1
Dibromomethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Dichlorodifluoromethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	06/09/03	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	06/09/03	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	06/09/03	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Laboratory Certification Numbers:

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233



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REPORT OF ANALYSIS

Mr. Shannon Cottrill
Hart & Hickman, PC
501 Minuet Lane #101
Charlotte, NC 28217

June 10, 2003

Date Received : June 06, 2003
Description : Goodrich Delavan
Sample ID : MW-4
Collected By : Shannon Cottrill
Collection Date : 06/04/03 15:45

ESC Sample # : L116524-04

Site ID : SC

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	1.0	ug/l	8260B	06/09/03	1
Ethylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Hexachlorobutadiene	BDL	1.0	ug/l	8260B	06/09/03	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	06/09/03	1
2-Butanone (MEK)	BDL	50.	ug/l	8260B	06/09/03	1
Methylene Chloride	BDL	5.0	ug/l	8260B	06/09/03	1
4-Methyl-2-pentanone (MIBK)	BDL	50.	ug/l	8260B	06/09/03	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	06/09/03	1
Naphthalene	BDL	5.0	ug/l	8260B	06/09/03	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Styrene	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
Toluene	BDL	5.0	ug/l	8260B	06/09/03	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
Trichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
Trichlorofluoromethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Vinyl chloride	BDL	1.0	ug/l	8260B	06/09/03	1
Xylenes, Total	BDL	3.0	ug/l	8260B	06/09/03	1
Surrogate Recovery						
Toluene-d8	100		% Rec.	8260B	06/09/03	1
Dibromofluoromethane	100		% Rec.	8260B	06/09/03	1
4-Bromofluorobenzene	99.		% Rec.	8260B	06/09/03	1


Terrie Fudge, ESC Representative

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Laboratory Certification Numbers:

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:

The reported analytical results relate only to the sample submitted.

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Shannon Cottrill
Hart & Hickman, PC
501 Minuet Lane #101
Charlotte, NC 28217

June 10, 2003

Date Received : June 06, 2003
Description : Goodrich Delavan

Sample ID : MW-5

Collected By : Shannon Cottrill
Collection Date : 06/04/03 16:45

ESC Sample # : L116524-05

Site ID : SC

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	06/08/03	1
Acrolein	BDL	50.	ug/l	8260B	06/08/03	1
Acrylonitrile	BDL	50.	ug/l	8260B	06/08/03	1
Benzene	BDL	1.0	ug/l	8260B	06/08/03	1
Bromobenzene	BDL	1.0	ug/l	8260B	06/08/03	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	06/08/03	1
Bromoform	BDL	1.0	ug/l	8260B	06/08/03	1
Bromomethane	BDL	1.0	ug/l	8260B	06/08/03	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	06/08/03	1
Chlorobenzene	BDL	1.0	ug/l	8260B	06/08/03	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	06/08/03	1
Chloroethane	BDL	1.0	ug/l	8260B	06/08/03	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	06/08/03	1
Chloroform	BDL	5.0	ug/l	8260B	06/08/03	1
Chloromethane	BDL	1.0	ug/l	8260B	06/08/03	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	06/08/03	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	06/08/03	1
1,2-Dibromo-3-Chloropropane	BDL	2.0	ug/l	8260B	06/08/03	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	06/08/03	1
Dibromomethane	BDL	1.0	ug/l	8260B	06/08/03	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/08/03	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/08/03	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/08/03	1
Dichlorodifluoromethane	BDL	1.0	ug/l	8260B	06/08/03	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	06/08/03	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	06/08/03	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	06/08/03	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	06/08/03	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	06/08/03	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	06/08/03	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	06/08/03	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	06/08/03	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	06/08/03	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	06/08/03	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	06/08/03	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Laboratory Certification Numbers:

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233



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Est. 1970

REPORT OF ANALYSIS

Mr. Shannon Cottrill
Hart & Hickman, PC
501 Minuet Lane #101
Charlotte, NC 28217

June 10, 2003

Date Received : June 06, 2003
Description : Goodrich Delavan

Sample ID : MW-5

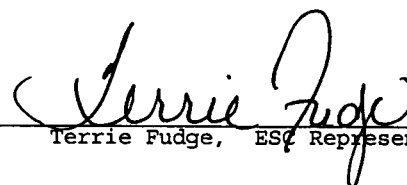
Collected By : Shannon Cottrill
Collection Date : 06/04/03 16:45

ESC Sample # : L116524-05

Site ID : SC

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	1.0	ug/l	8260B	06/08/03	1
Ethylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
Hexachlorobutadiene	BDL	1.0	ug/l	8260B	06/08/03	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	06/08/03	1
2-Butanone (MEK)	BDL	50.	ug/l	8260B	06/08/03	1
Methylene Chloride	BDL	5.0	ug/l	8260B	06/08/03	1
4-Methyl-2-pentanone (MIBK)	BDL	50.	ug/l	8260B	06/08/03	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	06/08/03	1
Naphthalene	BDL	5.0	ug/l	8260B	06/08/03	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
Styrene	BDL	1.0	ug/l	8260B	06/08/03	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	06/08/03	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	06/08/03	1
Tetrachloroethene	160	1.0	ug/l	8260B	06/08/03	1
Toluene	BDL	5.0	ug/l	8260B	06/08/03	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	06/08/03	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	06/08/03	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	06/08/03	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	06/08/03	1
Trichloroethene	BDL	1.0	ug/l	8260B	06/08/03	1
Trichlorofluoromethane	BDL	1.0	ug/l	8260B	06/08/03	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	06/08/03	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	06/08/03	1
Vinyl chloride	BDL	1.0	ug/l	8260B	06/08/03	1
Xylenes, Total	BDL	3.0	ug/l	8260B	06/08/03	1
Surrogate Recovery						
Toluene-d8	99.		% Rec.	8260B	06/08/03	1
Dibromofluoromethane	98.		% Rec.	8260B	06/08/03	1
4-Bromofluorobenzene	100		% Rec.	8260B	06/08/03	1


Terrie Fudge, ESC Representative

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Laboratory Certification Numbers:

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Shannon Cottrill
Hart & Hickman, PC
501 Minuet Lane #101
Charlotte, NC 28217

June 10, 2003

Date Received : June 06, 2003
Description : Goodrich Delavan
Sample ID : MW-6
Collected By : Shannon Cottrill
Collection Date : 06/04/03 17:15

ESC Sample # : L116524-06

Site ID : SC

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	06/09/03	1
Acrolein	BDL	50.	ug/l	8260B	06/09/03	1
Acrylonitrile	BDL	50.	ug/l	8260B	06/09/03	1
Benzene	BDL	1.0	ug/l	8260B	06/09/03	1
Bromobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	06/09/03	1
Bromoform	BDL	1.0	ug/l	8260B	06/09/03	1
Bromomethane	BDL	1.0	ug/l	8260B	06/09/03	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	06/09/03	1
Chlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	06/09/03	1
Chloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	06/09/03	1
Chloroform	BDL	5.0	ug/l	8260B	06/09/03	1
Chloromethane	BDL	1.0	ug/l	8260B	06/09/03	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	06/09/03	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dibromo-3-Chloropropane	BDL	2.0	ug/l	8260B	06/09/03	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	06/09/03	1
Dibromomethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Dichlorodifluoromethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	06/09/03	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	06/09/03	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	06/09/03	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Laboratory Certification Numbers:

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Shannon Cottrill
Hart & Hickman, PC
501 Minuet Lane #101
Charlotte, NC 28217

June 10, 2003

Date Received : June 06, 2003
Description : Goodrich Delavan

Sample ID : MW-6

Collected By : Shannon Cottrill
Collection Date : 06/04/03 17:15

ESC Sample # : L116524-06

Site ID : SC

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	1.0	ug/l	8260B	06/09/03	1
Ethylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Hexachlorobutadiene	BDL	1.0	ug/l	8260B	06/09/03	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	06/09/03	1
2-Butanone (MEK)	BDL	50.	ug/l	8260B	06/09/03	1
Methylene Chloride	BDL	5.0	ug/l	8260B	06/09/03	1
4-Methyl-2-pentanone (MIBK)	BDL	50.	ug/l	8260B	06/09/03	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	06/09/03	1
Naphthalene	BDL	5.0	ug/l	8260B	06/09/03	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Styrene	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
Toluene	BDL	5.0	ug/l	8260B	06/09/03	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
Trichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
Trichlorofluoromethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Vinyl chloride	BDL	1.0	ug/l	8260B	06/09/03	1
Xylenes, Total	BDL	3.0	ug/l	8260B	06/09/03	1
Surrogate Recovery						
Toluene-d8	100		% Rec.	8260B	06/09/03	1
Dibromofluoromethane	100		% Rec.	8260B	06/09/03	1
4-Bromofluorobenzene	100		% Rec.	8260B	06/09/03	1


Terrie Fudge, ESC Representative

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Laboratory Certification Numbers:

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Shannon Cottrill
Hart & Hickman, PC
501 Minuet Lane #101
Charlotte, NC 28217

June 10, 2003

Date Received : June 06, 2003
Description : Goodrich Delavan

Sample ID : TRIP BLANK

Collected By : Shannon Cottrill
Collection Date : 06/04/03 00:00

ESC Sample # : L116524-07

Site ID : SC

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	06/09/03	1
Acrolein	BDL	50.	ug/l	8260B	06/09/03	1
Acrylonitrile	BDL	50.	ug/l	8260B	06/09/03	1
Benzene	BDL	1.0	ug/l	8260B	06/09/03	1
Bromobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	06/09/03	1
Bromoform	BDL	1.0	ug/l	8260B	06/09/03	1
Bromomethane	BDL	1.0	ug/l	8260B	06/09/03	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	06/09/03	1
Chlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	06/09/03	1
Chloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	06/09/03	1
Chloroform	BDL	50.	ug/l	8260B	06/09/03	1
Chloromethane	BDL	1.0	ug/l	8260B	06/09/03	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	06/09/03	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dibromo-3-Chloropropane	BDL	2.0	ug/l	8260B	06/09/03	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	06/09/03	1
Dibromomethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Dichlorodifluoromethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	06/09/03	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	06/09/03	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	06/09/03	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Laboratory Certification Numbers:

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233



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Est. 1970

REPORT OF ANALYSIS

Mr. Shannon Cottrill
Hart & Hickman, PC
501 Minuet Lane #101
Charlotte, NC 28217

June 10, 2003

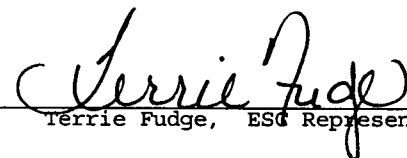
Date Received : June 06, 2003
Description : Goodrich Delavan
Sample ID : TRIP BLANK
Collected By : Shannon Cottrill
Collection Date : 06/04/03 00:00

ESC Sample # : L116524-07

Site ID : SC

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	1.0	ug/l	8260B	06/09/03	1
Ethylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Hexachlorobutadiene	BDL	1.0	ug/l	8260B	06/09/03	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	06/09/03	1
2-Butanone (MEK)	BDL	50.	ug/l	8260B	06/09/03	1
Methylene Chloride	BDL	5.0	ug/l	8260B	06/09/03	1
4-Methyl-2-pentanone (MIBK)	BDL	50.	ug/l	8260B	06/09/03	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	06/09/03	1
Naphthalene	BDL	5.0	ug/l	8260B	06/09/03	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Styrene	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
Toluene	BDL	5.0	ug/l	8260B	06/09/03	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	06/09/03	1
Trichloroethene	BDL	1.0	ug/l	8260B	06/09/03	1
Trichlorofluoromethane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	06/09/03	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	06/09/03	1
Vinyl chloride	BDL	1.0	ug/l	8260B	06/09/03	1
Xylenes, Total	BDL	3.0	ug/l	8260B	06/09/03	1
Surrogate Recovery						
Toluene-d8	100		% Rec.	8260B	06/09/03	1
Dibromofluoromethane	98.		% Rec.	8260B	06/09/03	1
4-Bromofluorobenzene	100		% Rec.	8260B	06/09/03	1


Terrie Fudge, ESC Representative

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Laboratory Certification Numbers:

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/10/03 15:40 Printed: 06/10/03 15:40

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L116524-01	Tetrachloroethene	E
	1,2,4-Trichlorobenzene	J4
L116524-02	Acrolein	J4
	1,4-Dichlorobenzene	J4
L116524-03	1,2,4-Trichlorobenzene	J4
L116524-04	Acrolein	J4
	1,4-Dichlorobenzene	J4
L116524-05	1,2,4-Trichlorobenzene	J4
L116524-06	1,4-Dichlorobenzene	J4
L116524-07	1,2,4-Trichlorobenzene	J4

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
E	GTL (EPA) - Greater than upper calibration limit: Actual value is known to be greater than the upper calibration range.
J4	The associated batch QC was outside the established quality control range for accuracy.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

Control Limits

2-Fluorophenol	31-119	Nitrobenzene-d5	43-118	Dibromfluoromethane	72-125
Phenol-d5	12-134	2-Fluorobiphenyl	45-128	Toluene-d8	79-120
2,4,6-Tribromophenol	51-141	Terphenyl-d14	43-137	4-Bromofluorobenzene	66-131

- TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.



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Est. 1970

REPORT OF ANALYSIS

Mr. Shannon Cottrill
Hart & Hickman, PC
501 Minuet Lane #101
Charlotte, NC 28217

June 13, 2003

Date Received : June 06, 2003
Description : Goodrich Delavan

ESC Sample # : L117078-01

Sample ID : SW-1

Site ID :

Collected By : Shannon Cottrill
Collection Date : 06/05/03 10:00

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	06/12/03	1
Acrolein	BDL	50.	ug/l	8260B	06/12/03	1
Acrylonitrile	BDL	50.	ug/l	8260B	06/12/03	1
Benzene	BDL	1.0	ug/l	8260B	06/12/03	1
Bromobenzene	BDL	1.0	ug/l	8260B	06/12/03	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	06/12/03	1
Bromoform	BDL	1.0	ug/l	8260B	06/12/03	1
Bromomethane	BDL	1.0	ug/l	8260B	06/12/03	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	06/12/03	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	06/12/03	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	06/12/03	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	06/12/03	1
Chlorobenzene	BDL	1.0	ug/l	8260B	06/12/03	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	06/12/03	1
Chloroethane	BDL	1.0	ug/l	8260B	06/12/03	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	06/12/03	1
Chloroform	BDL	5.0	ug/l	8260B	06/12/03	1
Chloromethane	BDL	1.0	ug/l	8260B	06/12/03	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	06/12/03	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	06/12/03	1
1,2-Dibromo-3-Chloropropane	BDL	2.0	ug/l	8260B	06/12/03	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	06/12/03	1
Dibromomethane	BDL	1.0	ug/l	8260B	06/12/03	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/12/03	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/12/03	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	06/12/03	1
Dichlorodifluoromethane	BDL	1.0	ug/l	8260B	06/12/03	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	06/12/03	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	06/12/03	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	06/12/03	1
cis-1,2-Dichloroethene	1.0	1.0	ug/l	8260B	06/12/03	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	06/12/03	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	06/12/03	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	06/12/03	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	06/12/03	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	06/12/03	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	06/12/03	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	06/12/03	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Laboratory Certification Numbers:

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
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REPORT OF ANALYSIS

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Charlotte, NC 28217

June 13, 2003

Date Received : June 06, 2003
Description : Goodrich Delavan

ESC Sample # : L117078-01

Sample ID : SW-1

Site ID :

Collected By : Shannon Cottrill
Collection Date : 06/05/03 10:00

Project # : GDR-006

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	1.0	ug/l	8260B	06/12/03	1
Ethylbenzene	BDL	1.0	ug/l	8260B	06/12/03	1
Hexachlorobutadiene	BDL	1.0	ug/l	8260B	06/12/03	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	06/12/03	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	06/12/03	1
2-Butanone (MEK)	BDL	50.	ug/l	8260B	06/12/03	1
Methylene Chloride	BDL	5.0	ug/l	8260B	06/12/03	1
4-Methyl-2-pentanone (MIBK)	BDL	50.	ug/l	8260B	06/12/03	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	06/12/03	1
Naphthalene	BDL	5.0	ug/l	8260B	06/12/03	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	06/12/03	1
Styrene	BDL	1.0	ug/l	8260B	06/12/03	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	06/12/03	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	06/12/03	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	06/12/03	1
Toluene	BDL	5.0	ug/l	8260B	06/12/03	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	06/12/03	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	06/12/03	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	06/12/03	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	06/12/03	1
Trichloroethene	BDL	1.0	ug/l	8260B	06/12/03	1
Trichlorofluoromethane	BDL	1.0	ug/l	8260B	06/12/03	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	06/12/03	1
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1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	06/12/03	1
Vinyl chloride	BDL	1.0	ug/l	8260B	06/12/03	1
Xylenes, Total	BDL	3.0	ug/l	8260B	06/12/03	1
Surrogate Recovery						
Toluene-d8	99.		% Rec.	8260B	06/12/03	1
Dibromofluoromethane	94.		% Rec.	8260B	06/12/03	1
4-Bromofluorobenzene	100		% Rec.	8260B	06/12/03	1


Terrie Fudge, ESC Representative

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Reported: 06/13/03 15:51 Printed: 06/13/03 15:51

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L117078-01	2-Chloroethyl vinyl ether	J4
	2,2-Dichloropropane	J4
	Methyl tert-butyl ether	J4

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.

Qualifier Report Information

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2,4,6-Tribromophenol	51-141	Terphenyl-d14	43-137	4-Bromofluorobenzene	66-131

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