APPENDIX C

GROUNDWATER SAMPLE COLLECTION LOGS

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-1
Site Location: Hattiesburg, Mississippi

Start Date: 10/14/2002 Finish Date: 10/14/2002
Sample Technician: Charles Coney and Rodney Sartor
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 17
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 11.47
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 1.9

Water Level Measurements		
Date	Time	Water Level (TOC)
10/14/2002	9:31	5.53

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
10/14/2002 10:20	2	6.19	125.6	20.5	13.7			
10:30		6.14	74.9	20.7	13.7			
10:40		6.05	140.2	20.8	13.2			
11:02		6.06	129.5	22.5	13.3			
11:15		5.91	127.0	22.5	14.3			

Sample Identification:

Weather Conditions During Sampling:

Comments:

Signature: Date:

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
10/14/2002	11:30		

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-4
Site Location: Hattiesburg, Mississippi

Start Date: 10/14/2002 Finish Date: 10/14/2002
Sample Technician: Charles Coney and Rodney Sartor
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 15
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 4.60
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 0.8

Water Level Measurements		
Date	Time	Water Level (TOC)
10/14/2002	12:24	10.40

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
10/14/2002 12:40	0.5	6.07	644.0	22.7	7.18			
12:50	1.0	6.16	621.0	21.7	5.03			
12:55	1.25	6.12	566.0	21.7	4.67			

Sample Identification:

Weather Conditions During Sampling:

Comments:

Signature: Date:

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
10/14/2002	13:05		

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-5
Site Location: Hattiesburg, Mississippi

Start Date: 10/14/2002 Finish Date: 10/14/2002
Sample Technician: Charles Coney and Rodney Sartor
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 15
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 6.3
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 1.1

Water Level Measurements		
Date	Time	Water Level (TOC)
10/14/2002	13:47	8.7

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
10/14/2002 14:05		6.68	484.0	26.2	3.28			
14:16		6.78	483.0	25.8	2.35			
14:20		6.72	396.0	25.5	2.52			
14:22		6.71	896.0	25.2	1.69			
14:25	2.5	6.72	560.0	25.1	1.61			
14:30	3.5	6.64	734.0	25.3	1.43			
14:34		6.64	428.0	24.9	2.87			
14:37		6.6	555.0	24.6	1.60			
14:41	4	6.54	325.0	24.6	1.67			
14:44		6.51	294.0	24.7	2.28			
14:46	4.5	6.62	416.0	24.4	1.61			
14:49	4.75	6.47	442.0	24.6	1.76			

Sample Identification:

Weather Conditions During Sampling:

Comments:

Signature: Date:

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
10/14/2002	14:50		

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-6
Site Location: Hattiesburg, Mississippi

Start Date: 10/14/2002 Finish Date: 10/14/2002
Sample Technician: Charles Coney and Rodney Sartor
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 18
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 9.95
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 1.7

Water Level Measurements		
Date	Time	Water Level (TOC)
10/14/2002	15:52	8.05

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
10/14/2002 16:00		6.72	110.6	24.9	1.93			
16:03		5.75	118.5	24.6	1.58			
16:05		5.68	104.2	24.5	1.26			
16:08		5.56	147.7	24.4	1.26			
16:09		5.61	120.2	24.2	1.09			
16:11		5.57	181.7	24.0	1.26			
16:13		5.63	80.0	23.9	1.48			
16:15		5.55	170.0	24.0	1.30			
16:17		5.57	186.8	24.2	1.18			
16:19		5.49	184.8	24.1	1.05			

Sample Identification:

Weather Conditions During Sampling:

Comments:

Signature: Date:

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
10/14/2002	16:22		

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072

Boring ID: MW-1
Site Location: Hattiesburg, Mississippi

Start Date: 12/4/02 Finish Date: 12/4/02
Sample Technician: Charles Coney
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 20.5
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 15.35
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 2.6

Water Level Measurements		
Date	Time	Water Level (TOC)
12/4/02	9:10	5.15

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
12/4/02 10:04	2.5	6.70	198.1	19.1	9.4	1.36		
10:21	5.0	6.70	181.5	19.6	8.9	0.91		
10:42	7.5	6.71	170.8	20.4	9.0	0.69		

Sample Identification: MW-1

Weather Conditions During Sampling: cloudy and warm, low 60's

Comments: Delivered sample directly to Glenn Jones of Bonner Laboratory

Signature: Spencer Trichell Date: 12/17/02

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
12/4/02	10:45	1 L Amber	none

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-2
Site Location: Hattiesburg, Mississippi

Start Date: 12/4/02 Finish Date: 12/4/02
Sample Technician: Charles Coney
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 20.5
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 14.95
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 2.5

Water Level Measurements		
Date	Time	Water Level (TOC)
12/4/02	15:18	5.55
	15:21	5.70
	15:25	5.70

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
12/4/02 15:25	0.25	5.77	104.6	19.8	5.6	3.40		
15:30	0.5	5.76	103.4	19.8	5.8	2.72		
15:35	0.75	5.68	103.1	19.7	6.7	2.52		
15:40	1.0	5.60	102.9	19.8	4.1	1.98		

Sample Identification: MW-2

Weather Conditions During Sampling: very cloudy, breezy, lower 60's

Comments: Delivered samples directly to Bonner Analytical

Signature: Spencer Trichell Date: 12/17/02

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
12/4/02	15:45	1 L amber	none

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-3
Site Location: Hattiesburg, Mississippi

Start Date: 12/4/02
Finish Date: 12/4/02
Sample Technician: Charles Coney
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 18
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 11.75
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 2.0

Water Level Measurements		
Date	Time	Water Level (TOC)
12/4/02	14:35	6.25
	14:42	6.25

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
12/4/02 14:42	0.5	6.70	122.3	19.8	16	2.90		
14:45	0.75	6.70	131.6	19.5	8.8	2.47		
14:50	1	6.70	119.6	19.5	7.4	2.22		
14:55	1.5	6.70	118.2	19.4	8.2	2.02		

Sample Identification: MW-3

Weather Conditions During Sampling: very cloudy, breezy, lower 60's

Comments: Delivered sample directly to Bonner Laboratory

Signature: Spencer Trichell Date: 12/17/02

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
12/4/02	15:00	1 L amber	none

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-4
Site Location: Hattiesburg, Mississippi

Start Date: 12/4/02
Finish Date: 12/5/02
Sample Technician: Charles Coney
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 18.5
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 8.58
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 1.5

Water Level Measurements		
Date	Time	Water Level (TOC)
12/4/02	10:27	9.92
12/5/02	12:45	9.67
12/5/02	12:55	9.71

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
12/5/02 12:55	0.2	6.22	382.0	19.6	7.3	0.87		
13:00	0.3	6.20	367.0	20.0	6.3	0.61		
13:05	0.4	6.18	363.0	20.1	3.4	0.57		
13:10	0.5	6.17	360.0	20.2	2.9	0.51		

Sample Identification: MW-4

Weather Conditions During Sampling: cloudy, breezy, lower 40's

Comments: _Delivered sample directly to Bonner Laboratory

Signature: Spencer Trichell Date: 12/17/02

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
12/5/02	13:15	1L ambers	none
		40 mL septa vials	HCl

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-5
Site Location: Hattiesburg, Mississippi

Start Date: 12/4/02
Finish Date: 12/5/02
Sample Technician: Charles Coney
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 18.5
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 10.45
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 1.8

Water Level Measurements		
Date	Time	Water Level (TOC)
12/4/02	11:10	8.05
12/5/02	13:50	7.40
12/5/02	14:02	8.14

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
12/5/02 14:02	0.25	6.82	621	15.2	10	0.49		
14:07	0.75	6.83	319	15.5	9.1	0.43		
14:12	1	6.83	619	15.3	7.3	0.38		
14:17	1.25	6.83	622	15.3	5.4	0.37		

Sample Identification: MW-5

Weather Conditions During Sampling: cloudy, breezy, lower 40's

Comments: Sample was relinquished directly to Bonner Laboratory

Signature: Spencer Trichell Date: 12/17/02

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
12/5/02	14:20	1L ambers	none

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-6
Site Location: Hattiesburg, Mississippi

Start Date: 12/4/02 Finish Date: 12/5/02
Sample Technician: Charles Coney
Purge/Sample Method: Peristaltic Pump, volume based
Well Diameter: 2"
Total Depth of Well: 23.25
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 15.52
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 2.6

Water Level Measurements		
Date	Time	Water Level (TOC)
12/4/02	11:07	7.73

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
12/5/02 14:57	2.6	5.47	163	20.4	5.4	1.82		
15:10	5.2	5.46	165	20.6	7.3	1.70		
15:25	7.8	5.50	167	20.5	4.6	1.75		

Sample Identification: MW-6

Weather Conditions During Sampling: cloudy, breezy, lower 40's

Comments: _Sample was relinquished directly to Bonner Analytical

Signature: Spencer Trichell Date: 12/17/02

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
12/5/02	15:30	1L ambers	none

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-7
Site Location: Hattiesburg, Mississippi

Start Date: 12/4/02
Finish Date: 12/4/02
Sample Technician: Spencer Trichell
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 22.5
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 8.89
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 1.5

Water Level Measurements		
Date	Time	Water Level (TOC)
12/4/02	11:53	13.61
12/4/02	15:50	13.68

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
12/4/02 15:50	1.5	4.33	160	21.3	2.0	3.50		
16:00	1.75	4.27	180	20.5	1.7	2.75		
16:05	2.0	3.78	160	20.2	1.9	2.50		
16:08	2.25	3.80	150	21.4	1.7	3.10		
16:13	2.5	3.78	150	21.1	1.9	2.40		

Sample Identification: MW-7

Weather Conditions During Sampling: raining, warm, lower 60's

Comments: Sample was relinquished directly to Bonner analytical

Signature: Spencer Trichell Date: 12/17/02

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
12/4/02	16:20	1L ambers	none
		40mL septa vials	HCl

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-8
Site Location: Hattiesburg, Mississippi

Start Date: 12/4/02 Finish Date: 12/5/02
Sample Technician: Charles Coney
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 20
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 5.91
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 1.0

Water Level Measurements		
Date	Time	Water Level (TOC)
12/4/02	9:35	14.09

WELL DEVELOPMENT/PURGING DATA

Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
12/5/02 10:57	0.3	5.93	545	21.4	1.0	0.63		
11:02	0.40	5.93	543	21.6	1.10	0.6		
11:07	0.50	5.92	543	21.7	0.95	0.55		
11:12	0.60	5.92	545	21.8	1.00	0.52		

Sample Identification: MW-8, MS, and MSD

Weather Conditions During Sampling: cloudy, breezy, lower 40's

Comments: _Relinquished samples directly to Bonner Laboratory

Signature: Spencer Trichell Date: 12/17/02

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
12/5/02	15:50	40 mL septa vials	HCl
		1L ambers	none

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-9
Site Location: Hattiesburg, Mississippi

Start Date: 12/4/02
Finish Date: 12/5/02
Sample Technician: Charles Coney
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 20
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 8.65
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 1.5

Water Level Measurements		
Date	Time	Water Level (TOC)
12/4/02	11:05	11.35
12/5/02	9:20	11.32
12/5/02	9:41	11.34

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
12/5/02 9:31	0.25	5.25	151	13.1	3.4	1.55		
9:36	0.35	5.16	147	14.2	3.2	0.81		
9:41	0.45	5.15	152	13.8	3.7	0.76		
9:46	0.55	5.80	510	16.1	0.9	0.75		
9:51	0.65	5.81	526	15.2	1.1	0.67		
9:56	0.75	5.82	532	14.3	1.1	0.71		
10:01	0.85	5.8	545	15.5	1.0	0.47		
10:06	1	5.82	557	16.7	1.0	0.65		

Sample Identification: MW-9

Weather Conditions During Sampling: cloudy, breezy, lower 40's

Comments: _Samples relinquished directly to Bonner Analytical

Signature: Spencer Trichel Date: 12/17/02

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
12/5/02	10:15	40 mL septa vials	HCl
		1L ambers	none

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-10
Site Location: Hattiesburg, Mississippi

Start Date: 12/4/02
Finish Date: 12/4/02
Sample Technician: Charles Coney
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 18.5
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 8.77
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 1.5

Water Level Measurements		
Date	Time	Water Level (TOC)
12/4/02	10:18	9.73
	16:00	9.75
	16:11	20:24

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
12/5/02 16:14	0.25	5.34	50.1	19.8	37	0.84		slightly turbid at first
16:20	0.5	5.41	49.3	20.1	34	0.60		
16:25	0.75	5.39	47.3	19.7	23	0.62		
16:30	1.0	5.35	46.1	19.6	16	0.68		
16:35	1.25	5.39	45.6	19.5	12	0.74		

Sample Identification: MW-10

Weather Conditions During Sampling: raining, lower 60's

Comments: Samples relinquished directly to Bonner Laboratory

Signature: Spencer Trichell Date: 12/17/02

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
12/4/02	16:38	40 mL septa vials	HCl
		1L amber	none

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-11
Site Location: Hattiesburg, Mississippi

Start Date: 12/4/02 Finish Date: 12/4/02
Sample Technician: Charles Coney
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 17
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 9.95
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 1.7

Water Level Measurements		
Date	Time	Water Level (TOC)
12/4/02	10:38	7.05

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
12/5/02 11:47	0.25	6.71	347	20.2	6.1	0.66		
11:52	0.5	6.70	319	19.8	6.5	0.57		
12:00	1	6.70	300	19.7	7.3	0.41		
12:03	1.25	6.70	300	19.6	6.5	0.45		

Sample Identification: MW-11

Weather Conditions During Sampling: cloudy and warm

Comments: _Samples were relinquished directly to Bonner Laboratory

Signature: Spencer Trichell Date: 12/17/02

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
12/4/02	12:10	1L amber	none
		40 mL septa vials	HCl

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-4
Site Location: Hattiesburg, Mississippi

Start Date: 2/11/03 Finish Date: 2/11/03
Sample Technician: Spencer Trichell
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 18.5
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 8.36
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 1.4

Water Level Measurements		
Date	Time	Water Level (TOC)
2/11/03	14:40	10.14

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
2/11/03 14:50	0.25	5.83	443.0	20.9	4.3	1.81		
14:55	0.4	5.82	443.0	21.5	4.8	0.90		
15:00	0.6	5.82	441.0	21.5	5.4	0.66		

Sample Identification: MW-4

Weather Conditions During Sampling: sunny, 60 F

Comments: _Delivered sample directly to Bonner Laboratory

Signature: Spencer Trichell Date: 2/14/03

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
2/11/03	15:00	40 mL septa vials	HCl

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-8
Site Location: Hattiesburg, Mississippi

Start Date: 2/11/03 Finish Date: 2/11/03
Sample Technician: Spencer Trichell
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 20
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 5.59
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 1.0

Water Level Measurements		
Date	Time	Water Level (TOC)
2/11/03	15:12	14.41

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
2/11/03 15:33	0.25	5.71	662	22.1	3.3	0.78		
15:39	0.40	5.69	667	22.1	4.70	0.46		
15:44	0.50	5.69	670	22.2	3.8	0.37		

Sample Identification: MW-8

Weather Conditions During Sampling: sunny, 60 F

Comments: _Relinquished samples directly to Bonner Laboratory

Signature: Spencer Trichell Date: 2/14/03

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
2/11/03	15:45	40 mL septa vials	HCl

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-9
Site Location: Hattiesburg, Mississippi

Start Date: 2/11/03
Finish Date: 2/11/03
Sample Technician: Spencer Trichell
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 20
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 8.33
Calculated Well Volume (V=6hd²)
(V = vol in gal; D = well diam. in ft): 1.4

Water Level Measurements		
Date	Time	Water Level (TOC)
2/11/03	15:52	11.67

WELL DEVELOPMENT/PURGING DATA

Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
2/11/03 16:05	0.25	5.65	448	20.3	9.2	0.50		
16:10	0.40	5.65	478	19.9	6.9	0.55		
16:15	0.60	5.66	791	19.8	6.5	0.53		

Sample Identification: MW-9

Weather Conditions During Sampling: sunny, 60 F

Comments: _Samples relinquished directly to Bonner Analytical

Signature: Spencer Trichell
Date: 2/14/03

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
2/11/03	16:15	40 mL septa vials	HCl

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: MW-11
Site Location: Hattiesburg, Mississippi

Start Date: 2/11/03 Finish Date: 2/11/03
Sample Technician: Spencer Trichell
Purge/Sample Method: Peristaltic Pump
Well Diameter: 2"
Total Depth of Well: 17
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): 9.83
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): 1.7

Water Level Measurements		
Date	Time	Water Level (TOC)
2/11/03	13:30	7.17

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
2/11/03 14:00	0.25	5.79	217	15.7	9.9	1.02		
14:05	0.4	5.72	213	15.5	9.6	0.54		
14:10	0.5	5.70	211	15.4	13	0.47		
14:15	0.6	5.68	204	15.3	12	0.43		
14:20	0.7	5.66	199	15.1	12	0.45		
14:24	0.8	5.65	194	15.1	9.8	0.51		

Sample Identification: MW-11

Weather Conditions During Sampling: sunny, 60 F

Comments: _Samples were relinquished directly to Bonner Laboratory

Signature: Spencer Trichell Date: 2/14/03

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
2/11/03	14:30	40 mL septa vials	HCl

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: CM-1
Site Location: Hattiesburg, Mississippi

Start Date: 02/11/2003 Finish Date: 02/11/2003
Sample Technician: Spencer Trichell
Purge/Sample Method: Grab sample
Well Diameter: na
Total Depth of Well: na
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): na
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): na

Water Level Measurements		
Date	Time	Water Level (TOC)
na	na	na

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
02/11/2003 12:55		7.16	191.0	10.2	20	10.52		

Sample Identification: CM-1

Weather Conditions During Sampling: sunny, 60 F

Comments: _Delivered sample directly to Bonner Laboratory

Signature: Spencer Trichell Date: 4/4/03

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
02/11/2003	12:55	40 mL septa vials	HCl
		1L ambers	none
		8 oz. Glass	none
		8 cc syringe	none

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: CM-2
Site Location: Hattiesburg, Mississippi

Start Date: 02/11/2003 Finish Date: 02/11/2003
Sample Technician: Spencer Trichell
Purge/Sample Method: Grab sample
Well Diameter: na
Total Depth of Well: na
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): na
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): na

Water Level Measurements		
Date	Time	Water Level (TOC)
na	na	na

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
02/11/2003 12:20		7.01	185.0	9.5	20	10.52		

Sample Identification: CM-2

Weather Conditions During Sampling: sunny, 60 F

Comments: _Delivered sample directly to Bonner Laboratory

Signature: Spencer Trichell Date: 4/4/03

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
02/11/2003	12:20	40 mL septa vials	HCl
		1 L amber	none
		8 oz glass	none
		3 cc syringe	none

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: CM-3
Site Location: Hattiesburg, Mississippi

Start Date: 02/11/2003 Finish Date: 02/11/2003
Sample Technician: Spencer Trichell
Purge/Sample Method: Grab sample
Well Diameter: na
Total Depth of Well: na
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): na
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): na

Water Level Measurements		
Date	Time	Water Level (TOC)
na	na	na

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
02/11/2003 11:15		6.81	183.0	8.3	24	10.77		

Sample Identification: CM-3

Weather Conditions During Sampling: sunny, 60 F

Comments: _Delivered sample directly to Bonner Laboratory

Signature: Spencer Trichell Date: 4/4/03

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
02/11/2003	11:15	40 mL septa vials	HCl
		1 L ambers	none
		8 oz glass	none
		3 cc syringe	none

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: CM-4
Site Location: Hattiesburg, Mississippi

Start Date: 02/11/2003 Finish Date: 02/11/2003
Sample Technician: Spencer Trichell
Purge/Sample Method: Grab sample
Well Diameter: na
Total Depth of Well: na
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): na
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): na

Water Level Measurements		
Date	Time	Water Level (TOC)
na	na	na

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
02/11/2003 10:35		6.94	174.0	8.6	17.9	10.98		

Sample Identification: CM-4

Weather Conditions During Sampling: sunny, 60 F

Comments: _Delivered sample directly to Bonner Laboratory

Signature: Spencer Trichell Date: 4/4/03

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
02/11/2003	10:35	40 mL septa vials	HCl
		1L amber	none
		8 oz. glass	none
		3 cc syringe	none

Eco-Systems, Inc.
Environmental Engineers and Scientists

Groundwater Sample Collection Log

Project Name: Hercules
Project Number: HER99072
Boring ID: CM-5
Site Location: Hattiesburg, Mississippi

Start Date: 02/11/2003
Finish Date: 02/11/2003
Sample Technician: Spencer Trichell
Purge/Sample Method: Grab sample
Well Diameter: na
Total Depth of Well: na
Approximate Depth of Water Column
(h= TD of well - water level [TOC]): na
Calculated Well Volume ($V=6hd^2$)
(V = vol in gal; D = well diam. in ft): na

Water Level Measurements		
Date	Time	Water Level (TOC)
na	na	na

WELL DEVELOPMENT/PURGING DATA								
Date/Time	Cumulative Volume (gal)	pH	Specific Conductivity (umohs)	Temperature (Celsius)	Turbidity (NTU)	D.O. (mg/l)	ORP (mv)	Comments
02/11/2003 9:25		6.88	188.0	8.4	20.2	10.7		

Sample Identification: CM-5

Weather Conditions During Sampling: sunny, 60 F

Comments: _Delivered sample directly to Bonner Laboratory

Signature: Spencer Trichell Date: 4/4/03

GROUNDWATER SAMPLE CONTAINERS			
Date	Time	Sample Container	Preservative
02/11/2003	9:25	40 mL septa vials	HCl
		1 L amber	none
		8 oz. Glass	none
		3 cc syringe	none

APPENDIX D

LABORATORY ANALYTICAL REPORTS

Mississippi State Chemical Laboratory

DR. KEVIN L. ARMBRUST
State Chemist

Results are presented for the analysis of dioxathion in four well water samples. The only previous experience the laboratory has had with this compound was to perform experiments to qualitatively identify its structural isomers on two occasions. The compounds were characterized by their UV and IR spectra, and were chromatographed both by liquid and gas chromatography (LC and GC). Some infusion and LC experiments with standards were done. No quantitative methods were developed. An extraction method was chosen that is amenable to recovering residues of many pesticides. The samples were buffered and the pH adjusted to 8.0 followed by three extractions with methylene chloride. The extracts were combined and then exchanged into acetonitrile containing internal standard for analysis by HPLC/UV and HPLC/MS. Sample extracts were maintained at 4°C.

The UV and MS data were taken simultaneously from the same injections of samples. The instrument used was a micromass Quattro Micro. The analytical column was an Alltech Altima C-18 (5u), 4.6mm X 250mm and maintained at 35°C. The mobile phase was 75:25 acetonitrile:water, isocratic at 1.0 ml/min. Two UV wavelengths were monitored for the entire run, but residues were quantitated from the 254 nm data for the internal standard and for dioxenethion. Concentrations of cis- and trans-dioxathion were determined from the 200 nm data.

Samples were introduced into the MS by atmospheric pressure chemical ionization at 300°C. The flow rate for the nebulizing gas was 400 L/hr. The ion chosen for quantitation was m/z 270.

Results and quantitation levels are reported for samples based on a signal-to-noise ratio of 5:1 for both detection techniques.

P.O. Box CR, Mississippi State, MS 39762 (662) 325-3324 FAX (662) 325-7807

HPLC/UV RESULTS

MSCL No.	26,523	26,524	26,525	26,526A	26,526B	Laboratory Blank Water	Lower Level of Quantitation
Sample ID	MW-1	MW-4	Rinsate	MW-5	MW-5 Duplicate		
Volume	1,000 ml	1,000 ml	625 ml	1,000 ml	1,000 ml	1,000 ml	
	PARTS PER BILLION						
Cis-dioxathion	ND*	ND	ND	ND	ND	ND	1.0
Trans-dioxathion	1.5	ND	ND	10	4.3	ND	1.0
Dioxenethion	ND	25	ND	ND	ND	ND	0.30

*ND = None Detected

	Spiking Level	Laboratory Spiked Water	Percent Recovery	Spiked MW-5 Replicate	Average MW-5 Replicates	Net Level Found	Percent Net Recovery
	PARTS PER BILLION						
Cis-dioxathion	42	47	112	36	ND	36	85.7
Trans-dioxathion	42	43	102	40	7.2	33	78.6
Dioxenethion	53	69	130	87	ND	87	164

HPLC/MS RESULTS

MSCL No.	26,523	26,524	26,525	26,526A	26,526B	Laboratory Blank Water	Lower Level of Quantitation
Sample ID	MW-1	MW-4	Rinsate	MW-5	MW-5 Duplicate		
Volume	1,000 ml	1,000 ml	625 ml	1,000 ml	1,000 ml	1,000 ml	
	PARTS PER BILLION						
Cis-dioxathion	ND	ND	ND	ND	ND	ND	0.21
Trans-dioxathion	ND	ND	ND	0.92	1.0	ND	0.21
Dioxenethion	ND	32	ND	ND	ND	ND	0.53

	Spiking Level	Laboratory Spiked Water	Percent Recovery	Spiked MW-5 Replicate	Average MW-5 Replicates	Net Level Found	Percent Net Recovery
	PARTS PER BILLION						
Cis-dioxathion	42	64	152	45	ND	45	107
Trans-dioxathion	42	101	240	59	0.5	58	138
Dioxenethion	53	84	158	50	ND	50	94.3

BONNER ANALYTICAL TESTING COMPANY

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601)-264-2854 Fax: (601)-268-7084 Email: batco@batco.com
WWW.BATCO.COM

Testing Your World for a Safer Tomorrow

YOUR COMPANY NAME: [illegible]
YOUR COMPANY ADDRESS: 613 [illegible]
NAME OF PERSON TO CONTACT: [illegible]
CONTACT PERSON'S PHONE: [illegible] FAX:
CONTACT PERSON'S EMAIL:

CLIENT PROJECT NO.	CLIENT P.O.#	CLIENT PROJECT NUMBER

	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PARAMETERS FOR ANALYSIS	NUMBER OF CONTAINERS	PRESERVATION	LABORATORY USE: File ID
1	MW-1	10/16/02	1120	Liquid	X	3	HCl	BT
2	MW-4	10/16/02	1300	Liquid	X	3	HCl	BT
3	[illegible]	10/16/02	1305	Liquid	X	3	HCl	BT
4	MW-5 MW-MSD	10/16/02	1450	Liquid	X	6	HCl	BT
5								BT
6								BT
7								BT
8								BT
9								BT
10								BT

Turn Around Time:

Project Number:

SAMPLE COLLECTOR/RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
[illegible]	10/17/02	1000	

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

METHOD OF SHIPMENT (If Any): FedEx Airbill # 8369 [illegible] 5550

RELINQUISHED BY:

DATE	TIME	RECEIVED FOR BATCO BY:	DATE/TIME

REMARKS:

☐ REQUEST BATCO TO DISPOSE OF ALL SAMPLE REMAINDERS

(Signature)

IF SAMPLE IS DETERMINED TO BE HAZARDOUS, A MINIMUM ADDITIONAL CHARGE OF $30.00 PER SAMPLE WILL BE ASSESSED.

REVISION NO 1.2
03/22/01

Bonner Analytical Testing Company

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CASE NARRATIVE: Hercules

Semi-volatiles(BNA analysis)

Samples were collected on December 4th and 5th from Hercules in Hattiesburg, MS. They were received at BATCO on December 5, 2002 and included monitoring wells 7, 8, 9, 10, and 11. A duplicate sample, a matrix spike/matrix spike duplicate, and a rinsate blank were also collected for BNA analysis.

Samples were extracted on December 10, 2002 according to EPA SW-846 method 3510C and analyzed according to EPA SW-846 method 8270C on December 11, 2002. No complications were observed during the extraction process or in the analysis of the samples.

No compounds listed in method 8270 were found in the samples except for 4-methylphenol, which was observed in BT80874 and the duplicate sample. The concentration of 4-methylphenol in BT80874 was 13.16 ppb and the concentration in the duplicate sample was 12.76 ppb.

A DFTPP standard was run on the GC/MS to ensure the machine was functioning properly. A six-point curve was also installed prior to the injection of the Hercules samples. The concentrations of the curve range from 10 ppm to 100 ppm. The percent RSD for all compounds in the curve was below 15%. Also, calibration verifications were run during the sequence for QA/QC purposes. Both the DFTPP standard and the calibration verifications passed. Also, all SPCC and CCC compounds passed according to method 8270C.

Authorized by: _____
Michael S. Bonner, PhD.

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

CASE NARRATIVE: Hercules, Hattiesburg MS.

Volatile Organic Analyses:

Samples were collected on October 14, 2002 from Hercules in Hattiesburg MS. They were received at BATCO on October 15, 2002 and included monitoring wells 5 and 6. A trip blank was also collected for volatile organic analyses.

Samples were analyzed for volatile organic compounds, VOC's, utilizing a 5890 Series II Hewlett Packard Gas Chromatograph (GC), and a Perkin-Elmer Ion Trap Detector. These samples were run within the fourteen-day holding time window according to EPA SW846 Method 8260B, which began on October 27, 2002. All QA/QC criteria were with in the limits as set forth in EPA SW846 Method 8260B.

No compounds listed on the target analyte list for EPA SW846 Method 8260B were found in the samples collected from Hercules in monitoring wells 5 and 6. The trip blank collected also contained any of the said compounds or showed signs of co-eluting interferences.

A BFB standard was run on the HP-5890 GC to verify the detector, Ion Trap Detector, was tuned and properly functional. A five point calibration curve was obtained from dilutions of a working standard, 8260 calibration mix, which proved to pass linearity in accordance to EPA Method 8260B. Initial and continuing calibration verifications were acquired, analyzed, and passed during the sequence of the sample run. All Quality Assurance and Control measures were met in accordance to Method 8260B.

Authorized by: _____

Michael S. Bonner, PhD.

Table 1. Continued

Compound	MW-4	MW-8	MW-9	MW-11	Duplicate
1,3-dichlorobenzene	ND	3.75 ppb	ND	ND	ND
1,4-dichlorobenzene	ND	3.80 ppb	ND	ND	ND
1,2-dichloroethane	ND	20.0 ppb	ND	3.11 ppb	ND
Cis-1,2-dichloroethene	ND	19.0 ppb	ND	ND	ND
Ethyl benzene	ND	55.6 ppb	ND	ND	ND
Isopropylbenzene	1.26 ppb	4.60 ppb	2.48 ppb	ND	1.01ppb
p-isopropyltoluene	ND	23.9 ppb	ND	ND	ND
Methylene chloride	ND	26.1 ppb	ND	ND	ND
Naphthalene	5.38 ppb	9.14 ppb	ND	ND	7.34ppb
Tetrachloroethene	ND	8.51 ppb	ND	ND	ND
1,2,3-trichlorobenzene	1.81 ppb	2.55 ppb	ND	ND	2.73ppb
1,2,4-trichlorobenzene	ND	2.86 ppb	ND	ND	2.17ppb
1,2,4-trimethylbenzene	ND	1.81 ppb	ND	ND	ND
Xylenes (total)	ND	79.0 ppb	ND	ND	ND
Vinyl chloride	ND	1.62 ppb	ND	ND	ND

A BFB standard was run on the HP-5890 GC to verify the detector, Ion Trap Detector, was tuned and properly functional. A five point calibration curve was obtained from dilutions of a working standard, 8260 calibration mix, which proved to pass linearity in accordance to EPA Method 8260B. Initial and continuing calibration verifications were acquired, analyzed, and passed during the sequence of the sample run. All Quality Assurance and Control measures were met in accordance to Method 8260B.

Authorized by: _____

Michael S. Bonner, PhD.

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

CASE NARRATIVE: Hercules, Hattiesburg MS.

Volatile Organic Analyses:

Samples were collected on December 4th and 5th, 2002 from Hercules in Hattiesburg MS. They were received at BATCO on December 5, 2002 and included monitoring wells 4, 7, 8, 9, 10, and 11. A duplicate sample, a matrix spike, matrix spike duplicate, a rinsate blank, and two trip blanks were also collected for volatile organic analyses.

Samples were analyzed for volatile organic compounds, VOC's, utilizing a 5890 Series II Hewlett Packard Gas Chromatograph (GC), and a Perkin-Elmer Ion Trap Detector. These samples were run within the fourteen-day holding time window according to EPA SW846 Method 8260B, which began on December 13, 2002. All QA/QC criteria were with in the limits as set forth in EPA SW846 Method 8260B.

Monitoring wells 4, 8, 9, and 11 and the sample duplicate were found to contain volatile organic compounds listed on the target analyte list, with monitoring well 8 having the highest levels of VOC compounds. Table 1 of this narrative lists the compounds observed from the said samples.

Table 1. Concentration Levels of Volatile Compounds for Samples Tested.

Compound	MW-4	MW-8	MW-9	MW-11	Duplicate
1,1-Dichloroethene	ND	17.0 ppb	5.92 ppb	ND	ND
Benzene	14.0 ppb	6900 ppb	9.15 ppb	114 ppb	11.2 ppb
Trichloroethene	ND	5.80 ppb	ND	ND	ND
Toluene	ND	28.0 ppb	ND	ND	ND
Chlorobenzene	1.81 ppb	290 ppb	ND	ND	1.14 ppb
Bromodichloromethane	ND	6.84 ppb	ND	ND	ND
Bromomethane	ND	4.07 ppb	ND	ND	ND
Carbon Tetrachloride	10.0 ppb	16,000 ppb	ND	ND	5.53 ppb
Chloroethane	63.0 ppb	66.0 ppb	ND	ND	64.8 ppb
Chloroform	ND	1800 ppb	ND	ND	ND
Chloromethane	1.72 ppb	39.2 ppb	ND	ND	1.19 ppb
Dibromochloromethane	ND	4.45 ppb	ND	ND	ND
1,2-dichlorobenzene	ND	2.71 ppb	ND	ND	ND

Bonner Analytical Testing Company

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CASE NARRATIVE: Hercules, Hattiesburg MS.

Semi-volatiles (Dioxathion Analysis)

Samples were collected and received by BATCO on October 14, 2002. A total of 6 water samples were received and analyzed for the presence of Dioxathion. These samples included monitoring wells 1,4, and 5 plus a rinsate and two matrix spikes. The sequence run included a Lab Control Sample, Method Blank, and a sample duplicate, as well as the fore mentioned samples.
A Dioxathion Calibration working standard was prepared from the individual Dioxenethion, Dioxathion (cis) and Dioxathion (trans) isomers obtained from Sigma-Aldrich Chemicals. Dilutions were made from the working standard to obtain a six-point curve (0.4 to 10 ppm) utilizing a HP-1090 HPLC and HP-Chem software. A Diode-Array Detector, DAD, was used to obtain the data. Table 1 illustrates the retention times, linearity correlation coefficient and the MDL's.

Table 1-Calibration Data

Dioxathion Isomer	Retention Times @ 210 nm (min)	Calibration of Linearity Correlation Coefficient	Method Detection Limits (ppb)
Dioxenethion	4.510	0.9996	0.220
Dioxathion (cis)	8.580	0.9995	0.480
Dioxathion (trans)	9.216	0.9978	0.300

Samples were extracted on 10/21/02 using an EPA SW846 Method 3520C for Continuous Liquid-Liquid separatory funnel extractions. Methylene chloride was the extracting solvent and exchanged to acetonitrile at 1-mL final volume. The samples were then analyzed on10/22/02, using the HP-1090 HPLC under the same method as the calibration. Calibration verifications were analyzed before and after the sample batch. All quality assurance criteria based on guidelines given in SW-846 Method 8000B was met. Table 2 illustrates the raw data obtained in this analysis.

Table 2-Raw Data

Lab ID	Description	Dioxenethion	Dioxathion (cis)	Dioxathion(trans)
BT80054	Monitor Well #1	ND	ND	ND
BT80055	Monitor Well #4	19.2ppb	4.80ppb	1.61ppb
BT80055D	Monitor Well #4 Dup	20.7ppb	4.71ppb	1.75ppb
BT80056	Rinsate	ND	ND	ND
BT80057	Monitor Well #5	5.09ppb	1.70ppb	1.44ppb

Authorized by: _____
Michael S. Bonner, PhD.

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

CASE NARRATIVE: Hercules

Semi-volatiles(BNA analysis)

Samples were collected on October 14, 2002 from Hercules in Hattiesburg, MS. They were received at BATCO on October 15, 2002 and included monitoring wells 5 and 6. A matrix spike and matrix spike duplicate were also collected for BNA analysis.

Samples were extracted on October 21, 2002 at 0900 according to EPA SW-846 method 3510C and analyzed according to EPA SW-846 method 8270C on November 6, 2002. No complications were observed during the extraction process or in the analysis of the samples.

No compounds listed in method 8270 were found in either of the monitoring wells. Lab control and MS/MSD recoveries for surrogate and target compounds were acceptable according to in-house criteria set by EPA SW-846 Method 8000B, section 8.7.

A DFTPP standard was run on the GC/MS to ensure the machine was functioning properly. A six-point curve was also installed prior to the injection of the Hercules samples. The concentrations of the curve range from 10 ppm to 100 ppm. The percent RSD for all compounds in the curve was below 15%. Also, calibration verifications were run during the sequence for QA/QC purposes. Both the DFTPP standard and the calibration verifications passed. Also, all SPCC and CCC compounds passed according to method 8270C.

Authorized by: _____
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2703 OAK GROVE ROAD, HATTIESBURG, MS 39402
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CASE NARRATIVE: Hercules, Hattiesburg MS.

Semi-volatiles (Dioxathion Analysis)

Samples were collected and received by BATCO on December 4 and December 5, 2002. A total of 6 water samples were collected on December 4 and a total of 9 samples were collected on December 5, 20002. These samples included monitoring wells 1-11, a duplicate sample, plus a rinsate blank and two matrix spikes for a total of 15 samples. The sequence run included a Laboratory Control Sample, and a Method Blank as quality assurance measures, as well as the fore mentioned samples.

A Dioxathion Calibration working standard was prepared from the individual Dioxenethion, Dioxathion (cis) and Dioxathion (trans) isomers obtained from Sigma-Aldrich Chemicals. Dilutions were made from the working standard to obtain a six-point curve (0.4 to 10 ppm) utilizing a HP-1090 HPLC and HP-Chem software. A Diode-Array Detector, DAD, was used to obtain the data. Table 1 illustrates the retention times, linearity correlation coefficient and the MDL's.

Table 1-Calibration Data

Dioxathion Isomer	Retention Times @ 210 nm (min)	Calibration of Linearity Correlation Coefficient	Method Detection Limits (ppb)
Dioxenethion	4.434	0.9994	0.220
Dioxathion (cis)	8.375	0.9999	0.480
Dioxathion (trans)	9.033	0.9996	0.300

Samples were extracted on 12/11/02 using an EPA SW846 Method 3510C for Separatory Funnel Liquid-Liquid Extraction. Methylene chloride was the extracting solvent and exchanged to acetonitrile at 1-mL final volume. The samples were then analyzed on12/12/02, using the HP-1090 HPLC under the same method as the calibration. Calibration verifications were analyzed before and after the sample batch. All quality assurance criteria based on guidelines given in SW-846 Method 8000B was met. Table 2 illustrates the raw data obtained in this analysis.

Table 2-Raw Data

Lab ID	Description	Dioxenethion	Dioxathion (cis)	Dioxathion (trans)	Surrogate Recovery
BT80863	Monitor Well #1	ND	ND	ND	83.2%
BT80864	Monitor Well #11	50.3ppb	5.00ppb	ND	99.4%
BT80865	Monitor Well #3	ND	ND	ND	90.0%
BT80866	Monitor Well #2	ND	ND	ND	87.6%
BT80867	Monitor Well #10	ND	ND	ND	88.0%
BT80868	Monitor Well #7	9.57ppb	ND	ND	79.6%
BT80870	Monitor Well #9	5.90ppb	12.8ppb	ND	146%
BT80871	Monitor Well #4	12.9ppb	3.34ppb	ND	85.8%
BT80872	Monitor Well #5	ND	ND	ND	82.2%
BT80873	Monitor Well #6	1.12ppb	ND	ND	76.0%
BT80874	Monitor Well #8	94.3ppb	ND	53.9ppb	409%
BT80875	Monitor Well #8 MS*	98.9ppb	5.35ppb	58.4ppb	414%
BT80876	Monitor Well #8 MSD*	98.5ppb	5.05ppb	57.9ppb	386%
BT80877	Rinsate Blank	ND	ND	ND	89.4%
BT80879	Sample Duplicate	12.1ppb	3.23ppb	ND	79.2%

*Spiked with 5ppb of each isomer

All samples were spiked with naphthalene (surrogate) prior to extraction. The surrogate was added to follow the extraction efficiency of the method. Two samples MW-8 and MW-9 had very high surrogate recoveries, 146% and 409%, respectively. These two samples were analyzed by GC/MS to confirm that the recoveries were due to naphthalene and not another interfering compound. Future analyses of these wells should include an alternate surrogate compound that does not co-elute with other peaks in the sample.

Authorized by: _____

Michael S. Bonner, PhD.

BONNER ANALYTICAL TESTING COMPANY

2703 Oak Grove Road, Hattiesburg, MS 39402

Phone: (601)-264-2854 Fax: (601)-268-7084 Email: batco@batco.com

WWW.BATCO.COM

Your Work Today for a Safer Tomorrow

YOUR COMPANY NAME: Hercules

YOUR COMPANY ADDRESS: 613 7th St
Hattiesburg, MS 39401

NAME OF PERSON TO CONTACT: Charlie Jordan

CONTACT PERSON'S PHONE: (601) 936-4440 FAX:

CONTACT PERSON'S EMAIL:

CLIENT PROJECT NO.	CLIENT P.O.#	CLIENT PROJECT NUMBER

	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	Dioxin/Furan	Semi's-1004	VOA	NUMBER OF CONTAINERS	PRESERVATION	BT File ID
1	MW-1	12/4/02	1045	Liquid	X			2		BT80863
2	MW-11	12/4/02	1210	Liquid	X	X	X	7		BT80864
3	MW-3	12/4/02	1500	Liquid	X			2		BT80865
4	MW-2	12/4/02	1545	Liquid	X			2		BT80866
5	MW-10	12/4/02	1640	Liquid	X	X	X	7		BT80867
6	MW-7	12/4/02	1620	Liquid	X	X	X	7		BT80868
7	Trip Blank	12/3/02	1604	Liquid			X	3		BT80869
8										BT
9										BT
10										BT

PARAMETERS FOR ANALYSIS

LABORATORY USE

Turn Around Time

Project Number: 005456

SAMPLE COLLECTOR/RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
[signature]	12/4/02	17:20	[signature]

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
[signature]	12/5/02	0905	

METHOD OF SHIPMENT (If Any):

RELINQUISHED BY:

DATE	TIME	RECEIVED FOR BATCO BY:	DATE/TIME
		[signature]	12-5-02 0905

REMARKS:

☐ REQUEST BATCO TO DISPOSE OF ALL SAMPLE REMAINDERS

(Signature)

IF SAMPLE IS DETERMINED TO BE HAZARDOUS, A MINIMUM ADDITIONAL CHARGE OF $30.00 PER SAMPLE WILL BE ASSESSED

REVISION NO 1.2
03/22/01

YOUR COMPANY NAME: Hercules

YOUR COMPANY ADDRESS: 613 7th St
Hattiesburg MS 39401

NAME OF PERSON TO CONTACT: Charlie Jordan

CONTACT PERSON'S PHONE: _____ FAX: _____

CONTACT PERSON'S EMAIL: _____

CLIENT PROJECT NO.	CLIENT P.O.#	CLIENT PROJECT NUMBER

BONNER ANALYTICAL TESTING COMPANY

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601)-264-2854 Fax: (601)-268-7084 Email: batco@batco.com
WWW.BATCO.COM

SAMPLE DESCRIPTION	DATE	TIME	MATRIX	Dioxins/Furans	Semi-VOA	VOA					NUMBER OF CONTAINERS	PRESERVATION	File ID
1 MW-9	12/5/02	1015	Liquid	X	X	X					7		BT80870
2 MW-4	12/5/02	1315	Liquid	X		X					5		BT80871
3 MW-5	12/5/02	1420	Liquid	X							2		BT80872
4 MW-6	12/5/02	1330	Liquid	X							2		BT80873
5 MW-8	12/5/02	~~1615~~ 1615	Liquid	X	X	X					7		BT80874 13-16
6 MS	12/5/02	1610	Liquid	X	X	X					7		BT80875
7 MSD	12/5/02	1610	Liquid	X	X	X					7		BT80876
8 Rinsate Blank	12/5/02	1525	Liquid	X	X	X					7		BT80877
9 Trip Blank	12/3/02	1601	Liquid			X					3		BT80878
10 Dup	12/3/02	1315	Liquid	X	X*	X					~~7~~ 8		BT80879 12-16

SAMPLE COLLECTOR/RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
Mark V. Ray	05DEC02	1658	

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

METHOD OF SHIPMENT (If Any)	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR BATCO BY:	DATE/TIME
				Maurie Ruiz	12-6-02 0800

REMARKS: * Semi-VOA Dup collected at 1610

☐ REQUEST BATCO TO DISPOSE OF ALL SAMPLE REMAINDERS

_____ (Signature)

IF SAMPLE IS DETERMINED TO BE HAZARDOUS, A MINIMUM ADDITIONAL CHARGE OF $30.00 PER SAMPLE WILL BE ASSESSED.

LABORATORY USE

Turn Around Time

Project Number 005456

REVISION NO 1.2
03/22/01

Bonner Analytical Testing Company

2703 Oak Grove Road, Hattiesburg, MS 39402
Phone: (601) 264-2854 Fax: (601) 268-7084

CASE NARRATIVE: Hercules, Hattiesburg MS.

Volatile Organic Analyses:

Samples were collected on February 11, 2003 from Hercules in Hattiesburg MS. They were received at BATCO on February 11, 2003 and included monitoring wells 4, 8, 9, 11 and Creek samples from 5 locations with a soil and water sample from each location. A duplicate sample was taken from the creek water, sediment and from a monitoring well, a rinsate blank, and trip blank was also collected for volatile organic analyses.

Samples were analyzed for volatile organic compounds, VOC's, utilizing a 5890 Series II Hewlett Packard Gas Chromatograph (GC), and a Perkin-Elmer Ion Trap Detector. These samples were run within the fourteen-day holding time window according to EPA SW846 Method 8260B, which began on February 11, 2002. All QA/QC criteria were with in the limits as set forth in EPA SW846 Method 8260B. The only exception is that the surrogate recoveries were out of range for BT82057 (MW-8) due to matrix affect. On a subsequent dilution the surrogate recoveries were with in proper range.

Monitoring wells 8 (BT82057), 9 (BT82059), 11(BT82054), DUP (BT82055), and creek water samples 4(BT82044), 3(BT82046), DUP (BT82048), 2(BT82050), 1(BT82052) and creek sediment samples 5 (BT82043), 4 (BT82045), 3 (BT42047), DUP (BT82049), 2 (BT82051) and 1 (BT82053) were found to contain volatile organic compounds listed on the target analyte list. Monitoring well 8 having the highest levels of VOC compounds. Table 1 of this narrative lists the compounds observed from the said samples. In addition all samples reported to have Naphthalene, 1,2,3-Trichlorobenzene, and 1,2,4-Trichlorobenzene. These compounds were found in the blank at levels above 5 % of the samples, so they have been tagged with a "B". Naphthalene, 1,2,3-Trichlorobenzene, and 1,2,4-Trichlorobenzene have not been recorded in the following summary.

Table 1. Concentration Levels of Volatile Compounds for Monitoring Wells.

Compound	MW-8	MW-9	MW-11	Duplicate
1,1-Dichloroethene	1.85 ppb	ND	ND	ND
Benzene	12000 ppb	64.3 ppb	6.39 ppb	6.80 ppb
Trichloroethene	3.20 ppb	ND	ND	ND
Toluene	35.4 ppb	ND	ND	ND
Chlorobenzene	230 ppb	5.85 ppb	ND	ND
Bromodichloromethane	4.72 ppb	ND	ND	ND
Carbon Tetrachloride	12000 ppb	20.7 ppb	ND	ND
Chloroethane	85.5 ppb	19.7 ppb	ND	ND
Chloroform	1300 ppb	9.83 ppb	ND	ND
Chloromethane	3.34 ppb	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND
1,2-dichlorobenzene	2.22 ppb	ND	ND	ND
1,3-dichlorobenzene	ND	ND	ND	ND
1,4-dichlorobenzene	3.14 ppb	ND	ND	ND
1,1-dichloroethane	ND	2.23 ppb	ND	ND
1,2-dichloroethane	79.8 ppb	1.4 3ppb	ND	ND
Cis-1,2-dichloroethene	17.5 ppb	ND	ND	ND
Ethyl benzene	67.5 ppb	1.53 ppb	ND	ND
Isopropylbenzene	4.35 ppb	1.92 ppb	ND	ND
p-isopropyltoluene	23.8 ppb	1.80 ppb	ND	ND
Methylene chloride	ND	ND	ND	ND
Styrene	1.25 ppb	ND	ND	ND
Tetrachloroethene	48.9 ppb	ND	ND	ND
1,2,4-trimethylbenzene	1.92 ppb	ND	ND	ND
1,3,5-trimethylbenzene	1.80 ppb	ND	ND	ND
Xylenes (total)	62.4 ppb	ND	ND	ND

Table 2. Concentration Levels of Volatile Compounds for Creek Water.

Compound	CM-1	CM- 2	CM-3	CM-4	CM-5	DUP
Benzene	2.82 ppb	1.17 ppb	3.66 ppb	2.25 ppb	4.04 ppb	3.57 ppb
Carbon Tetrachloride	3.03 ppb	1.48 ppb	ND	ND	ND	ND
Chlorethane	20.5 ppb	15.6 ppb	8.42 ppb	3.43 ppb	ND	4.83 ppb
Chloroform	2.34 ppb	ND	ND	ND	ND	ND

Table 3. Concentration Levels of Volatile Compounds for Creek Sediment.

Compound	CM-1	CM- 2	CM-3	CM-4	CM-5	DUP
Benzene	3.10 ppb	ND	ND	1.53 ppb	ND	ND
Bromomethane	ND	3.10 ppb	ND	ND	2.11 ppb	ND
n-Butylbenzene	3.97 ppb	1.65 ppb	ND	ND	ND	ND
Tert-Butylbenzene	1.76 ppb	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3.35 ppb	3.96 ppb	5.07 ppb	1.72 ppb	3.19 ppb	2.58 ppb
1,4-Dichlorobenzene	ND	ND	ND	ND	3.11 ppb	ND
n- propylbenzene	2.31 ppb	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	14.6 ppb	5.36 ppb	4.87 ppb	1.88 ppb	2.59 ppb	2.81 ppb
1,3,5-Trimethylbenzene	11.8 ppb	4.29 ppb	3.82 ppb	ND	2.24 ppb	2.21 ppb

A BFB standard was run on the HP-5890 GC to verify the detector, Ion Trap Detector, was tuned and properly functional. A five point calibration curve was obtained from dilutions of a working standard, 8260 calibration mix, which proved to pass linearity in accordance to EPA Method 8260B. Initial and continuing calibration verifications were acquired, analyzed, and passed during the sequence of the sample run. All Quality Assurance and Control measures were met in accordance to Method 8260B.

Authorized By: _____

Michael S. Bonner

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: MW-4
File #: BT82056

	Date	Time	
Collected:	02/11/03	15:00	ES
Received:	02/11/03	16:50	MS
Analyzed:	02/22/03	20:03	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	10.00	ND			ND			38.7	250.0	77.3	34.8	250.0	69.5
Benzene	71-43-2	10.00	ND			ND			44.1	250.0	88.2	41.3	250.0	82.6
Trichloroethene	79-01-6	10.00	ND			ND			45.3	250.0	90.5	43.5	250.0	87.0
Toluene	108-88-3	10.00	ND			ND			46.6	250.0	93.2	43.6	250.0	87.2
Chlorobenzene	108-90-7	10.00	ND			ND			48.6	250.0	97.3	46.9	250.0	93.8
Bromobenzene	108-86-1	10.00	ND			ND			ND			ND		
Bromochloromethane	74-97-5	10.00	ND			ND			ND			ND		
Bromodichloromethane	75-27-4	10.00	ND			ND			ND			ND		
Bromoform	75-25-2	10.00	ND			ND			ND			ND		
Bromomethane	74-83-9	10.00	ND			ND			ND			ND		
n-Butylbenzene	104-51-8	10.00	ND			ND			ND			ND		
sec-Butylbenzene	135-98-8	10.00	ND			ND			ND			ND		
tert-Butylbenzene	98-06-6	10.00	ND			ND			ND			ND		
Carbon Tetrachloride	56-23-5	10.00	ND			ND			ND			ND		
Chloroethane	75-00-3	12.00	ND			ND			ND			ND		
Chloroform	66-67-3	10.00	ND			ND			ND			ND		
Chloromethane	74-87-3	10.00	ND			ND			ND			ND		
2-Chlorotoluene	95-49-8	10.00	ND			ND			ND			ND		
4-Chlorotoluene	106-43-4	10.00	ND			ND			ND			ND		
Dibromochloromethane	124-48-1	10.00	ND			ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	11.00	ND			ND			ND			ND		
1,2-Dibromoethane	106-93-4	10.00	ND			ND			ND			ND		
Dibromomethane	74-95-3	10.00	ND			ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	10.00	ND			ND			3.11 J			ND		
1,3-Dichlorobenzene	541-73-1	10.00	ND			ND			ND			ND		
1,4-Dichlorobenzene	106-46-7	10.00	ND			ND			ND			ND		
Dichlorodifluoromethane	75-71-8	10.00	ND			ND			ND			ND		
1,1-Dichloroethane	75-34-3	10.00	ND			ND			ND			ND		
1,2-Dichloroethane	107-06-2	10.00	ND			ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	10.00	ND			ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	10.00	ND			ND			ND			ND		
1,2-Dichloropropane	78-87-5	10.00	ND			ND			ND			ND		
1,3-Dichloropropane	142-28-9	10.00	ND			ND			ND			ND		
2,2-Dichloropropane	594-20-7	10.00	ND			ND			ND			ND		
1,1-Dichloropropene	563-58-6	10.00	ND			ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	10.00	ND			ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	10.00	ND			ND			ND			ND		
Ethyl benzene	100-41-4	10.00	ND			ND			ND			ND		
Hexachlorobutadiene	87-88-3	10.00	ND			ND			ND			ND		
Isopropylbenzene	98-82-8	10.00	ND			ND			ND			ND		
p-Isopropyltoluene	99-87-6	10.00	ND			ND			ND			ND		
Methylene chloride	75-09-2	13.00	ND			30.7			30.2			48.0		
Naphthalene	91-20-3	11.00	34.4 B			ND			ND			ND		
n-Propylbenzene	103-65-1	10.00	ND											

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **MW-4**
File #: BT82056

Collected: 02/11/03 15:00 ES
Received: 02/11/03 16:50 MS
Analysis: 02/22/03 20:03 MGJ
Date Time Analyst

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
Styrene	100-42-5	10.00	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	10.00	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	10.00	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	10.00	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	10.00	45.9 B			41.9			43.9			69.4		
1,2,4-Trichlorobenzene	120-82-1	10.00	9.79 B			7.54 J			9.23 J			48.0		
1,1,1-Trichloroethane	71-55-6	10.00	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	10.00	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	10.00	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	10.00	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	10.00	ND			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	10.00	ND			ND			ND			ND		
Vinyl chloride	75-01-4	10.00	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	15.00	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		52.2	250.0	104.4	52.0	250.0	103.9	49.9	250.0	99.8	49.9	250.0	99.7
Dibromofluoromethane	1868-53-7		52.3	250.0	104.6	50.8	250.0	101.7	53.1	250.0	106.2	52.2	250.0	104.5
Toluene-d8	2037-26-5		51.1	250.0	102.2	48.4	250.0	96.8	49.7	250.0	99.3	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		53.0	250.0	106.1	49.9	250.0	99.8	50.2	250.0	100.5	54.6	250.0	109.3

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by: _____
Michael S. Bonner,Ph. D.
Bonner Analytical Testing Company

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **MW-8**
File #: BT82057

	Date	Time	Analyst
Collected:	02/11/03	15:45	ES
Received:	02/11/03	16:50	MS
Analyzed:	02/23/03	4:39	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE			BLANK			MATRIX SPIKE			MATRIX SPIKE DUP		
			Detected Amount ug/L (ppb)	Amount ug	% Recovery	Detected Amount ug/L (ppb)	Amount ug	% Recovery	Detected Amount ug/L (ppb)	Spike Amount ng	Spike % Recovery	Detected Amount ug/L (ppb)	Spike Amount ng	Spike % Recovery
1,1-Dichloroethene	75-35-4	10.00	1.85 J			ND			38.7	250.0	77.3	34.8	250.0	69.5
Benzene	71-43-2	500.00	12000			ND			44.1	250.0	88.2	41.3	250.0	82.6
Trichloroethene	79-01-6	10.00	3.20 J			ND			45.3	250.0	90.5	43.5	250.0	87.0
Toluene	108-88-3	10.00	35.40			ND			46.6	250.0	93.2	43.6	250.0	87.2
Chlorobenzene	108-90-7	500.00	230 J			ND			48.6	250.0	97.3	46.9	250.0	93.8
Bromobenzene	108-86-1	10.00	ND			ND			ND			ND		
Bromochloromethane	74-97-5	10.00	ND			ND			ND			ND		
Bromodichloromethane	75-27-4	10.00	4.72 J			ND			ND			ND		
Bromoform	75-25-2	10.00	ND			ND			ND			ND		
Bromomethane	74-83-9	10.00	ND			ND			ND			ND		
n-Butylbenzene	104-51-8	10.00	ND			ND			ND			ND		
sec-Butylbenzene	135-98-8	10.00	ND			ND			ND			ND		
tert-Butylbenzene	98-06-6	10.00	ND			ND			ND			ND		
Carbon Tetrachloride	56-23-5	500.00	12000			ND			ND			ND		
Chloroethane	75-00-3	12.00	85.5			ND			ND			ND		
Chloroform	66-67-3	500.00	1300			ND			ND			ND		
Chloromethane	74-87-3	10.00	3.34 J			ND			ND			ND		
2-Chlorotoluene	95-49-8	10.00	ND			ND			ND			ND		
4-Chlorotoluene	106-43-4	10.00	ND			ND			ND			ND		
Dibromochloromethane	124-48-1	10.00	ND			ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	11.00	ND			ND			ND			ND		
1,2-Dibromoethane	106-93-4	10.00	ND			ND			ND			ND		
Dibromomethane	74-95-3	10.00	ND			ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	10.00	2.22 J			ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	10.00	ND			ND			3.11 J			ND		
1,4-Dichlorobenzene	106-46-7	10.00	3.14 J			ND			ND			ND		
Dichlorodifluoromethane	75-71-8	10.00	ND			ND			ND			ND		
1,1-Dichloroethane	75-34-3	10.00	ND			ND			ND			ND		
1,2-Dichloroethane	107-06-2	10.00	79.8			ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	10.00	17.5			ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	10.00	ND			ND			ND			ND		
1,2-Dichloropropane	78-87-5	10.00	ND			ND			ND			ND		
1,3-Dichloropropane	142-28-9	10.00	ND			ND			ND			ND		
2,2-Dichloropropane	594-20-7	10.00	ND			ND			ND			ND		
1,1-Dichloropropene	563-58-6	10.00	ND			ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	10.00	ND			ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	10.00	ND			ND			ND			ND		
Ethyl benzene	100-41-4	10.00	67.5			ND			ND			ND		
Hexachlorobutadiene	87-68-3	10.00	ND			ND			ND			ND		
Isopropylbenzene	98-82-8	10.00	4.35 J			ND			ND			ND		
p-Isopropyltoluene	99-87-6	10.00	23.8			ND			ND			ND		
Methylene chloride	75-09-2	13.00	ND			ND			ND			ND		
Naphthalene	91-20-3	11.00	25.0 B			30.7			30.2			48.0		
n-Propylbenzene	103-65-1	10.00	ND			ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: MW-8
File #: BT82057

Collected:	02/11/03	15:45	ES
Received:	02/11/03	16:50	MS
Analysis:	02/23/03	4:39	MGJ
	Date	Time	Analyst

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
Styrene	100-42-5	10.00	1.25 J			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	10.00	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	10.00	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	10.00	48.9			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	10.00	25.3 B			41.9			43.9			69.4		
1,2,4-Trichlorobenzene	120-82-1	10.00	5.73 B			7.54 J			9.23 J			48.0		
1,1,1-Trichloroethane	71-55-6	10.00	1.50 J			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	10.00	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	10.00	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	10.00	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	10.00	1.92 J			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	10.00	1.80 J			ND			ND			ND		
Vinyl chloride	75-01-4	10.00	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	15.00	62.4			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		31.4	250.0	62.7 **	52.0	250.0	103.9	49.9	250.0	99.8	49.9	250.0	99.7
Dibromofluoromethane	1868-53-7		36.2	250.0	72.4 **	50.8	250.0	101.7	53.1	250.0	106.2	52.2	250.0	104.5
Toluene-d8	2037-26-5		49.7	250.0	99.4	48.4	250.0	96.8	49.7	250.0	99.3	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		50.5	250.0	100.9	49.9	250.0	99.8	50.2	250.0	100.5	54.6	250.0	109.3

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL
** = Surrogate recoveries were out of range due to matrix effect, Subsequent dilution was with in surrogate recovery limits.

Certified by: _____
Michael S. Bonner,Ph. D.
Bonner Analytical Testing Company

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **MW-9**
File #: BT82059

	Date	Time	Analyst
Collected:	02/11/03	16:16	ES
Received:	02/11/03	16:50	MS
Analyzed:	02/22/03	4:39	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)		SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	10.00	ND				ND			38.7	250.0	77.3	34.8	250.0	69.5
Benzene	71-43-2	10.00	64.3				ND			44.1	250.0	88.2	41.3	250.0	82.6
Trichloroethene	79-01-6	10.00	ND				ND			45.3	250.0	90.5	43.5	250.0	87.0
Toluene	108-88-3	10.00	ND				ND			46.6	250.0	93.2	43.6	250.0	87.2
Chlorobenzene	108-90-7	10.00	5.85	J			ND			48.6	250.0	97.3	46.9	250.0	93.8
Bromobenzene	108-86-1	10.00	ND				ND			ND			ND		
Bromochloromethane	74-97-5	10.00	ND				ND			ND			ND		
Bromodichloromethane	75-27-4	10.00	ND				ND			ND			ND		
Bromoform	75-25-2	10.00	ND				ND			ND			ND		
Bromomethane	74-83-9	10.00	ND				ND			ND			ND		
n-Butylbenzene	104-51-8	10.00	ND				ND			ND			ND		
sec-Butylbenzene	135-98-8	10.00	ND				ND			ND			ND		
tert-Butylbenzene	98-06-6	10.00	ND				ND			ND			ND		
Carbon Tetrachloride	56-23-5	10.00	20.7				ND			ND			ND		
Chloroethane	75-00-3	12.00	19.7				ND			ND			ND		
Chloroform	66-67-3	10.00	9.83	J			ND			ND			ND		
Chloromethane	74-87-3	10.00	ND				ND			ND			ND		
2-Chlorotoluene	95-49-8	10.00	ND				ND			ND			ND		
4-Chlorotoluene	106-43-4	10.00	ND				ND			ND			ND		
Dibromochloromethane	124-48-1	10.00	ND				ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	11.00	ND				ND			ND			ND		
1,2-Dibromoethane	106-93-4	10.00	ND				ND			ND			ND		
Dibromomethane	74-95-3	10.00	ND				ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	10.00	ND				ND			3.11	J		ND		
1,3-Dichlorobenzene	541-73-1	10.00	ND				ND			ND			ND		
1,4-Dichlorobenzene	106-46-7	10.00	ND				ND			ND			ND		
Dichlorodifluoromethane	75-71-8	10.00	ND				ND			ND			ND		
1,1-Dichloroethane	75-34-3	10.00	2.23	J			ND			ND			ND		
1,2-Dichloroethane	107-06-2	10.00	1.43	J			ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	10.00	ND				ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	10.00	ND				ND			ND			ND		
1,2-Dichloropropane	78-87-5	10.00	ND				ND			ND			ND		
1,3-Dichloropropane	142-28-9	10.00	ND				ND			ND			ND		
2,2-Dichloropropane	594-20-7	10.00	ND				ND			ND			ND		
1,1-Dichloropropene	563-58-6	10.00	ND				ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	10.00	ND				ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	10.00	ND				ND			ND			ND		
Ethyl benzene	100-41-4	10.00	1.53	J			ND			ND			ND		
Hexachlorobutadiene	87-68-3	10.00	ND				ND			ND			ND		
Isopropylbenzene	98-82-8	10.00	1.92	J			ND			ND			ND		
p-Isopropyltoluene	99-87-6	10.00	1.80	J			ND			ND			ND		
Methylene chloride	75-09-2	13.00	ND				ND			ND			ND		
Naphthalene	91-20-3	11.00	31.7	B			30.7			30.2			48.0		
n-Propylbenzene	103-65-1	10.00	ND				ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **MW-9**
File #: BT82059

	Date	Time	Analyst
Collected:	02/11/03	16:16	ES
Received:	02/11/03	16:50	MS
Analysis:	02/22/03	4:39	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP % Recovery
Styrene	100-42-5	10.00	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	10.00	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	10.00	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	10.00	ND			ND			ND			69.4		
1,2,3-Trichlorobenzene	87-61-6	10.00	36.8 B			41.9			43.9			48.0		
1,2,4-Trichlorobenzene	120-82-1	10.00	4.98 B			7.54 J			9.23 J			ND		
1,1,1-Trichloroethane	71-55-6	10.00	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	10.00	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	10.00	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	10.00	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	10.00	ND			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	10.00	ND			ND			ND			ND		
Vinyl chloride	75-01-4	10.00	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	15.00	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		51.4	250.0	102.7	52.0	250.0	103.9	49.9	250.0	99.8	49.9	250.0	99.7
Dibromofluoromethane	1868-53-7		52.6	250.0	105.3	50.8	250.0	101.7	53.1	250.0	106.2	52.2	250.0	104.5
Toluene-d8	2037-26-5		51.0	250.0	102.0	48.4	250.0	96.8	49.7	250.0	99.3	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		50.3	250.0	100.6	49.9	250.0	99.8	50.2	250.0	100.5	54.6	250.0	109.3

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by: _____
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Bonner Analytical Testing Company

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **MW-11**
File #: BT82054

	Date	Time	
Collected:	02/11/03	14:30	ES
Received:	02/11/03	16:50	MS
Analyzed:	02/22/03	17:54	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	10.00	ND			ND			38.7	250.0	77.3	34.8	250.0	69.5
Benzene	71-43-2	10.00	6.39 J			ND			44.1	250.0	88.2	41.3	250.0	82.6
Trichloroethene	79-01-6	10.00	ND			ND			45.3	250.0	90.5	43.5	250.0	87.0
Toluene	108-88-3	10.00	ND			ND			46.6	250.0	93.2	43.6	250.0	87.2
Chlorobenzene	108-90-7	10.00	ND			ND			48.6	250.0	97.3	46.9	250.0	93.8
Bromobenzene	108-86-1	10.00	ND			ND			ND			ND		
Bromochloromethane	74-97-5	10.00	ND			ND			ND			ND		
Bromodichloromethane	75-27-4	10.00	ND			ND			ND			ND		
Bromoform	75-25-2	10.00	ND			ND			ND			ND		
Bromomethane	74-83-9	10.00	ND			ND			ND			ND		
n-Butylbenzene	104-51-8	10.00	ND			ND			ND			ND		
sec-Butylbenzene	135-98-8	10.00	ND			ND			ND			ND		
tert-Butylbenzene	98-06-6	10.00	ND			ND			ND			ND		
Carbon Tetrachloride	56-23-5	10.00	ND			ND			ND			ND		
Chloroethane	75-00-3	12.00	ND			ND			ND			ND		
Chloroform	66-67-3	10.00	ND			ND			ND			ND		
Chloromethane	74-87-3	10.00	ND			ND			ND			ND		
2-Chlorotoluene	95-49-8	10.00	ND			ND			ND			ND		
4-Chlorotoluene	106-43-4	10.00	ND			ND			ND			ND		
Dibromochloromethane	124-48-1	10.00	ND			ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	11.00	ND			ND			ND			ND		
1,2-Dibromoethane	106-93-4	10.00	ND			ND			ND			ND		
Dibromomethane	74-95-3	10.00	ND			ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	10.00	ND			ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	10.00	ND			ND			3.11 J			ND		
1,4-Dichlorobenzene	106-46-7	10.00	ND			ND			ND			ND		
Dichlorodifluoromethane	75-71-8	10.00	ND			ND			ND			ND		
1,1-Dichloroethane	75-34-3	10.00	ND			ND			ND			ND		
1,2-Dichloroethane	107-06-2	10.00	ND			ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	10.00	ND			ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	10.00	ND			ND			ND			ND		
1,2-Dichloropropane	78-87-5	10.00	ND			ND			ND			ND		
1,3-Dichloropropane	142-28-9	10.00	ND			ND			ND			ND		
2,2-Dichloropropane	594-20-7	10.00	ND			ND			ND			ND		
1,1-Dichloropropene	563-58-6	10.00	ND			ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	10.00	ND			ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	10.00	ND			ND			ND			ND		
Ethyl benzene	100-41-4	10.00	ND			ND			ND			ND		
Hexachlorobutadiene	87-68-3	10.00	ND			ND			ND			ND		
Isopropylbenzene	98-82-8	10.00	ND			ND			ND			ND		
p-Isopropyltoluene	99-87-6	10.00	ND			ND			ND			ND		
Methylene chloride	75-09-2	13.00	ND			ND			ND			ND		
Naphthalene	91-20-3	11.00	42.6 B			30.7			30.2			48.0		
n-Propylbenzene	103-65-1	10.00	ND			ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: MW-11
File #: BT82054

	Date	Time	Analyst
Collected:	02/11/03	14:30	ES
Received:	02/11/03	16:50	MS
Analysis:	02/22/03	17:54	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
Styrene	100-42-5	10.00	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	10.00	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	10.00	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	10.00	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	10.00	53.4 B			41.9			43.9			69.4		
1,2,4-Trichlorobenzene	120-82-1	10.00	13.55 B			7.54 J			9.23 J			48.0		
1,1,1-Trichloroethane	71-55-6	10.00	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	10.00	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	10.00	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	10.00	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	10.00	ND			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	10.00	ND			ND			ND			ND		
Vinyl chloride	75-01-4	10.00	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	15.00	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		49.7	250.0	99.4	52.0	250.0	103.9	49.9	250.0	99.8	49.9	250.0	99.7
Dibromofluoromethane	1868-53-7		52.4	250.0	104.8	50.8	250.0	101.7	53.1	250.0	106.2	52.2	250.0	104.5
Toluene-d8	2037-26-5		48.9	250.0	97.7	48.4	250.0	96.8	49.7	250.0	99.3	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		51.4	250.0	102.8	49.9	250.0	99.8	50.2	250.0	100.5	54.6	250.0	109.3

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by: _____
Michael S. Bonner,Ph. D.
Bonner Analytical Testing Company

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **MW-11 DUP**
File #: BT82055

Collected: 02/11/03 14:30 ES
Received: 02/11/03 16:50 MS
Analyzed: 02/22/03 18:59 MGJ
(Date / Time / Analyst)

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	10.00	ND			ND			38.7	250.0	77.3	34.8	250.0	69.5
Benzene	71-43-2	10.00	6.80 J			ND			44.1	250.0	88.2	41.3	250.0	82.6
Trichloroethene	79-01-6	10.00	ND			ND			45.3	250.0	90.5	43.5	250.0	87.0
Toluene	108-88-3	10.00	ND			ND			46.6	250.0	93.2	43.6	250.0	87.2
Chlorobenzene	108-90-7	10.00	ND			ND			48.6	250.0	97.3	46.9	250.0	93.8
Bromobenzene	108-86-1	10.00	ND			ND			ND			ND		
Bromochloromethane	74-97-5	10.00	ND			ND			ND			ND		
Bromodichloromethane	75-27-4	10.00	ND			ND			ND			ND		
Bromoform	75-25-2	10.00	ND			ND			ND			ND		
Bromomethane	74-83-9	10.00	ND			ND			ND			ND		
n-Butylbenzene	104-51-8	10.00	ND			ND			ND			ND		
sec-Butylbenzene	135-98-8	10.00	ND			ND			ND			ND		
tert-Butylbenzene	98-06-6	10.00	ND			ND			ND			ND		
Carbon Tetrachloride	56-23-5	10.00	ND			ND			ND			ND		
Chloroethane	75-00-3	12.00	ND			ND			ND			ND		
Chloroform	66-67-3	10.00	ND			ND			ND			ND		
Chloromethane	74-87-3	10.00	ND			ND			ND			ND		
2-Chlorotoluene	95-49-8	10.00	ND			ND			ND			ND		
4-Chlorotoluene	106-43-4	10.00	ND			ND			ND			ND		
Dibromochloromethane	124-48-1	10.00	ND			ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	11.00	ND			ND			ND			ND		
1,2-Dibromoethane	106-93-4	10.00	ND			ND			ND			ND		
Dibromomethane	74-95-3	10.00	ND			ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	10.00	ND			ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	10.00	ND			ND			3.11 J			ND		
1,4-Dichlorobenzene	106-46-7	10.00	ND			ND			ND			ND		
Dichlorodifluoromethane	75-71-8	10.00	ND			ND			ND			ND		
1,1-Dichloroethane	75-34-3	10.00	ND			ND			ND			ND		
1,2-Dichloroethane	107-06-2	10.00	ND			ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	10.00	ND			ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	10.00	ND			ND			ND			ND		
1,2-Dichloropropane	78-87-5	10.00	ND			ND			ND			ND		
1,3-Dichloropropane	142-28-9	10.00	ND			ND			ND			ND		
2,2-Dichloropropane	594-20-7	10.00	ND			ND			ND			ND		
1,1-Dichloropropene	563-58-6	10.00	ND			ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	10.00	ND			ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	10.00	ND			ND			ND			ND		
Ethyl benzene	100-41-4	10.00	ND			ND			ND			ND		
Hexachlorobutadiene	87-68-3	10.00	ND			ND			ND			ND		
Isopropylbenzene	98-82-8	10.00	ND			ND			ND			ND		
p-Isopropyltoluene	99-87-6	10.00	ND			ND			ND			ND		
Methylene chloride	75-09-2	13.00	ND			ND			ND			ND		
Naphthalene	91-20-3	11.00	13.4 B			30.7			30.2			48.0		
n-Propylbenzene	103-65-1	10.00	ND			ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **MW-11 DUP**
File #: BT82055

	Date	Time	Analyst
Collected:	02/11/03	14:30	ES
Received:	02/11/03	16:50	MS
Analysis:	02/22/03	18:59	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP % Recovery
Styrene	100-42-5	10.00	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	10.00	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	10.00	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	10.00	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	10.00	13.5 B			41.9			43.9			69.4		
1,2,4-Trichlorobenzene	120-82-1	10.00	4.50 B			7.54 J			9.23 J			48.0		
1,1,1-Trichloroethane	71-55-6	10.00	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	10.00	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	10.00	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	10.00	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	10.00	ND			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	10.00	ND			ND			ND			ND		
Vinyl chloride	75-01-4	10.00	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	15.00	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		52.2	250.0	104.4	52.0	250.0	103.9	49.9	250.0	99.8	49.9	250.0	99.7
Dibromofluoromethane	1868-53-7		52.3	250.0	104.6	50.8	250.0	101.7	53.1	250.0	106.2	52.2	250.0	104.5
Toluene-d8	2037-26-5		51.1	250.0	102.2	48.4	250.0	96.8	49.7	250.0	99.3	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		53.0	250.0	106.1	49.9	250.0	99.8	50.2	250.0	100.5	54.8	250.0	109.3

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by: _____
Michael S. Bonner,Ph. D.
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BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **Rinsate Blank**
File #: BT82058

	Date	Time	
Collected:	02/11/03	15:35	ES
Received:	02/11/03	16:50	MS
Analyzed:	02/22/03	4:39	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	10.00	ND			ND			38.7	250.0	77.3	34.8	250.0	69.5
Benzene	71-43-2	10.00	ND			ND			44.1	250.0	88.2	41.3	250.0	82.6
Trichloroethene	79-01-6	10.00	ND			ND			45.3	250.0	90.5	43.5	250.0	87.0
Toluene	108-88-3	10.00	ND			ND			46.6	250.0	93.2	43.6	250.0	87.2
Chlorobenzene	108-90-7	10.00	ND			ND			48.6	250.0	97.3	46.9	250.0	93.8
Bromobenzene	108-86-1	10.00	ND			ND			ND			ND		
Bromochloromethane	74-97-5	10.00	ND			ND			ND			ND		
Bromodichloromethane	75-27-4	10.00	ND			ND			ND			ND		
Bromoform	75-25-2	10.00	ND			ND			ND			ND		
Bromomethane	74-83-9	10.00	ND			ND			ND			ND		
n-Butylbenzene	104-51-8	10.00	ND			ND			ND			ND		
sec-Butylbenzene	135-98-8	10.00	ND			ND			ND			ND		
tert-Butylbenzene	98-06-6	10.00	ND			ND			ND			ND		
Carbon Tetrachloride	56-23-5	10.00	ND			ND			ND			ND		
Chloroethane	75-00-3	12.00	ND			ND			ND			ND		
Chloroform	66-67-3	10.00	2.56 J			ND			ND			ND		
Chloromethane	74-87-3	10.00	ND			ND			ND			ND		
2-Chlorotoluene	95-49-8	10.00	ND			ND			ND			ND		
4-Chlorotoluene	106-43-4	10.00	ND			ND			ND			ND		
Dibromochloromethane	124-48-1	10.00	ND			ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	11.00	ND			ND			ND			ND		
1,2-Dibromoethane	106-93-4	10.00	ND			ND			ND			ND		
Dibromomethane	74-95-3	10.00	ND			ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	10.00	ND			ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	10.00	ND			ND			3.11 J			ND		
1,4-Dichlorobenzene	106-46-7	10.00	ND			ND			ND			ND		
Dichlorodifluoromethane	75-71-8	10.00	ND			ND			ND			ND		
1,1-Dichloroethane	75-34-3	10.00	ND			ND			ND			ND		
1,2-Dichloroethane	107-06-2	10.00	ND			ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	10.00	ND			ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	10.00	ND			ND			ND			ND		
1,2-Dichloropropane	78-87-5	10.00	ND			ND			ND			ND		
1,3-Dichloropropane	142-28-9	10.00	ND			ND			ND			ND		
2,2-Dichloropropane	594-20-7	10.00	ND			ND			ND			ND		
1,1-Dichloropropene	563-58-6	10.00	ND			ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	10.00	ND			ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	10.00	ND			ND			ND			ND		
Ethyl benzene	100-41-4	10.00	ND			ND			ND			ND		
Hexachlorobutadiene	87-68-3	10.00	ND			ND			ND			ND		
Isopropylbenzene	98-82-8	10.00	ND			ND			ND			ND		
p-Isopropyltoluene	99-87-6	10.00	ND			ND			ND			ND		
Methylene chloride	75-09-2	13.00	ND			ND			ND			ND		
Naphthalene	91-20-3	11.00	37.94 B			30.69			30.22			47.95		
n-Propylbenzene	103-65-1	10.00	ND			ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **Rinsate Blank**
File #: BT82058

Collected: 02/11/03 15:35 ES
Received: 02/11/03 16:50 MS
Analysis: 02/22/03 4:39 MGJ
Date Time Analyst

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP % Recovery
Styrene	100-42-5	10.00	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	10.00	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	10.00	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	10.00	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	10.00	46.7 B			41.9			43.9			69.4		
1,2,4-Trichlorobenzene	120-82-1	10.00	11.9 B			7.54 J			9.23 J			48.0		
1,1,1-Trichloroethane	71-55-6	10.00	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	10.00	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	10.00	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	10.00	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	10.00	ND			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	10.00	ND			ND			ND			ND		
Vinyl chloride	75-01-4	10.00	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	15.00	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		48.5	250.0	96.9	52.0	250.0	103.9	49.9	250.0	99.8	49.9	250.0	99.7
Dibromofluoromethane	1868-53-7		48.4	250.0	96.8	50.8	250.0	101.7	53.1	250.0	106.2	52.2	250.0	104.5
Toluene-d8	2037-26-5		49.0	250.0	97.9	48.4	250.0	96.8	49.7	250.0	99.3	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		53.0	250.0	106.1	49.9	250.0	99.8	50.2	250.0	100.5	54.6	250.0	109.3

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by: _____
Michael S. Bonner,Ph. D.
Bonner Analytical Testing Company

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA

VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **Trip Blank**
File #: BT82119

Collected: 02/11/03 (Date) 0:00 (Time) ES (Analyst)
Received: 02/11/03 16:50 MS
Analyzed: 02/22/03 15:45 MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	10.00	ND			ND			38.7	250.0	77.3	34.8	250.0	69.5
Benzene	71-43-2	10.00	ND			ND			44.1	250.0	88.2	41.3	250.0	82.6
Trichloroethene	79-01-6	10.00	ND			ND			45.3	250.0	90.5	43.5	250.0	87.0
Toluene	108-88-3	10.00	ND			ND			46.6	250.0	93.2	43.6	250.0	87.2
Chlorobenzene	108-90-7	10.00	ND			ND			48.6	250.0	97.3	46.9	250.0	93.8
Bromobenzene	108-86-1	10.00	ND			ND			ND			ND		
Bromochloromethane	74-97-5	10.00	ND			ND			ND			ND		
Bromodichloromethane	75-27-4	10.00	ND			ND			ND			ND		
Bromoform	75-25-2	10.00	ND			ND			ND			ND		
Bromomethane	74-83-9	10.00	ND			ND			ND			ND		
n-Butylbenzene	104-51-8	10.00	ND			ND			ND			ND		
sec-Butylbenzene	135-98-8	10.00	ND			ND			ND			ND		
tert-Butylbenzene	98-06-6	10.00	ND			ND			ND			ND		
Carbon Tetrachloride	56-23-5	10.00	ND			ND			ND			ND		
Chloroethane	75-00-3	12.00	ND			ND			ND			ND		
Chloroform	66-67-3	10.00	ND			ND			ND			ND		
Chloromethane	74-87-3	10.00	ND			ND			ND			ND		
2-Chlorotoluene	95-49-8	10.00	ND			ND			ND			ND		
4-Chlorotoluene	106-43-4	10.00	ND			ND			ND			ND		
Dibromochloromethane	124-48-1	10.00	ND			ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	11.00	ND			ND			ND			ND		
1,2-Dibromoethane	106-93-4	10.00	ND			ND			ND			ND		
Dibromomethane	74-95-3	10.00	ND			ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	10.00	ND			ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	10.00	ND			ND			3.11 J			ND		
1,4-Dichlorobenzene	106-46-7	10.00	ND			ND			ND			ND		
Dichlorodifluoromethane	75-71-8	10.00	ND			ND			ND			ND		
1,1-Dichloroethane	75-34-3	10.00	ND			ND			ND			ND		
1,2-Dichloroethane	107-06-2	10.00	ND			ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	10.00	ND			ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	10.00	ND			ND			ND			ND		
1,2-Dichloropropane	78-87-5	10.00	ND			ND			ND			ND		
1,3-Dichloropropane	142-28-9	10.00	ND			ND			ND			ND		
2,2-Dichloropropane	594-20-7	10.00	ND			ND			ND			ND		
1,1-Dichloropropene	563-58-6	10.00	ND			ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	10.00	ND			ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	10.00	ND			ND			ND			ND		
Ethyl benzene	100-41-4	10.00	ND			ND			ND			ND		
Hexachlorobutadiene	87-88-3	10.00	ND			ND			ND			ND		
Isopropylbenzene	98-82-8	10.00	ND			ND			ND			ND		
p-Isopropyltoluene	99-87-6	10.00	ND			ND			ND			ND		
Methylene chloride	75-09-2	13.00	ND			ND			ND			ND		
Naphthalene	91-20-3	11.00	33.7 B			30.7			30.2			48.0		
n-Propylbenzene	103-65-1	10.00	ND			ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **Trip Blank**
File #: BT82119

	Date	Time	Analyst
Collected:	02/11/03	0:00	ES
Received:	02/11/03	16:50	MS
Analysis:	02/22/03	15:45	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP % Recovery
Styrene	100-42-5	10.00	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	10.00	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	10.00	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	10.00	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	10.00	47.3 B			41.9			43.9			69.4		
1,2,4-Trichlorobenzene	120-82-1	10.00	14.25 B			7.54 J			9.23 J			48.0		
1,1,1-Trichloroethane	71-55-6	10.00	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	10.00	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	10.00	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	10.00	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	10.00	ND			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	10.00	ND			ND			ND			ND		
Vinyl chloride	75-01-4	10.00	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	15.00	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		49.5	250.0	98.9	52.0	250.0	103.9	49.9	250.0	99.8	49.9	250.0	99.7
Dibromofluoromethane	1868-53-7		52.3	250.0	104.7	50.8	250.0	101.7	53.1	250.0	106.2	52.2	250.0	104.5
Toluene-d8	2037-26-5		48.5	250.0	97.0	48.4	250.0	96.8	49.7	250.0	99.3	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		48.7	250.0	97.4	49.9	250.0	99.8	50.2	250.0	100.5	54.6	250.0	109.3

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by: _____
Michael S. Bonner,Ph. D.
Bonner Analytical Testing Company

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **CM-1**
File #: BT82052

	Date	Time	Analyst
Collected:	02/11/03	12:55	ES
Received:	02/11/03	16:50	MS
Analyzed:	02/23/03	6:48	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE			BLANK			MATRIX SPIKE			MATRIX SPIKE DUP		
			Detected Amount ug/L (ppb)	Amount ug	% Recovery	Detected Amount ug/L (ppb)	Amount ug	% Recovery	Detected Amount ug/L (ppb)	Spike Amount ng	Spike % Recovery	Detected Amount ug/L (ppb)	Spike Amount ng	Spike % Recovery
1,1-Dichloroethene	75-35-4	10.00	ND			ND			38.7	250.0	77.3	34.8	250.0	69.5
Benzene	71-43-2	10.00	2.82 J			ND			44.1	250.0	88.2	41.3	250.0	82.6
Trichloroethene	79-01-6	10.00	ND			ND			45.3	250.0	90.5	43.5	250.0	87.0
Toluene	108-88-3	10.00	ND			ND			46.6	250.0	93.2	43.6	250.0	87.2
Chlorobenzene	108-90-7	10.00	ND			ND			48.6	250.0	97.3	46.9	250.0	93.8
Bromobenzene	108-86-1	10.00	ND			ND			ND			ND		
Bromochloromethane	74-97-5	10.00	ND			ND			ND			ND		
Bromodichloromethane	75-27-4	10.00	ND			ND			ND			ND		
Bromoform	75-25-2	10.00	ND			ND			ND			ND		
Bromomethane	74-83-9	10.00	ND			ND			ND			ND		
n-Butylbenzene	104-51-8	10.00	ND			ND			ND			ND		
sec-Butylbenzene	135-98-8	10.00	ND			ND			ND			ND		
tert-Butylbenzene	98-06-6	10.00	ND			ND			ND			ND		
Carbon Tetrachloride	56-23-5	10.00	3.03 J			ND			ND			ND		
Chloroethane	75-00-3	12.00	20.5			ND			ND			ND		
Chloroform	66-67-3	10.00	2.34 J			ND			ND			ND		
Chloromethane	74-87-3	10.00	ND			ND			ND			ND		
2-Chlorotoluene	95-49-8	10.00	ND			ND			ND			ND		
4-Chlorotoluene	106-43-4	10.00	ND			ND			ND			ND		
Dibromochloromethane	124-48-1	10.00	ND			ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	11.00	ND			ND			ND			ND		
1,2-Dibromoethane	106-93-4	10.00	ND			ND			ND			ND		
Dibromomethane	74-95-3	10.00	ND			ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	10.00	ND			ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	10.00	ND			ND			3.11 J			ND		
1,4-Dichlorobenzene	106-46-7	10.00	ND			ND			ND			ND		
Dichlorodifluoromethane	75-71-8	10.00	ND			ND			ND			ND		
1,1-Dichloroethane	75-34-3	10.00	ND			ND			ND			ND		
1,2-Dichloroethane	107-06-2	10.00	ND			ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	10.00	ND			ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	10.00	ND			ND			ND			ND		
1,2-Dichloropropane	78-87-5	10.00	ND			ND			ND			ND		
1,3-Dichloropropane	142-28-9	10.00	ND			ND			ND			ND		
2,2-Dichloropropane	594-20-7	10.00	ND			ND			ND			ND		
1,1-Dichloropropene	563-58-6	10.00	ND			ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	10.00	ND			ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	10.00	ND			ND			ND			ND		
Ethyl benzene	100-41-4	10.00	ND			ND			ND			ND		
Hexachlorobutadiene	87-68-3	10.00	ND			ND			ND			ND		
Isopropylbenzene	98-82-8	10.00	ND			ND			ND			ND		
p-Isopropyltoluene	99-87-6	10.00	ND			ND			ND			ND		
Methylene chloride	75-09-2	13.00	ND			ND			ND			ND		
Naphthalene	91-20-3	11.00	25.7 B			30.7			30.2			48.0		
n-Propylbenzene	103-65-1	10.00	ND			ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-1
File #: BT82052

Collected: 02/11/03 12:55 ES
Received: 02/11/03 16:50 MS
Analysis: 02/23/03 6:48 MGJ
Date Time Analyst

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
Styrene	100-42-5	10.00	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	10.00	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	10.00	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	10.00	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	10.00	32.2 B			41.9			43.9			69.4		
1,2,4-Trichlorobenzene	120-82-1	10.00	3.36 B			7.54 J			9.23 J			48.0		
1,1,1-Trichloroethane	71-55-6	10.00	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	10.00	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	10.00	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	10.00	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	10.00	ND			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	10.00	ND			ND			ND			ND		
Vinyl chloride	75-01-4	10.00	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	15.00	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		49.9	250.0	99.8	52.0	250.0	103.9	49.9	250.0	99.8	49.9	250.0	99.7
Dibromofluoromethane	1868-53-7		52.8	250.0	105.6	50.8	250.0	101.7	53.1	250.0	106.2	52.2	250.0	104.5
Toluene-d8	2037-26-5		50.7	250.0	101.3	48.4	250.0	96.8	49.7	250.0	99.3	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		50.3	250.0	100.5	49.9	250.0	99.8	50.2	250.0	100.5	54.6	250.0	109.3

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by:

Michael S. Bonner,Ph. D.
Bonner Analytical Testing Company

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-2
File #: BT82050

	Date	Time	Analyst
Collected:	02/11/03	12:20	ES
Received:	02/11/03	16:50	MS
Analyzed:	02/23/03	7:52	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	10.00	ND			ND			38.7	250.0	77.3	34.8	250.0	69.5
Benzene	71-43-2	10.00	1.17 J			ND			44.1	250.0	88.2	41.3	250.0	82.6
Trichloroethene	79-01-6	10.00	ND			ND			45.3	250.0	90.5	43.5	250.0	87.0
Toluene	108-88-3	10.00	ND			ND			46.6	250.0	93.2	43.6	250.0	87.2
Chlorobenzene	108-90-7	10.00	ND			ND			48.6	250.0	97.3	46.9	250.0	93.8
Bromobenzene	108-86-1	10.00	ND			ND			ND			ND		
Bromochloromethane	74-97-5	10.00	ND			ND			ND			ND		
Bromodichloromethane	75-27-4	10.00	ND			ND			ND			ND		
Bromoform	75-25-2	10.00	ND			ND			ND			ND		
Bromomethane	74-83-9	10.00	ND			ND			ND			ND		
n-Butylbenzene	104-51-8	10.00	ND			ND			ND			ND		
sec-Butylbenzene	135-98-8	10.00	ND			ND			ND			ND		
tert-Butylbenzene	98-06-6	10.00	ND			ND			ND			ND		
Carbon Tetrachloride	56-23-5	10.00	1.48 J			ND			ND			ND		
Chloroethane	75-00-3	12.00	15.6			ND			ND			ND		
Chloroform	66-67-3	10.00	ND			ND			ND			ND		
Chloromethane	74-87-3	10.00	ND			ND			ND			ND		
2-Chlorotoluene	95-49-8	10.00	ND			ND			ND			ND		
4-Chlorotoluene	106-43-4	10.00	ND			ND			ND			ND		
Dibromochloromethane	124-48-1	10.00	ND			ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	11.00	ND			ND			ND			ND		
1,2-Dibromoethane	106-93-4	10.00	ND			ND			ND			ND		
Dibromomethane	74-95-3	10.00	ND			ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	10.00	ND			ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	10.00	ND			ND			3.11 J			ND		
1,4-Dichlorobenzene	106-46-7	10.00	ND			ND			ND			ND		
Dichlorodifluoromethane	75-71-8	10.00	ND			ND			ND			ND		
1,1-Dichloroethane	75-34-3	10.00	ND			ND			ND			ND		
1,2-Dichloroethane	107-06-2	10.00	ND			ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	10.00	ND			ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	10.00	ND			ND			ND			ND		
1,2-Dichloropropane	78-87-5	10.00	ND			ND			ND			ND		
1,3-Dichloropropane	142-28-9	10.00	ND			ND			ND			ND		
2,2-Dichloropropane	594-20-7	10.00	ND			ND			ND			ND		
1,1-Dichloropropene	563-58-6	10.00	ND			ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	10.00	ND			ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	10.00	ND			ND			ND			ND		
Ethyl benzene	100-41-4	10.00	ND			ND			ND			ND		
Hexachlorobutadiene	87-68-3	10.00	ND			ND			ND			ND		
Isopropylbenzene	98-82-8	10.00	ND			ND			ND			ND		
p-Isopropyltoluene	99-87-6	10.00	ND			ND			ND			ND		
Methylene chloride	75-09-2	13.00	ND			ND			ND			ND		
Naphthalene	91-20-3	11.00	20.3 B			30.7			30.2			48.0		
n-Propylbenzene	103-65-1	10.00	ND			ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-2
File #: BT82050

	Date	Time	
Collected:	02/11/03	12:20	ES
Received:	02/11/03	16:50	MS
Analysis:	02/23/03	7:52	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
Styrene	100-42-5	10.00	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	10.00	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	10.00	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	10.00	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	10.00	24.8 B			41.9			43.9			69.4		
1,2,4-Trichlorobenzene	120-82-1	10.00	2.37 B			7.54 J			9.23 J			48.0		
1,1,1-Trichloroethane	71-55-6	10.00	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	10.00	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	10.00	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	10.00	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	10.00	ND			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	10.00	ND			ND			ND			ND		
Vinyl chloride	75-01-4	10.00	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	15.00	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		52.2	250.0	104.4	52.0	250.0	103.9	49.9	250.0	99.8	49.9	250.0	99.7
Dibromofluoromethane	1868-53-7		53.2	250.0	106.4	50.8	250.0	101.7	53.1	250.0	106.2	52.2	250.0	104.5
Toluene-d8	2037-26-5		48.1	250.0	96.1	48.4	250.0	96.8	49.7	250.0	99.3	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		49.6	250.0	99.2	49.9	250.0	99.8	50.2	250.0	100.5	54.6	250.0	109.3

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by: _____
Michael S. Bonner,Ph. D.
Bonner Analytical Testing Company

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-3
File #: BT82046

	Date	Time	Analyst
Collected:	02/11/03	11:15	ES
Received:	02/11/03	16:50	MS
Analyzed:	02/23/03	8:56	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)		SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	10.00	ND				ND			38.7	250.0	77.3	34.8	250.0	69.5
Benzene	71-43-2	10.00	3.66	J			ND			44.1	250.0	88.2	41.3	250.0	82.6
Trichloroethene	79-01-6	10.00	ND				ND			45.3	250.0	90.5	43.5	250.0	87.0
Toluene	108-88-3	10.00	ND				ND			46.6	250.0	93.2	43.6	250.0	87.2
Chlorobenzene	108-90-7	10.00	ND				ND			48.6	250.0	97.3	46.9	250.0	93.8
Bromobenzene	108-86-1	10.00	ND				ND			ND			ND		
Bromochloromethane	74-97-5	10.00	ND				ND			ND			ND		
Bromodichloromethane	75-27-4	10.00	ND				ND			ND			ND		
Bromoform	75-25-2	10.00	ND				ND			ND			ND		
Bromomethane	74-83-9	10.00	ND				ND			ND			ND		
n-Butylbenzene	104-51-8	10.00	ND				ND			ND			ND		
sec-Butylbenzene	135-98-8	10.00	ND				ND			ND			ND		
tert-Butylbenzene	98-06-6	10.00	ND				ND			ND			ND		
Carbon Tetrachloride	56-23-5	10.00	ND				ND			ND			ND		
Chloroethane	75-00-3	12.00	8.42	J			ND			ND			ND		
Chloroform	66-67-3	10.00	ND				ND			ND			ND		
Chloromethane	74-87-3	10.00	ND				ND			ND			ND		
2-Chlorotoluene	95-49-8	10.00	ND				ND			ND			ND		
4-Chlorotoluene	106-43-4	10.00	ND				ND			ND			ND		
Dibromochloromethane	124-48-1	10.00	ND				ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	11.00	ND				ND			ND			ND		
1,2-Dibromoethane	106-93-4	10.00	ND				ND			ND			ND		
Dibromomethane	74-95-3	10.00	ND				ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	10.00	ND				ND			3.11	J		ND		
1,3-Dichlorobenzene	541-73-1	10.00	ND				ND			ND			ND		
1,4-Dichlorobenzene	106-46-7	10.00	ND				ND			ND			ND		
Dichlorodifluoromethane	75-71-8	10.00	ND				ND			ND			ND		
1,1-Dichloroethane	75-34-3	10.00	ND				ND			ND			ND		
1,2-Dichloroethane	107-06-2	10.00	ND				ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	10.00	ND				ND			ND			ND		
trans-1,2-Dichloroethene	158-60-5	10.00	ND				ND			ND			ND		
1,2-Dichloropropane	78-87-5	10.00	ND				ND			ND			ND		
1,3-Dichloropropane	142-28-9	10.00	ND				ND			ND			ND		
2,2-Dichloropropane	594-20-7	10.00	ND				ND			ND			ND		
1,1-Dichloropropene	563-58-6	10.00	ND				ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	10.00	ND				ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	10.00	ND				ND			ND			ND		
Ethyl benzene	100-41-4	10.00	ND				ND			ND			ND		
Hexachlorobutadiene	87-68-3	10.00	ND				ND			ND			ND		
Isopropylbenzene	98-82-8	10.00	ND				ND			ND			ND		
p-Isopropyltoluene	99-87-6	10.00	ND				ND			ND			ND		
Methylene chloride	75-09-2	13.00	ND				ND			ND			ND		
Naphthalene	91-20-3	11.00	20.1	B			30.7			30.2			48.0		
n-Propylbenzene	103-65-1	10.00	ND				ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-3
File #: BT82046

	Date	Time	Analyst
Collected:	02/11/03	11:15	ES
Received:	02/11/03	16:50	MS
Analysis:	02/23/03	8:56	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP % Recovery
Styrene	100-42-5	10.00	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	10.00	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	10.00	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	10.00	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	10.00	23.0 B			41.9			43.9			69.4		
1,2,4-Trichlorobenzene	120-82-1	10.00	2.13 B			7.54 J			9.23 J			48.0		
1,1,1-Trichloroethane	71-55-6	10.00	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	10.00	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	10.00	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	10.00	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	10.00	ND			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	10.00	ND			ND			ND			ND		
Vinyl chloride	75-01-4	10.00	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	15.00	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		47.9	250.0	95.7	52.0	250.0	103.9	49.9	250.0	99.8	49.9	250.0	99.7
Dibromofluoromethane	1868-53-7		53.3	250.0	106.6	50.8	250.0	101.7	53.1	250.0	106.2	52.2	250.0	104.5
Toluene-d8	2037-26-5		49.4	250.0	98.7	48.4	250.0	96.8	49.7	250.0	99.3	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		51.6	250.0	103.2	49.9	250.0	99.8	50.2	250.0	100.5	54.6	250.0	109.3

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by: _____
Michael S. Bonner,Ph. D.
Bonner Analytical Testing Company

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: DUP
File #: BT82048

Collected: 02/11/03 11:15 ES
Received: 02/11/03 16:50 MS
Analyzed: 02/23/03 10:01 MGJ
Date Time Analyst

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	10.00	ND			ND			38.7	250.0	77.3	34.8	250.0	69.5
Benzene	71-43-2	10.00	3.57 J			ND			44.1	250.0	88.2	41.3	250.0	82.6
Trichloroethene	79-01-6	10.00	ND			ND			45.3	250.0	90.5	43.5	250.0	87.0
Toluene	108-88-3	10.00	ND			ND			46.6	250.0	93.2	43.6	250.0	87.2
Chlorobenzene	108-90-7	10.00	ND			ND			48.6	250.0	97.3	46.9	250.0	93.8
Bromobenzene	108-86-1	10.00	ND			ND			ND			ND		
Bromochloromethane	74-97-5	10.00	ND			ND			ND			ND		
Bromodichloromethane	75-27-4	10.00	ND			ND			ND			ND		
Bromoform	75-25-2	10.00	ND			ND			ND			ND		
Bromomethane	74-83-9	10.00	ND			ND			ND			ND		
n-Butylbenzene	104-51-8	10.00	ND			ND			ND			ND		
sec-Butylbenzene	135-98-8	10.00	ND			ND			ND			ND		
tert-Butylbenzene	98-06-6	10.00	ND			ND			ND			ND		
Carbon Tetrachloride	56-23-5	10.00	ND			ND			ND			ND		
Chloroethane	75-00-3	12.00	4.83 J			ND			ND			ND		
Chloroform	66-67-3	10.00	ND			ND			ND			ND		
Chloromethane	74-87-3	10.00	ND			ND			ND			ND		
2-Chlorotoluene	95-49-8	10.00	ND			ND			ND			ND		
4-Chlorotoluene	106-43-4	10.00	ND			ND			ND			ND		
Dibromochloromethane	124-48-1	10.00	ND			ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	11.00	ND			ND			ND			ND		
1,2-Dibromoethane	106-93-4	10.00	ND			ND			ND			ND		
Dibromomethane	74-95-3	10.00	ND			ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	10.00	ND			ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	10.00	ND			ND			3.11 J			ND		
1,4-Dichlorobenzene	106-46-7	10.00	ND			ND			ND			ND		
Dichlorodifluoromethane	75-71-8	10.00	ND			ND			ND			ND		
1,1-Dichloroethane	75-34-3	10.00	ND			ND			ND			ND		
1,2-Dichloroethane	107-06-2	10.00	ND			ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	10.00	ND			ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	10.00	ND			ND			ND			ND		
1,2-Dichloropropane	78-87-5	10.00	ND			ND			ND			ND		
1,3-Dichloropropane	142-28-9	10.00	ND			ND			ND			ND		
2,2-Dichloropropane	594-20-7	10.00	ND			ND			ND			ND		
1,1-Dichloropropene	563-58-6	10.00	ND			ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	10.00	ND			ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	10.00	ND			ND			ND			ND		
Ethyl benzene	100-41-4	10.00	ND			ND			ND			ND		
Hexachlorobutadiene	87-68-3	10.00	ND			ND			ND			ND		
Isopropylbenzene	98-82-8	10.00	ND			ND			ND			ND		
p-Isopropyltoluene	99-87-6	10.00	ND			ND			ND			ND		
Methylene chloride	75-09-2	13.00	ND			ND			ND			ND		
Naphthalene	91-20-3	11.00	12.8 B			30.7			30.2			48.0		
n-Propylbenzene	103-65-1	10.00	ND			ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: DUP
File #: BT82048

	Date	Time	Analyst
Collected:	02/11/03	11:15	ES
Received:	02/11/03	18:50	MS
Analysis:	02/23/03	10:01	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
Styrene	100-42-5	10.00	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	10.00	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	10.00	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	10.00	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	10.00	11.2 B			41.9			43.9			69.4		
1,2,4-Trichlorobenzene	120-82-1	10.00	1.18 B			7.54 J			9.23 J			48.0		
1,1,1-Trichloroethane	71-55-6	10.00	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	10.00	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	10.00	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	10.00	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	10.00	ND			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	10.00	ND			ND			ND			ND		
Vinyl chloride	75-01-4	10.00	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	15.00	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		47.9	250.0	95.7	52.0	250.0	103.9	49.9	250.0	99.8	49.9	250.0	99.7
Dibromofluoromethane	1868-53-7		53.3	250.0	106.6	50.8	250.0	101.7	53.1	250.0	106.2	52.2	250.0	104.5
Toluene-d8	2037-26-5		49.4	250.0	98.7	48.4	250.0	96.8	49.7	250.0	99.3	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		51.6	250.0	103.2	49.9	250.0	99.8	50.2	250.0	100.5	54.6	250.0	109.3

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by: _____
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BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-4
File #: BT82044

	Date	Time	Analyst
Collected:	02/11/03	10:35	ES
Received:	02/11/03	16:50	MS
Analyzed:	02/23/03	11:05	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	10.00	ND			ND			38.7	250.0	77.3	34.8	250.0	69.5
Benzene	71-43-2	10.00	2.25 J			ND			44.1	250.0	88.2	41.3	250.0	82.6
Trichloroethene	79-01-6	10.00	ND			ND			45.3	250.0	90.5	43.5	250.0	87.0
Toluene	108-88-3	10.00	ND			ND			46.6	250.0	93.2	43.6	250.0	87.2
Chlorobenzene	108-90-7	10.00	ND			ND			48.6	250.0	97.3	46.9	250.0	93.8
Bromobenzene	108-86-1	10.00	ND			ND			ND			ND		
Bromochloromethane	74-97-5	10.00	ND			ND			ND			ND		
Bromodichloromethane	75-27-4	10.00	ND			ND			ND			ND		
Bromoform	75-25-2	10.00	ND			ND			ND			ND		
Bromomethane	74-83-9	10.00	ND			ND			ND			ND		
n-Butylbenzene	104-51-8	10.00	ND			ND			ND			ND		
sec-Butylbenzene	135-98-8	10.00	ND			ND			ND			ND		
tert-Butylbenzene	98-06-6	10.00	ND			ND			ND			ND		
Carbon Tetrachloride	56-23-5	10.00	ND			ND			ND			ND		
Chloroethane	75-00-3	12.00	3.43 J			ND			ND			ND		
Chloroform	66-67-3	10.00	ND			ND			ND			ND		
Chloromethane	74-87-3	10.00	ND			ND			ND			ND		
2-Chlorotoluene	95-49-8	10.00	ND			ND			ND			ND		
4-Chlorotoluene	106-43-4	10.00	ND			ND			ND			ND		
Dibromochloromethane	124-48-1	10.00	ND			ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	11.00	ND			ND			ND			ND		
1,2-Dibromoethane	106-93-4	10.00	ND			ND			ND			ND		
Dibromomethane	74-95-3	10.00	ND			ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	10.00	ND			ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	10.00	ND			ND			3.11 J			ND		
1,4-Dichlorobenzene	106-46-7	10.00	ND			ND			ND			ND		
Dichlorodifluoromethane	75-71-8	10.00	ND			ND			ND			ND		
1,1-Dichloroethane	75-34-3	10.00	ND			ND			ND			ND		
1,2-Dichloroethane	107-06-2	10.00	ND			ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	10.00	ND			ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	10.00	ND			ND			ND			ND		
1,2-Dichloropropane	78-87-5	10.00	ND			ND			ND			ND		
1,3-Dichloropropane	142-28-9	10.00	ND			ND			ND			ND		
2,2-Dichloropropane	594-20-7	10.00	ND			ND			ND			ND		
1,1-Dichloropropene	563-58-6	10.00	ND			ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	10.00	ND			ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	10.00	ND			ND			ND			ND		
Ethyl benzene	100-41-4	10.00	ND			ND			ND			ND		
Hexachlorobutadiene	87-68-3	10.00	ND			ND			ND			ND		
Isopropylbenzene	98-82-8	10.00	ND			ND			ND			ND		
p-Isopropyltoluene	99-87-6	10.00	ND			ND			ND			ND		
Methylene chloride	75-09-2	13.00	ND			ND			ND			ND		
Naphthalene	91-20-3	11.00	13.0 B			30.7			30.2			48.0		
n-Propylbenzene	103-65-1	10.00	ND			ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-4
File #: BT82044

Collected: 02/11/03 10:35 ES
Received: 02/11/03 16:50 MS
Analysis: 02/23/03 11:05 MGJ
Date Time Analyst

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
Styrene	100-42-5	10.00	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	10.00	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	10.00	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	10.00	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	10.00	12.2 B			41.9			43.9			69.4		
1,2,4-Trichlorobenzene	120-82-1	10.00	1.26 B			7.54 J			9.23 J			48.0		
1,1,1-Trichloroethane	71-55-6	10.00	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	10.00	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	10.00	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	10.00	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	10.00	ND			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	10.00	ND			ND			ND			ND		
Vinyl chloride	75-01-4	10.00	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	15.00	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		48.3	250.0	96.5	52.0	250.0	103.9	49.9	250.0	99.8	49.9	250.0	99.7
Dibromofluoromethane	1868-53-7		53.1	250.0	106.3	50.8	250.0	101.7	53.1	250.0	106.2	52.2	250.0	104.5
Toluene-d8	2037-26-5		47.1	250.0	94.2	48.4	250.0	96.8	49.7	250.0	99.3	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		53.5	250.0	107.0	49.9	250.0	99.8	50.2	250.0	100.5	54.6	250.0	109.3

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by: _____
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BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-5
File #: BT82042

Collected: 02/11/03 9:25 ES
Received: 02/11/03 16:50 MS
Analyzed: 02/23/03 12:10 MGJ
Date Time Analyst

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE			BLANK			MATRIX SPIKE			MATRIX SPIKE DUP		
			Detected Amount ug/L (ppb)	Amount ug	% Recovery	Detected Amount ug/L (ppb)	Amount ug	% Recovery	Detected Amount ug/L (ppb)	Spike Amount ng	Spike % Recovery	Detected Amount ug/L (ppb)	Spike Amount ng	Spike % Recovery
1,1-Dichloroethene	75-35-4	10.00	ND			ND			38.7	250.0	77.3	34.8	250.0	69.5
Benzene	71-43-2	10.00	4.04 J			ND			44.1	250.0	88.2	41.3	250.0	82.6
Trichloroethene	79-01-6	10.00	ND			ND			45.3	250.0	90.5	43.5	250.0	87.0
Toluene	108-88-3	10.00	ND			ND			46.6	250.0	93.2	43.6	250.0	87.2
Chlorobenzene	108-90-7	10.00	ND			ND			48.6	250.0	97.3	46.9	250.0	93.8
Bromobenzene	108-86-1	10.00	ND			ND			ND			ND		
Bromochloromethane	74-97-5	10.00	ND			ND			ND			ND		
Bromodichloromethane	75-27-4	10.00	ND			ND			ND			ND		
Bromoform	75-25-2	10.00	ND			ND			ND			ND		
Bromomethane	74-83-9	10.00	ND			ND			ND			ND		
n-Butylbenzene	104-51-8	10.00	ND			ND			ND			ND		
sec-Butylbenzene	135-98-8	10.00	ND			ND			ND			ND		
tert-Butylbenzene	98-06-6	10.00	ND			ND			ND			ND		
Carbon Tetrachloride	56-23-5	10.00	ND			ND			ND			ND		
Chloroethane	75-00-3	12.00	ND			ND			ND			ND		
Chloroform	66-67-3	10.00	ND			ND			ND			ND		
Chloromethane	74-87-3	10.00	ND			ND			ND			ND		
2-Chlorotoluene	95-49-8	10.00	ND			ND			ND			ND		
4-Chlorotoluene	106-43-4	10.00	ND			ND			ND			ND		
Dibromochloromethane	124-48-1	10.00	ND			ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	11.00	ND			ND			ND			ND		
1,2-Dibromoethane	106-93-4	10.00	ND			ND			ND			ND		
Dibromomethane	74-95-3	10.00	ND			ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	10.00	ND			ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	10.00	ND			ND			3.11 J			ND		
1,4-Dichlorobenzene	106-46-7	10.00	ND			ND			ND			ND		
Dichlorodifluoromethane	75-71-8	10.00	ND			ND			ND			ND		
1,1-Dichloroethane	75-34-3	10.00	ND			ND			ND			ND		
1,2-Dichloroethane	107-06-2	10.00	ND			ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	10.00	ND			ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	10.00	ND			ND			ND			ND		
1,2-Dichloropropane	78-87-5	10.00	ND			ND			ND			ND		
1,3-Dichloropropane	142-28-9	10.00	ND			ND			ND			ND		
2,2-Dichloropropane	594-20-7	10.00	ND			ND			ND			ND		
1,1-Dichloropropene	563-58-6	10.00	ND			ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	10.00	ND			ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	10.00	ND			ND			ND			ND		
Ethyl benzene	100-41-4	10.00	ND			ND			ND			ND		
Hexachlorobutadiene	87-68-3	10.00	ND			ND			ND			ND		
Isopropylbenzene	98-82-8	10.00	ND			ND			ND			ND		
p-Isopropyltoluene	99-87-6	10.00	ND			ND			ND			ND		
Methylene chloride	75-09-2	13.00	ND			ND			ND			ND		
Naphthalene	91-20-3	11.00	7.51 B			30.7			30.2			48.0		
n-Propylbenzene	103-65-1	10.00	ND			ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **CM-5**
File #: BT82042

	Date	Time	Analyst
Collected:	02/11/03	9:25	ES
Received:	02/11/03	16:50	MS
Analysis:	02/23/03	12:10	MGJ

Sample Type: Water
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/L (ppb)	SAMPLE Detected Amount ug/L (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/L (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/L (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/L (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
Styrene	100-42-5	10.00	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	10.00	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	10.00	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	10.00	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	10.00	5.54 B			41.9			43.9			69.4		
1,2,4-Trichlorobenzene	120-82-1	10.00	ND			7.54 J			9.23 J			48.0		
1,1,1-Trichloroethane	71-55-6	10.00	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	10.00	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	10.00	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	10.00	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	10.00	ND			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	10.00	ND			ND			ND			ND		
Vinyl chloride	75-01-4	10.00	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	15.00	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		49.8	250.0	99.5	52.0	250.0	103.9	49.9	250.0	99.8	49.9	250.0	99.7
Dibromofluoromethane	1868-53-7		51.9	250.0	103.8	50.8	250.0	101.7	53.1	250.0	106.2	52.2	250.0	104.5
Toluene-d8	2037-26-5		50.2	250.0	100.4	48.4	250.0	96.8	49.7	250.0	99.3	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		50.1	250.0	100.3	49.9	250.0	99.8	50.2	250.0	100.5	54.6	250.0	109.3

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by: _____
Michael S. Bonner,Ph. D.
Bonner Analytical Testing Company

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **CM-1**
File #: BT82053

	Date	Time	Analyst
Collected:	02/11/03	12:55	ES
Received:	02/11/03	16:50	MS
Analyzed:	02/24/03	15:01	MGJ

Sample Type: Soil
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/Kg (ppb)	SAMPLE Detected Amount ug/Kg (ppb)		SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/Kg (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/Kg (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/Kg (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	14.88	ND				ND			35.8	250.0	71.6	32.1	250.0	64.2
Benzene	71-43-2	14.88	3.10	J			ND			46.7	250.0	93.4	47.0	250.0	94.1
Trichloroethene	79-01-6	14.88	ND				ND			47.0	250.0	94.1	43.7	250.0	87.5
Toluene	108-88-3	14.88	ND				ND			46.7	250.0	97.3	46.9	250.0	93.7
Chlorobenzene	108-90-7	14.88	ND				ND			47.4	250.0	94.7	48.7	250.0	97.3
Bromobenzene	108-86-1	14.88	ND				ND			ND			ND		
Bromochloromethane	74-97-5	14.88	ND				ND			ND			ND		
Bromodichloromethane	75-27-4	14.88	ND				ND			ND			ND		
Bromoform	75-25-2	14.88	ND				ND			ND			ND		
Bromomethane	74-83-9	14.88	ND				ND			ND			ND		
n-Butylbenzene	104-51-8	14.88	3.97	J			ND			ND			ND		
sec-Butylbenzene	135-98-8	14.88	ND				ND			ND			ND		
tert-Butylbenzene	98-06-6	14.88	1.76	J			ND			ND			ND		
Carbon Tetrachloride	56-23-5	14.88	ND				ND			ND			ND		
Chloroethane	75-00-3	17.88	ND				ND			ND			ND		
Chloroform	66-67-3	14.88	ND				ND			ND			ND		
Chloromethane	74-87-3	14.88	ND				ND			ND			ND		
2-Chlorotoluene	95-49-8	14.88	ND				ND			ND			ND		
4-Chlorotoluene	106-43-4	14.88	ND				ND			ND			ND		
Dibromochloromethane	124-48-1	14.88	ND				ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	14.88	ND				ND			ND			ND		
1,2-Dibromoethane	106-93-4	14.88	ND				ND			ND			ND		
Dibromomethane	74-95-3	14.88	ND				ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	14.88	ND				ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	14.88	3.35	J			ND			ND			ND		
1,4-Dichlorobenzene	106-46-7	14.88	ND				ND			ND			ND		
Dichlorodifluoromethane	75-71-8	14.88	ND				ND			ND			ND		
1,1-Dichloroethane	75-34-3	14.88	ND				ND			ND			ND		
1,2-Dichloroethane	107-06-2	14.88	ND				ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	14.88	ND				ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	14.88	ND				ND			ND			ND		
1,2-Dichloropropane	78-87-5	14.88	ND				ND			ND			ND		
1,3-Dichloropropane	142-28-9	14.88	ND				ND			ND			ND		
2,2-Dichloropropane	594-20-7	14.88	ND				ND			ND			ND		
1,1-Dichloropropene	563-58-6	14.88	ND				ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	14.88	ND				ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	14.88	ND				ND			ND			ND		
Ethyl benzene	100-41-4	14.88	ND				ND			ND			ND		
Hexachlorobutadiene	87-68-3	14.88	ND				ND			ND			ND		
Isopropylbenzene	98-82-8	14.88	ND				ND			ND			ND		
p-Isopropyltoluene	99-87-6	14.88	ND				ND			ND			ND		
Methylene chloride	75-09-2	19.34	ND				ND			ND			ND		
Naphthalene	91-20-3	16.37	17.4	B			21.3			15.8	J		22.4		
n-Propylbenzene	103-65-1	14.88	2.31	J			ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-1
File #: BT82053

Collected: 02/11/03 (Date) 12:55 (Time) ES
Received: 02/11/03 16:50 MS
Analysis: 02/24/03 15:01 MGJ (Analyst)

Sample Type: Soil
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/Kg (ppb)	SAMPLE Detected Amount ug/Kg (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/Kg (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/Kg (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE % Recovery	MATRIX SPIKE DUP Detected Amount ug/Kg (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP % Recovery
Styrene	100-42-5	14.88	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	14.88	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	14.88	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	14.88	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	14.88	18.0 B			30.4			22.7			27.3		
1,2,4-Trichlorobenzene	120-82-1	14.88	10.2 B			12.4 J			5.66 J			6.75 J		
1,1,1-Trichloroethane	71-55-6	14.88	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	14.88	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	14.88	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	14.88	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	14.88	14.6 J			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	14.88	11.8 J			ND			ND			ND		
Vinyl chloride	75-01-4	14.88	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	22.32	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		40.5	250.0	81.0	52.1	250.0	104.2	47.3	250.0	94.62	50.3	250.0	100.6
Dibromofluoromethane	1868-53-7		46.9	250.0	93.7	48.8	250.0	97.6	45.6	250.0	91.2	44.3	250.0	88.5
Toluene-d8	2037-26-5		51.3	250.0	102.6	48.4	250.0	96.7	47.4	250.0	94.8	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		51.0	250.0	102.1	50.1	250.0	100.2	47.3	250.0	94.6	48.1	250.0	96.1

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by: _____
Michael S. Bonner,Ph. D.
Bonner Analytical Testing Company

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-2
File #: BT82051

Collected: 02/11/03 12:20 ES
Received: 02/11/03 16:50 MS
Analyzed: 02/24/03 16:06 MGJ
Date Time Analyst

Sample Type: Soil
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/Kg (ppb)	SAMPLE Detected Amount ug/Kg (ppb)		SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/Kg (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/Kg (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/Kg (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	15.66	ND				ND			35.8	250.0	71.6	32.1	250.0	84.2
Benzene	71-43-2	15.66	3.10	J			ND			46.7	250.0	93.4	47.0	250.0	94.1
Trichloroethene	79-01-6	15.66	ND				ND			47.0	250.0	94.1	43.7	250.0	87.5
Toluene	108-88-3	15.66	ND				ND			48.7	250.0	97.3	46.9	250.0	93.7
Chlorobenzene	108-90-7	15.66	ND				ND			47.4	250.0	94.7	48.7	250.0	97.3
Bromobenzene	108-86-1	15.66	ND				ND			ND			ND		
Bromochloromethane	74-97-5	15.66	ND				ND			ND			ND		
Bromodichloromethane	75-27-4	15.66	ND				ND			ND			ND		
Bromoform	75-25-2	15.66	ND				ND			ND			ND		
Bromomethane	74-83-9	15.66	ND				ND			ND			ND		
n-Butylbenzene	104-51-8	15.66	1.65	J			ND			ND			ND		
sec-Butylbenzene	135-98-8	15.66	ND				ND			ND			ND		
tert-Butylbenzene	98-06-6	15.66	ND				ND			ND			ND		
Carbon Tetrachloride	56-23-5	15.66	ND				ND			ND			ND		
Chloroethane	75-00-3	16.79	ND				ND			ND			ND		
Chloroform	66-67-3	15.66	ND				ND			ND			ND		
Chloromethane	74-87-3	15.66	ND				ND			ND			ND		
2-Chlorotoluene	95-49-8	15.66	ND				ND			ND			ND		
4-Chlorotoluene	106-43-4	15.66	ND				ND			ND			ND		
Dibromochloromethane	124-48-1	15.66	ND				ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	15.66	ND				ND			ND			ND		
1,2-Dibromoethane	106-93-4	15.66	ND				ND			ND			ND		
Dibromomethane	74-95-3	15.66	ND				ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	15.66	ND				ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	15.66	3.96	J			ND			ND			ND		
1,4-Dichlorobenzene	106-46-7	15.66	ND				ND			ND			ND		
Dichlorodifluoromethane	75-71-8	15.66	ND				ND			ND			ND		
1,1-Dichloroethane	75-34-3	15.66	ND				ND			ND			ND		
1,2-Dichloroethane	107-06-2	15.66	ND				ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	15.66	ND				ND			ND			ND		
trans-1,2-Dichloroethene	158-60-5	15.66	ND				ND			ND			ND		
1,2-Dichloropropane	78-87-5	15.66	ND				ND			ND			ND		
1,3-Dichloropropane	142-28-9	15.66	ND				ND			ND			ND		
2,2-Dichloropropane	594-20-7	15.66	ND				ND			ND			ND		
1,1-Dichloropropene	563-58-6	15.66	ND				ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	15.66	ND				ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	15.66	ND				ND			ND			ND		
Ethyl benzene	100-41-4	15.66	ND				ND			ND			ND		
Hexachlorobutadiene	87-68-3	15.66	ND				ND			ND			ND		
Isopropylbenzene	98-82-8	15.66	ND				ND			ND			ND		
p-Isopropyltoluene	99-87-6	15.66	ND				ND			ND			ND		
Methylene chloride	75-09-2	20.36	ND				ND			ND			ND		
Naphthalene	91-20-3	17.23	19.8	B			21.3			15.8	J		22.4		
n-Propylbenzene	103-65-1	15.66	ND				ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **CM-2**
File #: BT82051

Collected: 02/11/03 12:20 ES
Received: 02/11/03 16:50 MS
Analysis: 02/24/03 16:06 MGJ
Date Time Analyst

Sample Type: Soil
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/Kg (ppb)	SAMPLE Detected Amount ug/Kg (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/Kg (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/Kg (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE % Recovery	MATRIX SPIKE DUP Detected Amount ug/Kg (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP % Recovery
Styrene	100-42-5	15.66	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	15.66	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	15.66	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	15.66	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	15.66	23.8 B			30.4			22.7			27.3		
1,2,4-Trichlorobenzene	120-82-1	15.66	9.13 B			12.4 J			5.66 J			6.75 J		
1,1,1-Trichloroethane	71-55-6	15.66	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	15.66	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	15.66	ND			ND			ND			ND		
1,2,3-Trichloropropane	98-18-4	15.66	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	15.66	5.38 J			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	15.66	4.29 J			ND			ND			ND		
Vinyl chloride	75-01-4	15.66	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	23.49	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		40.5	250.0	81.0	52.1	250.0	104.2	47.3	250.0	94.62	50.3	250.0	100.6
Dibromofluoromethane	1868-53-7		48.3	250.0	96.6	48.8	250.0	97.6	45.6	250.0	91.2	44.3	250.0	88.5
Toluene-d8	2037-26-5		51.5	250.0	102.9	48.4	250.0	96.7	47.4	250.0	94.8	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		52.0	250.0	103.9	50.1	250.0	100.2	47.3	250.0	94.6	48.1	250.0	96.1

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by: _____
Michael S. Bonner,Ph. D.
Bonner Analytical Testing Company

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **DUP**
File #: BT82049

Collected: 02/11/03 11:15 ES
Received: 02/11/03 16:50 MS
Analyzed: 02/24/03 18:14 MGJ
Date Time Analyst

Sample Type: Soil
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/Kg (ppb)	SAMPLE Detected Amount ug/Kg (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/Kg (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/Kg (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/Kg (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	14.58	ND			ND			35.8	250.0	71.6	32.1	250.0	64.2
Benzene	71-43-2	14.58	ND			ND			46.7	250.0	93.4	47.0	250.0	94.1
Trichloroethene	79-01-6	14.58	ND			ND			47.0	250.0	94.1	43.7	250.0	87.5
Toluene	108-88-3	14.58	ND			ND			48.7	250.0	97.3	46.9	250.0	93.7
Chlorobenzene	108-90-7	14.58	ND			ND			47.4	250.0	94.7	48.7	250.0	97.3
Bromobenzene	108-86-1	14.58	ND			ND			ND			ND		
Bromochloromethane	74-97-5	14.58	ND			ND			ND			ND		
Bromodichloromethane	75-27-4	14.58	ND			ND			ND			ND		
Bromoform	75-25-2	14.58	ND			ND			ND			ND		
Bromomethane	74-83-9	14.58	ND			ND			ND			ND		
n-Butylbenzene	104-51-8	14.58	ND			ND			ND			ND		
sec-Butylbenzene	135-98-8	14.58	ND			ND			ND			ND		
tert-Butylbenzene	98-06-6	14.58	ND			ND			ND			ND		
Carbon Tetrachloride	56-23-5	14.58	ND			ND			ND			ND		
Chloroethane	75-00-3	17.50	ND			ND			ND			ND		
Chloroform	68-67-3	14.58	ND			ND			ND			ND		
Chloromethane	74-87-3	14.58	ND			ND			ND			ND		
2-Chlorotoluene	95-49-8	14.58	ND			ND			ND			ND		
4-Chlorotoluene	106-43-4	14.58	ND			ND			ND			ND		
Dibromochloromethane	124-48-1	14.58	ND			ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	14.58	ND			ND			ND			ND		
1,2-Dibromoethane	106-93-4	14.58	ND			ND			ND			ND		
Dibromomethane	74-95-3	14.58	ND			ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	14.58	ND			ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	14.58	2.58 J			ND			ND			ND		
1,4-Dichlorobenzene	106-46-7	14.58	ND			ND			ND			ND		
Dichlorodifluoromethane	75-71-8	14.58	ND			ND			ND			ND		
1,1-Dichloroethane	75-34-3	14.58	ND			ND			ND			ND		
1,2-Dichloroethane	107-06-2	14.58	ND			ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	14.58	ND			ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	14.58	ND			ND			ND			ND		
1,2-Dichloropropane	78-87-5	14.58	ND			ND			ND			ND		
1,3-Dichloropropane	142-28-9	14.58	ND			ND			ND			ND		
2,2-Dichloropropane	594-20-7	14.58	ND			ND			ND			ND		
1,1-Dichloropropene	563-58-6	14.58	ND			ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	14.58	ND			ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	14.58	ND			ND			ND			ND		
Ethyl benzene	100-41-4	14.58	ND			ND			ND			ND		
Hexachlorobutadiene	87-68-3	14.58	ND			ND			ND			ND		
Isopropylbenzene	98-82-8	14.58	ND			ND			ND			ND		
p-Isopropyltoluene	99-87-6	14.58	ND			ND			ND			ND		
Methylene chloride	75-09-2	18.95	ND			ND			ND			ND		
Naphthalene	91-20-3	18.04	5.30 B			21.3			15.8 J			22.4		
n-Propylbenzene	103-65-1	14.58	ND			ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: **DUP**
File #: BT82049

	Date	Time	Analyst
Collected:	02/11/03	11:15	ES
Received:	02/11/03	16:50	MS
Analysis:	02/24/03	18:14	MGJ

Sample Type: Soil
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/Kg (ppb)	SAMPLE Detected Amount ug/Kg (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/Kg (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/Kg (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE % Recovery	MATRIX SPIKE DUP Detected Amount ug/Kg (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP % Recovery
Styrene	100-42-5	14.58	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	14.58	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	14.58	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	14.58	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	14.58	6.77 B			30.4			22.7			27.3		
1,2,4-Trichlorobenzene	120-82-1	14.58	1.97 B			12.4 J			5.66 J			6.75 J		
1,1,1-Trichloroethane	71-55-6	14.58	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	14.58	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	14.58	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	14.58	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	14.58	2.81 J			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	14.58	2.21 J			ND			ND			ND		
Vinyl chloride	75-01-4	14.58	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	21.87	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		40.2	250.0	80.3	52.1	250.0	104.2	47.3	250.0	94.62	50.3	250.0	100.6
Dibromofluoromethane	1868-53-7		48.0	250.0	96.0	48.8	250.0	97.6	45.6	250.0	91.2	44.3	250.0	88.5
Toluene-d8	2037-26-5		53.1	250.0	106.3	48.4	250.0	96.7	47.4	250.0	94.8	49.2	250.0	96.4
4-Bromofluorobenzene	460-00-4		55.0	250.0	109.9	50.1	250.0	100.2	47.3	250.0	94.6	48.1	250.0	96.1

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

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BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-3
File #: BT82047

	Date	Time	Analyst
Collected:	02/11/03	11:15	ES
Received:	02/11/03	16:50	MS
Analyzed:	02/24/03	17:10	MGJ

Sample Type: Soil
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/Kg (ppb)	SAMPLE			BLANK			MATRIX SPIKE			MATRIX SPIKE DUP		
			Detected Amount ug/Kg (ppb)	Amount ug	% Recovery	Detected Amount ug/Kg (ppb)	Amount ug	% Recovery	Detected Amount ug/Kg (ppb)	Spike Amount ng	Spike % Recovery	Detected Amount ug/Kg (ppb)	Spike Amount ng	Spike % Recovery
1,1-Dichloroethene	75-35-4	22.68	ND			ND			35.8	250.0	71.6	32.1	250.0	64.2
Benzene	71-43-2	22.68	ND			ND			46.7	250.0	93.4	47.0	250.0	94.1
Trichloroethene	79-01-6	22.68	ND			ND			47.0	250.0	94.1	43.7	250.0	87.5
Toluene	108-88-3	22.68	ND			ND			48.7	250.0	97.3	46.9	250.0	93.7
Chlorobenzene	108-90-7	22.68	ND			ND			47.4	250.0	94.7	48.7	250.0	97.3
Bromobenzene	108-86-1	22.68	ND			ND			ND			ND		
Bromochloromethane	74-97-5	22.68	ND			ND			ND			ND		
Bromodichloromethane	75-27-4	22.68	ND			ND			ND			ND		
Bromoform	75-25-2	22.68	ND			ND			ND			ND		
Bromomethane	74-83-9	22.68	ND			ND			ND			ND		
n-Butylbenzene	104-51-8	22.68	ND			ND			ND			ND		
sec-Butylbenzene	135-98-8	22.68	ND			ND			ND			ND		
tert-Butylbenzene	98-06-6	22.68	ND			ND			ND			ND		
Carbon Tetrachloride	56-23-5	22.68	ND			ND			ND			ND		
Chloroethane	75-00-3	27.22	ND			ND			ND			ND		
Chloroform	66-67-3	22.68	ND			ND			ND			ND		
Chloromethane	74-87-3	22.68	ND			ND			ND			ND		
2-Chlorotoluene	95-49-8	22.68	ND			ND			ND			ND		
4-Chlorotoluene	106-43-4	22.68	ND			ND			ND			ND		
Dibromochloromethane	124-48-1	22.68	ND			ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	22.68	ND			ND			ND			ND		
1,2-Dibromoethane	106-93-4	22.68	ND			ND			ND			ND		
Dibromomethane	74-95-3	22.68	ND			ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	22.68	ND			ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	22.68	5.07 J			ND			ND			ND		
1,4-Dichlorobenzene	106-46-7	22.68	ND			ND			ND			ND		
Dichlorodifluoromethane	75-71-8	22.68	ND			ND			ND			ND		
1,1-Dichloroethane	75-34-3	22.68	ND			ND			ND			ND		
1,2-Dichloroethane	107-06-2	22.68	ND			ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	22.68	ND			ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	22.68	ND			ND			ND			ND		
1,2-Dichloropropane	78-87-5	22.68	ND			ND			ND			ND		
1,3-Dichloropropane	142-28-9	22.68	ND			ND			ND			ND		
2,2-Dichloropropane	594-20-7	22.68	ND			ND			ND			ND		
1,1-Dichloropropene	563-58-6	22.68	ND			ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	22.68	ND			ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	22.68	ND			ND			ND			ND		
Ethyl benzene	100-41-4	22.68	ND			ND			ND			ND		
Hexachlorobutadiene	87-68-3	22.68	ND			ND			ND			ND		
Isopropylbenzene	98-82-8	22.68	ND			ND			ND			ND		
p-Isopropyltoluene	99-87-6	22.68	ND			ND			ND			ND		
Methylene chloride	75-09-2	29.48	ND			ND			ND			ND		
Naphthalene	91-20-3	24.95	14.7 B			21.3 J			15.8 J			22.4 J		
n-Propylbenzene	103-65-1	22.68	ND			ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-3
File #: BT82047

	Date	Time	Analyst
Collected:	02/11/03	11:15	ES
Received:	02/11/03	16:50	MS
Analysis:	02/24/03	17:10	MGJ

Sample Type: Soil
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/Kg (ppb)	SAMPLE Detected Amount ug/Kg (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/Kg (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/Kg (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/Kg (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
Styrene	100-42-5	22.68	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	22.68	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	22.68	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	22.68	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	22.68	21.3 B			30.4			22.7 J			27.3		
1,2,4-Trichlorobenzene	120-82-1	22.68	6.10 B			12.4 J			5.66 J			6.75 J		
1,1,1-Trichloroethane	71-55-6	22.68	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	22.68	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	22.68	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	22.68	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	22.68	4.87 J			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	22.68	3.82 J			ND			ND			ND		
Vinyl chloride	75-01-4	22.68	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	34.02	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		40.0	250.0	80.1	52.1	250.0	104.2	47.3	250.0	94.62	50.3	250.0	100.6
Dibromofluoromethane	1868-53-7		48.0	250.0	96.0	48.8	250.0	97.6	45.6	250.0	91.2	44.3	250.0	88.5
Toluene-d8	2037-26-5		52.5	250.0	104.9	48.4	250.0	96.7	47.4	250.0	94.8	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		51.1	250.0	102.3	50.1	250.0	100.2	47.3	250.0	94.6	48.1	250.0	96.1

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by: _____
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BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-4
File #: BT82045

	Date	Time	Analyst
Collected:	02/11/03	10:35	ES
Received:	02/11/03	16:50	MS
Analyzed:	02/24/03	20:23	MGJ

Sample Type: Soil
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/Kg (ppb)	SAMPLE Detected Amount ug/Kg (ppb)		SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/Kg (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/Kg (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/Kg (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	13.35	ND				ND			35.8	250.0	71.6	32.1	250.0	64.2
Benzene	71-43-2	13.35	1.53	J			ND			46.7	250.0	93.4	47.0	250.0	94.1
Trichloroethene	79-01-6	13.35	ND				ND			47.0	250.0	94.1	43.7	250.0	87.5
Toluene	108-88-3	13.35	ND				ND			48.7	250.0	97.3	46.9	250.0	93.7
Chlorobenzene	108-90-7	13.35	ND				ND			47.4	250.0	94.7	48.7	250.0	97.3
Bromobenzene	108-86-1	13.35	ND				ND			ND			ND		
Bromochloromethane	74-97-5	13.35	ND				ND			ND			ND		
Bromodichloromethane	75-27-4	13.35	ND				ND			ND			ND		
Bromoform	75-25-2	13.35	ND				ND			ND			ND		
Bromomethane	74-83-9	13.35	ND				ND			ND			ND		
n-Butylbenzene	104-51-8	13.35	ND				ND			ND			ND		
sec-Butylbenzene	135-98-8	13.35	ND				ND			ND			ND		
tert-Butylbenzene	98-06-6	13.35	ND				ND			ND			ND		
Carbon Tetrachloride	56-23-5	13.35	ND				ND			ND			ND		
Chloroethane	75-00-3	16.02	ND				ND			ND			ND		
Chloroform	66-67-3	13.35	ND				ND			ND			ND		
Chloromethane	74-87-3	13.35	ND				ND			ND			ND		
2-Chlorotoluene	95-49-8	13.35	ND				ND			ND			ND		
4-Chlorotoluene	106-43-4	13.35	ND				ND			ND			ND		
Dibromochloromethane	124-48-1	13.35	ND				ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	13.35	ND				ND			ND			ND		
1,2-Dibromoethane	106-93-4	13.35	ND				ND			ND			ND		
Dibromomethane	74-95-3	13.35	ND				ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	13.35	ND				ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	13.35	1.72	J			ND			ND			ND		
1,4-Dichlorobenzene	106-46-7	13.35	ND				ND			ND			ND		
Dichlorodifluoromethane	75-71-8	13.35	ND				ND			ND			ND		
1,1-Dichloroethane	75-34-3	13.35	ND				ND			ND			ND		
1,2-Dichloroethane	107-06-2	13.35	ND				ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	13.35	ND				ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	13.35	ND				ND			ND			ND		
1,2-Dichloropropane	78-87-5	13.35	ND				ND			ND			ND		
1,3-Dichloropropane	142-28-9	13.35	ND				ND			ND			ND		
2,2-Dichloropropane	594-20-7	13.35	ND				ND			ND			ND		
1,1-Dichloropropene	563-58-6	13.35	ND				ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	13.35	ND				ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	13.35	ND				ND			ND			ND		
Ethyl benzene	100-41-4	13.35	ND				ND			ND			ND		
Hexachlorobutadiene	87-68-3	13.35	ND				ND			ND			ND		
Isopropylbenzene	98-82-8	13.35	ND				ND			ND			ND		
p-Isopropyltoluene	99-87-6	13.35	ND				ND			ND			ND		
Methylene chloride	75-09-2	17.36	ND				ND			ND			ND		
Naphthalene	91-20-3	14.69	5.87	B			21.3			15.8			22.4		
n-Propylbenzene	103-65-1	13.35	ND				ND			ND			ND		

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-4
File #: BT82045

Collected: 02/11/03 10:35 ES
Received: 02/11/03 16:50 MS
Analysis: 02/24/03 20:23 MGJ
Date Time Analyst

Sample Type: Soil
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/Kg (ppb)	SAMPLE Detected Amount ug/Kg (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/Kg (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/Kg (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE % Recovery	MATRIX SPIKE DUP Detected Amount ug/Kg (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP % Recovery
Styrene	100-42-5	13.35	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	13.35	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	13.35	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	13.35	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	13.35	9.26 B			30.4			22.7			27.3		
1,2,4-Trichlorobenzene	120-82-1	13.35	2.10 B			12.4 J			5.66 J			6.75 J		
1,1,1-Trichloroethane	71-55-6	13.35	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	13.35	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	13.35	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	13.35	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	13.35	1.88 J			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	13.35	ND			ND			ND			ND		
Vinyl chloride	75-01-4	13.35	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	20.03	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		40.5	250.0	81.0	52.1	250.0	104.2	47.3	250.0	94.62	50.3	250.0	100.6
Dibromofluoromethane	1868-53-7		47.7	250.0	95.4	48.8	250.0	97.8	45.6	250.0	91.2	44.3	250.0	88.5
Toluene-d8	2037-26-5		50.0	250.0	99.9	48.4	250.0	98.7	47.4	250.0	94.8	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		52.9	250.0	105.8	50.1	250.0	100.2	47.3	250.0	94.6	48.1	250.0	96.1

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

Certified by:

Michael S. Bonner,Ph. D.
Bonner Analytical Testing Company

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-5
File #: BT82043

Collected: 02/11/03 9:25 ES
Received: 02/11/03 16:50 MS
Analyzed: 02/24/03 20:23 MGJ
Date Time Analyst

Sample Type: Soil
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/Kg (ppb)	SAMPLE Detected Amount ug/Kg (ppb)		SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/Kg (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/Kg (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE Spike % Recovery	MATRIX SPIKE DUP Detected Amount ug/Kg (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP Spike % Recovery
1,1-Dichloroethene	75-35-4	18.80	ND				ND			35.8	250.0	71.6	32.1	250.0	64.2
Benzene	71-43-2	18.80	ND				ND			46.7	250.0	93.4	47.0	250.0	94.1
Trichloroethene	79-01-6	18.80	ND				ND			47.0	250.0	94.1	43.7	250.0	87.5
Toluene	108-88-3	18.80	ND				ND			48.7	250.0	97.3	46.9	250.0	93.7
Chlorobenzene	108-90-7	18.80	ND				ND			47.4	250.0	94.7	48.7	250.0	97.3
Bromobenzene	108-86-1	18.80	ND				ND			ND			ND		
Bromochloromethane	74-97-5	18.80	ND				ND			ND			ND		
Bromodichloromethane	75-27-4	18.80	ND				ND			ND			ND		
Bromoform	75-25-2	18.80	ND				ND			ND			ND		
Bromomethane	74-83-9	18.80	2.11	J			ND			ND			ND		
n-Butylbenzene	104-51-8	18.80	ND				ND			ND			ND		
sec-Butylbenzene	135-98-8	18.80	ND				ND			ND			ND		
tert-Butylbenzene	98-06-6	18.80	ND				ND			ND			ND		
Carbon Tetrachloride	56-23-5	18.80	ND				ND			ND			ND		
Chloroethane	75-00-3	22.58	ND				ND			ND			ND		
Chloroform	66-67-3	18.80	ND				ND			ND			ND		
Chloromethane	74-87-3	18.80	ND				ND			ND			ND		
2-Chlorotoluene	95-49-8	18.80	ND				ND			ND			ND		
4-Chlorotoluene	106-43-4	18.80	ND				ND			ND			ND		
Dibromochloromethane	124-48-1	18.80	ND				ND			ND			ND		
1,2-Dibromo-3-chloropropane	96-12-8	18.80	ND				ND			ND			ND		
1,2-Dibromoethane	106-93-4	18.80	ND				ND			ND			ND		
Dibromomethane	74-95-3	18.80	ND				ND			ND			ND		
1,2-Dichlorobenzene	95-50-1	18.80	ND				ND			ND			ND		
1,3-Dichlorobenzene	541-73-1	18.80	3.19	J			ND			ND			ND		
1,4-Dichlorobenzene	106-46-7	18.80	3.11	J			ND			ND			ND		
Dichlorodifluoromethane	75-71-8	18.80	ND				ND			ND			ND		
1,1-Dichloroethane	75-34-3	18.80	ND				ND			ND			ND		
1,2-Dichloroethane	107-06-2	18.80	ND				ND			ND			ND		
cis-1,2-Dichloroethene	156-59-2	18.80	ND				ND			ND			ND		
trans-1,2-Dichloroethene	156-60-5	18.80	ND				ND			ND			ND		
1,2-Dichloropropane	78-87-5	18.80	ND				ND			ND			ND		
1,3-Dichloropropane	142-28-9	18.80	ND				ND			ND			ND		
2,2-Dichloropropane	594-20-7	18.80	ND				ND			ND			ND		
1,1-Dichloropropene	563-58-6	18.80	ND				ND			ND			ND		
c-1,3-Dichloropropene	10061-01-5	18.80	ND				ND			ND			ND		
t-1,3-Dichloropropene	10061-02-6	18.80	ND				ND			ND			ND		
Ethyl benzene	100-41-4	18.80	ND				ND			ND			ND		
Hexachlorobutadiene	87-68-3	18.80	ND				ND			ND			ND		
Isopropylbenzene	98-82-8	18.80	ND				ND			ND			ND		
p-Isopropyltoluene	99-87-6	18.80	ND				ND			ND			ND		
Methylene chloride	75-09-2	24.44	ND				ND			15.8	J		22.4		
Naphthalene	91-20-3	20.68	10.8	B			21.3			ND			ND		
n-Propylbenzene	103-65-1	18.80	ND				ND								

BONNER ANALYTICAL TESTING COMPANY

QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
VOLATILE ORGANICS - GC/MS ANALYSIS DATA

Client: Hercules
Location: CM-5
File #: BT82043

	Date	Time	
Collected:	02/11/03	9:25	ES
Received:	02/11/03	16:50	MS
Analysis:	02/24/03	20:23	MGJ

Sample Type: Soil
Analysis Method: 8260B
Project Number: 005855

Compound Name	CAS Number	PQL* ug/Kg (ppb)	SAMPLE Detected Amount ug/Kg (ppb)	SAMPLE Amount ug	SAMPLE % Recovery	BLANK Detected Amount ug/Kg (ppb)	BLANK Amount ug	BLANK % Recovery	MATRIX SPIKE Detected Amount ug/Kg (ppb)	MATRIX SPIKE Spike Amount ng	MATRIX SPIKE % Recovery	MATRIX SPIKE DUP Detected Amount ug/Kg (ppb)	MATRIX SPIKE DUP Spike Amount ng	MATRIX SPIKE DUP % Recovery
Styrene	100-42-5	18.80	ND			ND			ND			ND		
1,1,1,2-Tetrachloroethane	630-20-6	18.80	ND			ND			ND			ND		
1,1,2,2-Tetrachloroethane	79-34-5	18.80	ND			ND			ND			ND		
Tetrachloroethene	127-18-4	18.80	ND			ND			ND			ND		
1,2,3-Trichlorobenzene	87-61-6	18.80	15.1 B			30.4			22.7			27.3		
1,2,4-Trichlorobenzene	120-82-1	18.80	3.64 B J			12.4 J			5.86 J			8.75 J		
1,1,1-Trichloroethane	71-55-6	18.80	ND			ND			ND			ND		
1,1,2-Trichloroethane	79-00-5	18.80	ND			ND			ND			ND		
Trichlorofluoromethane	75-69-4	18.80	ND			ND			ND			ND		
1,2,3-Trichloropropane	96-18-4	18.80	ND			ND			ND			ND		
1,2,4-Trimethylbenzene	95-63-6	18.80	2.59 J			ND			ND			ND		
1,3,5-Trimethylbenzene	108-67-8	18.80	2.24 J			ND			ND			ND		
Vinyl chloride	75-01-4	18.80	ND			ND			ND			ND		
Xylenes (total)	1330-20-7	28.20	ND			ND			ND			ND		
Surrogate Compounds			Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
1,2-Dichloroethane-d4	17060-07-0		49.5	250.0	98.9	52.1	250.0	104.2	47.3	250.0	94.62	50.3	250.0	100.6
Dibromofluoromethane	1868-53-7		52.3	250.0	104.7	48.8	250.0	97.6	45.6	250.0	91.2	44.3	250.0	88.5
Toluene-d8	2037-26-5		48.5	250.0	97.0	48.4	250.0	96.7	47.4	250.0	94.8	49.2	250.0	98.4
4-Bromofluorobenzene	460-00-4		48.7	250.0	97.4	50.1	250.0	100.2	47.3	250.0	94.6	48.1	250.0	98.1

B = Analyte in Blank greater than 5% of sample.
* = PQLs are defined by the EPA as 5 to 10 times the MDL. PQLs listed ate 10 times the MDL

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CASE NARRATIVE: Hercules, Hattiesburg MS.

Semi-volatiles (Dioxathion Analysis)

Samples were collected by EcoSystems of Jackson on February 11, 2003. The samples were received by BATCO on February 11, 2003. A total of 7 water samples and 6 soil samples were collected on February 11, 2003. These samples included both soil and water aliquots from CM-5, CM-4, CM-3, CM-3 duplicate, CM-2, and CM-1, plus a rinsate blank for the water sample, for a total of 13 samples. The sequence run included a Laboratory Control Sample, Method Blank, Matrix Spike, and Matrix Spike Duplicate as quality assurance measures, as well as the fore mentioned samples.

A Dioxathion Calibration working standard was prepared from the individual Dioxenethion, Dioxathion (cis) and Dioxathion (trans) isomers obtained from Sigma-Aldrich Chemicals. Dilutions were made from the working standard to obtain an eight-point curve (0.4 to 20 ppm) utilizing a HP-1090 HPLC and HP-Chem software. A Diode-Array Detector, DAD, was used to obtain the data. Table 1 illustrates the retention times, linearity correlation coefficient and the PQL's.

Table 1-Calibration Data

Dioxathion Isomer	Retention Times @ 210 nm (min)	Calibration of Linearity Correlation Coefficient	Practical Quant. Limits for Water (ppb)	Practical Quant. Limits for Soils (ppb)
Dioxenethion	3.648	0.9997	2.19	170
Dioxathion (cis)	6.914	0.9974	4.75	134
Dioxathion (trans)	7.462	0.9998	3.04	149

Water samples were extracted on 02/14/03 using an EPA SW846 Method 3510C for Separatory Funnel Liquid-Liquid Extraction. Methylene chloride was the extracting solvent and exchanged to acetonitrile at 1-mL final volume. The samples were then analyzed on 02/24/03, using the HP-1090 HPLC under the same method as the calibration. Soil samples were extracted on 02/17/03 using an EPA Method 3550 for Ultrasonic Soil Extractions. The soil samples were analyzed on 02/24/03 under the same

conditions as the water samples. Calibration verifications were analyzed before and after the sample batch. All quality assurance criteria based on guidelines given in SW-846 Method 8000B was met. Table 2 illustrates the raw data obtained in this analysis.

Table 2-Raw Data

Lab ID	Description	Dioxenethion	Dioxathion (cis)	Dioxathion (trans)	Surrogate Recovery
BT82042	CM-5 Water	3.07ppb	ND	ND	82.8%
BT82043	CM-5 Soil	ND	ND	448 ppb	36.2%
BT82044	CM-4 Water	BPQL	ND	ND	42.2%
BT82045	CM-4 Soil	ND	ND	ND	47.4%
BT82046	CM-3 Water	3.16 ppb	ND	ND	65.4%
BT82047	CM-3 Soil	ND	ND	1370 ppb	59.8%
BT82048	CM-3 Water Duplicate	2.93 ppb	ND	ND	62.6%
BT82049	CM-3 Soil Duplicate	ND	ND	BPQL	61.8%
BT82050	CM-2 Water	ND	8.72 ppb	ND	89.8%
BT82051	CM-2 Soil	ND	ND	ND	59.4%
BT82052	CM-1 Water	ND	ND	ND	85.2%
BT82053	CM-1 Soil	ND	ND	790 ppb	58.4%
BT82058	Rinsate Blank	ND	ND	ND	89.4%

All soil samples are reported on a dry weight basis.

All samples were spiked with naphthalene (surrogate) prior to extraction. The surrogate was added to follow the extraction efficiency of the method. A method blank, lab control sample, matrix spike, matrix spike duplicate, and a sample duplicate were extracted with both water and soil batches to follow QA/QC procedures. All QA/QC data were found to pass guidelines according to EPA Method 8000, with exception to the soil sample and it's duplicate. The CM-3 soil sample was found to contain 1370 ppb of the dioxathion trans-isomer and the CM-3 duplicate was found to contain 3.18 ppb, both of which are reported as a dry weight basis. Upon examination of the actual samples, it was observed that the samples were of two different physical properties. CM-3 was of a sand and rocky consistency and the CM-3 duplicate was of a gray sand and sediment consistency. Therefore, it is believed that the samples were collected separately and not homogeneously mixed before transfer to sample containers.

Authorized by_____
Michael S. Bonner, Ph. D.

BONNER ANALYTICAL TESTING COMPANY
QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
DIOXATHION/ DIOXENETHION HPLC ANALYSIS DATA

Client: Hercules
Sample ID: CM-1
File #: BT82052

	Date		Analyst
Collected:	02/11/03	1255	MGJ
Extracted:	02/14/03	1400	SCF
Analyzed:	02/24/03	1601	SCF

Sample Type: Water
Extraction Method: SW846 3510C
Analysis Method: Modified SW846

		SAMPLE			METHOD BLANK			MATRIX SPIKE			LAB CONTROL		
			Spike			Spike			Spike			Spike	
COMPOUNDS	PQL ug/L (ppb)	Detected Amount ug/L (ppb)	Amount ug/L	% Recovery	Detected Amount ug/L (ppb)	Amount ug/L	% Recovery	Detected Amount mg/L (ppm)	Amount mg/L	% Recovery	Detected Amount mg/L (ppm)	Amount mg/L	% Recovery
Dioxenethion	2.19	ND			ND			5.14	5.00	103	4.70	5.00	94.0
Dioxathion (cis)	4.75	ND			ND			5.01	5.00	100	5.07	5.00	101
Dioxathion (trans)	3.04	ND			ND			5.09	5.00	102	4.72	5.00	94.4
SURROGATE COMPOUNDS		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Naphthalene		4.26	5.00	85.2	4.43	5.00	88.6	3.95	5.00	79.0	3.64	5.00	72.8

*PQL's were determined by EPA definition (5 to 10 times MDL)

Certified by: _____
Michael S. Bonner, Ph.D
BONNER ANALYTICAL TESTING COMPANY

BONNER ANALYTICAL TESTING COMPANY
QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
DIOXATHION/ DIOXENETHION HPLC ANALYSIS DATA

Client: Hercules
Sample ID: CM-2
File #: BT82050

	Date		Analyst
Collected:	02/11/03	1220	MGJ
Extracted:	02/14/03	1400	SCF
Analyzed:	02/24/03	1601	SCF

Sample Type: Water
Extraction Method: SW846 3510C
Analysis Method: Modified SW846

		SAMPLE			METHOD BLANK			MATRIX SPIKE			LAB CONTROL		
			Spike			Spike			Spike			Spike	
COMPOUNDS	PQL ug/L (ppb)	Detected Amount ug/L (ppb)	Amount ug/L	% Recovery	Detected Amount ug/L (ppb)	Amount ug/L	% Recovery	Detected Amount mg/L (ppm)	Amount mg/L	% Recovery	Detected Amount mg/L (ppm)	Amount mg/L	% Recovery
Dioxenethion	2.19	ND			ND			5.14	5.00	103	4.70	5.00	94.0
Dioxathion (cis)	4.75	8.72			ND			5.01	5.00	100	5.07	5.00	101
Dioxathion (trans)	3.04	ND			ND			5.09	5.00	102	4.72	5.00	94.4
SURROGATE COMPOUNDS		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Naphthalene		4.49	5.00	89.8	4.43	5.00	88.6	3.95	5.00	79.0	3.64	5.00	72.8

*PQL's were determined by EPA definition (5 to 10 times MDL)

Certified by: _____
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QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
DIOXATHION/ DIOXENETHION HPLC ANALYSIS DATA

Client: Hercules
Sample ID: CM-3
File #: BT82046

	Date		Analyst
Collected:	02/11/03	1115	MGJ
Extracted:	02/14/03	1400	SCF
Analyzed:	02/24/03	1601	SCF

Sample Type: Water
Extraction Method: SW846 3510C
Analysis Method: Modified SW846

		SAMPLE			METHOD BLANK			MATRIX SPIKE			LAB CONTROL		
			Spike			Spike			Spike			Spike	
COMPOUNDS	PQL ug/L (ppb)	Detected Amount ug/L (ppb)	Amount ug/L	% Recovery	Detected Amount ug/L (ppb)	Amount ug/L	% Recovery	Detected Amount mg/L (ppm)	Amount mg/L	% Recovery	Detected Amount mg/L (ppm)	Amount mg/L	% Recovery
Dioxenethion	2.19	3.16			ND			5.14	5.00	103	4.70	5.00	94.0
Dioxathion (cis)	4.75	ND			ND			5.01	5.00	100	5.07	5.00	101
Dioxathion (trans)	3.04	ND			ND			5.09	5.00	102	4.72	5.00	94.4
SURROGATE COMPOUNDS		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Naphthalene		3.27	5.00	65.4	4.43	5.00	88.6	3.95	5.00	79.0	3.64	5.00	72.8

*PQL's were determined by EPA definition (5 to 10 times MDL)

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QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
DIOXATHION/ DIOXENETHION HPLC ANALYSIS DATA

Client: Hercules
Sample ID: CM-3 Duplicate
File #: BT82048

Collected:	02/11/03	1115
Extracted:	02/14/03	1400
Analyzed:	02/24/03	1601
	Date	

MGJ
SCF
SCF
Analyst

Sample Type: Water
Extraction Method: SW846 3510C
Analysis Method: Modified SW846

		SAMPLE			METHOD BLANK			MATRIX SPIKE			LAB CONTROL		
		Detected	Spike		Detected	Spike		Detected	Spike		Detected	Spike	
COMPOUNDS	PQL ug/L (ppb)	Amount ug/L (ppb)	Amount ug/L	% Recovery	Amount ug/L (ppb)	Amount ug/L	% Recovery	Amount mg/L (ppm)	Amount mg/L	% Recovery	Amount mg/L (ppm)	Amount mg/L	% Recovery
Dioxenethion	2.19	2.93			ND			5.14	5.00	103	4.70	5.00	94.0
Dioxathion (cis)	4.75	ND			ND			5.01	5.00	100	5.07	5.00	101
Dioxathion (trans)	3.04	ND			ND			5.09	5.00	102	4.72	5.00	94.4
SURROGATE COMPOUNDS		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Naphthalene		3.13	5.00	62.6	4.43	5.00	88.6	3.95	5.00	79.0	3.64	5.00	72.8

*PQL's were determined by EPA definition (5 to 10 times MDL)

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QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
DIOXATHION/ DIOXENETHION HPLC ANALYSIS DATA

Client: Hercules
Sample ID: CM-4
File #: BT82044

	Date		Analyst
Collected:	02/11/03	1035	MGJ
Extracted:	02/14/03	1400	SCF
Analyzed:	02/24/03	1601	SCF

Sample Type: Water
Extraction Method: SW846 3510C
Analysis Method: Modified SW846

		SAMPLE			METHOD BLANK			MATRIX SPIKE			LAB CONTROL		
			Spike			Spike			Spike			Spike	
COMPOUNDS	PQL ug/L (ppb)	Detected Amount ug/L (ppb)	Amount ug/L	% Recovery	Detected Amount ug/L (ppb)	Amount ug/L	% Recovery	Detected Amount mg/L (ppm)	Amount mg/L	% Recovery	Detected Amount mg/L (ppm)	Amount mg/L	% Recovery
Dioxenethion	2.19	BPQL			ND			5.14	5.00	103	4.70	5.00	94.0
Dioxathion (cis)	4.75	ND			ND			5.01	5.00	100	5.07	5.00	101
Dioxathion (trans)	3.04	ND			ND			5.09	5.00	102	4.72	5.00	94.4
SURROGATE COMPOUNDS		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Naphthalene		2.11	5.00	42.2	4.43	5.00	88.6	3.95	5.00	79.0	3.64	5.00	72.8

*PQL's were determined by EPA definition (5 to 10 times MDL)

Certified by: _____
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BONNER ANALYTICAL TESTING COMPANY
QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
DIOXATHION/ DIOXENETHION HPLC ANALYSIS DATA

Client: Hercules
Sample ID: CM-5
File #: BT82042

	Date		Analyst
Collected:	02/11/03	925	MGJ
Extracted:	02/14/03	1400	SCF
Analyzed:	02/24/03	1601	SCF

Sample Type: Water
Extraction Method: SW846 3510C
Analysis Method: Modified SW846

		SAMPLE			METHOD BLANK			MATRIX SPIKE			LAB CONTROL		
			Spike			Spike			Spike			Spike	
COMPOUNDS	PQL ug/L (ppb)	Detected Amount ug/L (ppb)	Amount ug/L	% Recovery	Detected Amount ug/L (ppb)	Amount ug/L	% Recovery	Detected Amount mg/L (ppm)	Amount mg/L	% Recovery	Detected Amount mg/L (ppm)	Amount mg/L	% Recovery
Dioxenethion	2.19	3.07			ND			5.14	5.00	103	4.70	5.00	94.0
Dioxathion (cis)	4.75	ND			ND			5.01	5.00	100	5.07	5.00	101
Dioxathion (trans)	3.04	ND			ND			5.09	5.00	102	4.72	5.00	94.4
SURROGATE COMPOUNDS		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Naphthalene		4.14	5.00	82.8	4.43	5.00	88.6	3.95	5.00	79.0	3.64	5.00	72.8

*PQL's were determined by EPA definition (5 to 10 times MDL)

Certified by: _____
Michael S. Bonner, Ph.D
BONNER ANALYTICAL TESTING COMPANY

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QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
DIOXATHION/ DIOXENETHION HPLC ANALYSIS DATA

Client: Hercules
Sample ID: Rinsate Blank
File #: BT82058

	Date		Analyst
Collected:	02/11/03	1535	MGJ
Extracted:	02/14/03	1400	SCF
Analyzed:	02/24/03	1601	SCF

Sample Type: Water
Extraction Method: SW846 3510C
Analysis Method: Modified SW846

COMPOUNDS	PQL ug/L (ppb)	SAMPLE			METHOD BLANK			MATRIX SPIKE			LAB CONTROL		
		Detected Amount ug/L (ppb)	Spike		Detected Amount ug/L (ppb)	Spike		Detected Amount mg/L (ppm)	Spike		Detected Amount mg/L (ppm)	Spike	
			Amount ug/L	% Recovery		Amount ug/L	% Recovery		Amount mg/L	% Recovery		Amount mg/L	% Recovery
Dioxenethion	2.19	ND			ND			5.14	5.00	103	4.70	5.00	94.0
Dioxathion (cis)	4.75	ND			ND			5.01	5.00	100	5.07	5.00	101
Dioxathion (trans)	3.04	ND			ND			5.09	5.00	102	4.72	5.00	94.4
SURROGATE COMPOUNDS		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Naphthalene		4.47	5.00	89.4	4.43	5.00	88.6	3.95	5.00	79.0	3.64	5.00	72.8

*PQL's were determined by EPA definition (5 to 10 times MDL)

Certified by: _____
Michael S. Bonner, Ph.D
BONNER ANALYTICAL TESTING COMPANY

BONNER ANALYTICAL TESTING COMPANY
QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
DIOXATHION/ DIOXENETHION HPLC ANALYSIS DATA

Client: Hercules
Sample ID: CM-1
File #: BT82053

Collected: 02/11/03 1255 MGJ
Extracted: 02/17/03 1300 SCF
Analyzed: 02/24/03 1601 SCF
Date Analyst

Sample Type: Soil
Extraction Method: SW846 3550C
Analysis Method: Modified SW846

COMPOUNDS	PQL ug/kg (ppb)	SAMPLE Detected Amount ug/kg (ppb)	SAMPLE Spike Amount ug/kg	SAMPLE Spike % Recovery	METHOD BLANK Detected Amount ug/kg (ppb)	METHOD BLANK Spike Amount ug/kg	METHOD BLANK Spike % Recovery	MATRIX SPIKE Detected Amount mg/kg (ppm)	MATRIX SPIKE Spike Amount mg/kg	MATRIX SPIKE Spike % Recovery	LAB CONTROL Detected Amount mg/kg (ppm)	LAB CONTROL Spike Amount mg/kg	LAB CONTROL Spike % Recovery
Dioxenethion	170	ND			ND			5.06	5.00	101	4.49	5.00	89.8
Dioxathion (cis)	134	ND			ND			4.60	5.00	92.0	4.02	5.00	80.4
Dioxathion (trans)	149	790			ND			4.36	5.00	87.2	4.30	5.00	86.0
SURROGATE COMPOUNDS		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Naphthalene		2.92	5.00	58.4	3.94	5.00	78.8	3.60	5.00	72.0	5.15	5.00	103

*PQL's were determined by EPA definition (5 to 10 times MDL)

Certified by: _____
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BONNER ANALYTICAL TESTING COMPANY

BONNER ANALYTICAL TESTING COMPANY
QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
DIOXATHION/ DIOXENETHION HPLC ANALYSIS DATA

Client: **Hercules**
Sample ID: CM-2 Soil
File #: BT82051

	Date		Analyst
Collected:	02/11/03	1220	MGJ
Extracted:	02/17/03	1300	SCF
Analyzed:	02/24/03	1601	SCF

Sample Type: Soil
Extraction Method: SW846 3550C
Analysis Method: Modified SW846

		SAMPLE			METHOD BLANK			MATRIX SPIKE			LAB CONTROL		
			Spike			Spike			Spike			Spike	
COMPOUNDS	PQL ug/kg (ppb)	Detected Amount ug/kg (ppb)	Amount ug/kg	% Recovery	Detected Amount ug/kg (ppb)	Amount ug/kg	% Recovery	Detected Amount mg/kg (ppm)	Amount mg/kg	% Recovery	Detected Amount mg/kg (ppm)	Amount mg/kg	% Recovery
Dioxenethion	170	ND			ND			5.06	5.00	101	4.49	5.00	89.8
Dioxathion (cis)	134	ND			ND			4.60	5.00	92.0	4.02	5.00	80.4
Dioxathion (trans)	149	ND			ND			4.36	5.00	87.2	4.30	5.00	86.0
SURROGATE COMPOUNDS		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Naphthalene		2.97	5.00	59.4	3.94	5.00	78.8	3.60	5.00	72.0	5.15	5.00	103

*PQL's were determined by EPA definition (5 to 10 times MDL)

Certified by: _____
Michael S. Bonner, Ph.D
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BONNER ANALYTICAL TESTING COMPANY
QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
DIOXATHION/ DIOXENETHION HPLC ANALYSIS DATA

Client: Hercules
Sample ID: CM-3 Soil
File #: BT82047

	Date		Analyst
Collected:	02/11/03	1115	MGJ
Extracted:	02/17/03	1300	SCF
Analyzed:	02/24/03	1601	SCF

Sample Type: Soil
Extraction Method: SW846 3550C
Analysis Method: Modified SW846

COMPOUNDS	PQL ug/kg (ppb)	SAMPLE			METHOD BLANK			MATRIX SPIKE			LAB CONTROL		
		Detected Amount ug/kg (ppb)	Spike		Detected Amount ug/kg (ppb)	Spike		Detected Amount mg/kg (ppm)	Spike		Detected Amount mg/kg (ppm)	Spike	
			Amount ug/kg	% Recovery		Amount ug/kg	% Recovery		Amount mg/kg	% Recovery		Amount mg/kg	% Recovery
Dioxenethion	170	ND			ND			5.06	5.00	101	4.49	5.00	89.8
Dioxathion (cis)	134	ND			ND			4.60	5.00	92.0	4.02	5.00	80.4
Dioxathion (trans)	149	1370			ND			4.36	5.00	87.2	4.30	5.00	86.0
SURROGATE COMPOUNDS		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Naphthalene		2.99	5.00	59.8	3.94	5.00	78.8	3.60	5.00	72.0	5.15	5.00	103

*PQL's were determined by EPA definition (5 to 10 times MDL)

Certified by: _____
Michael S. Bonner, Ph.D
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BONNER ANALYTICAL TESTING COMPANY
QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
DIOXATHION/ DIOXENETHION HPLC ANALYSIS DATA

Client: Hercules
Sample ID: CM-3 Duplicate Soil
File #: BT82049

Collected:	02/11/03	1115	MGJ
Extracted:	02/17/03	1300	SCF
Analyzed:	02/24/03	1601	SCF
	Date		Analyst

Sample Type: Soil
Extraction Method: SW846 3550C
Analysis Method: Modified SW846

		SAMPLE			METHOD BLANK			MATRIX SPIKE			LAB CONTROL		
		Detected	Spike		Detected	Spike		Detected	Spike		Detected	Spike	
COMPOUNDS	PQL ug/kg (ppb)	Amount ug/kg (ppb)	Amount ug/kg	% Recovery	Amount ug/kg (ppb)	Amount ug/kg	% Recovery	Amount mg/kg (ppm)	Amount mg/kg	% Recovery	Amount mg/kg (ppm)	Amount mg/kg	% Recovery
Dioxenethion	170	ND			ND			5.06	5.00	101	4.49	5.00	89.8
Dioxathion (cis)	134	ND			ND			4.60	5.00	92.0	4.02	5.00	80.4
Dioxathion (trans)	149	BPQL			ND			4.36	5.00	87.2	4.30	5.00	86.0
SURROGATE COMPOUNDS		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Naphthalene		3.09	5.00	61.8	3.94	5.00	78.8	3.60	5.00	72.0	5.15	5.00	103

*PQL's were determined by EPA definition (5 to 10 times MDL)

Certified by: _____
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QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
DIOXATHION/ DIOXENETHION HPLC ANALYSIS DATA

Client: Hercules
Sample ID: CM-4 Soil
File #: BT82045

	Date		Analyst
Collected:	02/11/03	1035	MGJ
Extracted:	02/17/03	1300	SCF
Analyzed:	02/24/03	1601	SCF

Sample Type: Soil
Extraction Method: SW846 3550C
Analysis Method: Modified SW846

COMPOUNDS	PQL ug/kg (ppb)	SAMPLE Detected Amount ug/kg (ppb)	SAMPLE Spike Amount ug/kg	SAMPLE Spike % Recovery	METHOD BLANK Detected Amount ug/kg (ppb)	METHOD BLANK Spike Amount ug/kg	METHOD BLANK Spike % Recovery	MATRIX SPIKE Detected Amount mg/kg (ppm)	MATRIX SPIKE Spike Amount mg/kg	MATRIX SPIKE Spike % Recovery	LAB CONTROL Detected Amount mg/kg (ppm)	LAB CONTROL Spike Amount mg/kg	LAB CONTROL Spike % Recovery
Dioxenethion	170	ND			ND			5.06	5.00	101	4.49	5.00	89.8
Dioxathion (cis)	134	ND			ND			4.60	5.00	92.0	4.02	5.00	80.4
Dioxathion (trans)	149	ND			ND			4.36	5.00	87.2	4.30	5.00	86.0
SURROGATE COMPOUNDS		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Naphthalene		2.37	5.00	47.4	3.94	5.00	78.8	3.60	5.00	72.0	5.15	5.00	103

*PQL's were determined by EPA definition (5 to 10 times MDL)

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QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
DIOXATHION/ DIOXENETHION HPLC ANALYSIS DATA

Client: Hercules
Sample ID: CM-5 Soil
File #: BT82043

	Date		Analyst
Collected:	02/11/03	925	MGJ
Extracted:	02/17/03	1300	SCF
Analyzed:	02/24/03	1601	SCF

Sample Type: Soil
Extraction Method: SW846 3550C
Analysis Method: Modified SW846

COMPOUNDS	PQL ug/kg (ppb)	SAMPLE			METHOD BLANK			MATRIX SPIKE			LAB CONTROL		
		Detected Amount ug/kg (ppb)	Spike		Detected Amount ug/kg (ppb)	Spike		Detected Amount mg/kg (ppm)	Spike		Detected Amount mg/kg (ppm)	Spike	
			Amount ug/kg	% Recovery		Amount ug/kg	% Recovery		Amount mg/kg	% Recovery		Amount mg/kg	% Recovery
Dioxenethion	170	ND			ND			5.06	5.00	101	4.49	5.00	89.8
Dioxathion (cis)	134	ND			ND			4.60	5.00	92.0	4.02	5.00	80.4
Dioxathion (trans)	149	448			ND			4.36	5.00	87.2	4.30	5.00	86.0
SURROGATE COMPOUNDS		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Naphthalene		1.81	5.00	36.2	3.94	5.00	78.8	3.60	5.00	72.0	5.15	5.00	103

*PQL's were determined by EPA definition (5 to 10 times MDL)

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BONNER ANALYTICAL TESTING COMPANY
QUANTITATIVE RESULTS AND QUALITY ASSURANCE DATA
DIOXATHION/ DIOXENETHION HPLC ANALYSIS DATA

Client: Hercules
Sample ID: Rinsate Blank
File #: BT82058

	Date		Analyst
Collected:	02/11/03	1535	MGJ
Extracted:	02/14/03	1400	SCF
Analyzed:	02/24/03	1601	SCF

Sample Type: Water
Extraction Method: SW846 3510C
Analysis Method: Modified SW846

		SAMPLE			METHOD BLANK			MATRIX SPIKE			LAB CONTROL		
			Spike			Spike			Spike			Spike	
COMPOUNDS	PQL ug/L (ppb)	Detected Amount ug/L (ppb)	Amount ug/L	% Recovery	Detected Amount ug/L (ppb)	Amount ug/L	% Recovery	Detected Amount mg/L (ppm)	Amount mg/L	% Recovery	Detected Amount mg/L (ppm)	Amount mg/L	% Recovery
Dioxenethion	2.19	ND			ND			5.14	5.00	103	4.70	5.00	94.0
Dioxathion (cis)	4.75	ND			ND			5.01	5.00	100	5.07	5.00	101
Dioxathion (trans)	3.04	ND			ND			5.09	5.00	102	4.72	5.00	94.4
SURROGATE COMPOUNDS		Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery	Detected Amount	Spiked Amount	% Recovery
Naphthalene		4.47	5.00	89.4	4.43	5.00	88.6	3.95	5.00	79.0	3.64	5.00	72.8

*PQL's were determined by EPA definition (5 to 10 times MDL)

Certified by: _____
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BONNER ANALYTICAL TESTING COMPANY
2703 OAK GROVE ROAD
HATTIESBURG, MS 39402
PH. (601) 264-2854

Client: HERCULES

Project #: 005855 **Sample Date/Time: 02-11-03**
Collected By: MGJ **Date/Time Rec'd: 02-11-03 @ 1650**

Sample I.D.	Time Collected	File #	TOC	Date/Time/Analyst
CM-5 (Liquid)	0925	BT82042	6.669	02-13-03/1245/MDS
CM-5 (Soil)	0925	BT82043	144	02-26-03/1400/KAW
CM-4 (Liquid)	1035	BT82044	5.202	02-13-03/1245/MDS
CM-4 (Soil)	1035	BT82045	74.6	02-26-03/1400/KAW
CM-3 (Liquid)	1115	BT82046	4.520	02-13-03/1245/MDS
CM-3 (Soil)	1115	BT82047	141.4	02-26-03/1400/KAW
CM-3 Dup.(Liquid)	1115	BT82048	5.325	02-13-03/1245/MDS
CM-3 Dup.(Soil)	1115	BT82049	123.8	02-26-03/1400/KAW
CM-2 (Liquid)	1220	BT82050	3.139	02-13-03/1245/MDS
CM-2 (Soil)	1220	BT82051	218.5	02-26-03/1400/KAW
CM-1 (Liquid)	1255	BT82052	2.660	02-13-03/1245/MDS
CM-1 (Soil)	1255	BT82053	158.3	02-26-03/1400/KAW
Rinseate Blank	1535	BT82058	1.646	02-13-03/1245/MDS

Method for soil - Tekmar-Dohrmann/183 Boat Method.
Method for liquid - 415.2. MDL for liquid is 0.5

Data reported in ppm (mg/L for liquid & ug/g for soil), unless otherwise noted. All analyses performed in accordance with 40 CFR 136 and amendments.

MDL = Method Detection Limit.

Certified by: _____
Michael S. Bonner, Ph.D.
BONNER ANALYTICAL TESTING COMPANY

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BONNER ANALYTICAL TESTING COMPANY

2703 Oak Grove Road, Hattiesburg, MS 39402

Phone: (601)-264-2854 Fax: (601)-268-7084 Email: batco@batco.com

WWW.BATCO.COM

Testing Your World for a Safer Tomorrow

YOUR COMPANY NAME: _____

YOUR COMPANY ADDRESS: _____

_____

_____

NAME OF PERSON TO CONTACT: _____

CONTACT PERSON'S PHONE: _____ FAX: _____

CONTACT PERSON'S EMAIL: _____

CLIENT PROJECT NO.	CLIENT P.O.#	CLIENT PROJECT NUMBER

SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PARAMETERS FOR ANALYSIS	NUMBER OF CONTAINERS	PRESERVATION	LABORATORY USE: File ID
1							BT
2							BT
3							BT
4							BT
5							BT
6							BT
7							BT
8							BT
9							BT
10							BT

LABORATORY USE: Turn Around Time

LABORATORY USE: Project Number

SAMPLE COLLECTOR/RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

METHOD OF SHIPMENT (If Any)	RELINQUISHED BY:

DATE	TIME	RECEIVED FOR BATCO BY:	DATE/TIME

REMARKS: _____

☐ REQUEST BATCO TO DISPOSE OF ALL SAMPLE REMAINDERS

_____ (Signature)

IF SAMPLE IS DETERMINED TO BE HAZARDOUS, A MINIMUM ADDITIONAL CHARGE OF $30.00 PER SAMPLE WILL BE ASSESSED.

REVISION NO 1.2
03/22/01

BONNER ANALYTICAL TESTING COMPANY

2703 Oak Grove Road, Hattiesburg, MS 39402

Phone: (601)-264-2854 Fax: (601)-268-7084 Email: batco@batco.com

WWW.BATCO.COM

Testing Your World for a Safer Tomorrow

YOUR COMPANY NAME: _____

YOUR COMPANY ADDRESS: _____

_____

_____

NAME OF PERSON TO CONTACT: _____

CONTACT PERSON'S PHONE: _____ FAX: _____

CONTACT PERSON'S EMAIL: _____

CLIENT PROJECT NO.	CLIENT P.O.#	CLIENT PROJECT NUMBER

	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PARAMETERS FOR ANALYSIS							NUMBER OF CONTAINERS	PRESERVATION	LABORATORY USE Turn Around Time Project Number File ID
1														BT
2														BT
3														BT
4														BT
5														BT
6														BT
7														BT
8														BT
9														BT
10														BT

SAMPLE COLLECTOR/RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

METHOD OF SHIPMENT (If Any)	RELINQUISHED BY:

DATE	TIME	RECEIVED FOR BATCO BY:	DATE/TIME

REMARKS: _____

☐ REQUEST BATCO TO DISPOSE OF ALL SAMPLE REMAINDERS

_____ (Signature)

IF SAMPLE IS DETERMINED TO BE HAZARDOUS, A MINIMUM ADDITIONAL CHARGE OF $30.00 PER SAMPLE WILL BE ASSESSED.

REVISION NO 1.2
03/22/01

BURNS COOLEY DENNIS, INC.
GEOTECHNICAL CONSULTANTS

551 SUNNYBROOK ROAD
RIDGELAND, MS 39157

BUS: (601) 856-9911
FAX: (601) 856-9774

P. O. BOX 12828
JACKSON, MS 39236

EARTHWORK TESTING REPORT

To: Eco Systems
439 Katherine Drive, Suite 2A
Jackson, Mississippi 39208

Date: March 10, 2003

Project No.: 03123

Attn: Spencer Trichell

Report No.: 1

Project: Submitted Samples
Hercules Project No. HER 99072
Ridgeland, Mississippi

Laboratory test results are presented in this report for earthwork testing performed **March 3, 2003,** for the above-captioned project.

LABORATORY TESTING:

2 sieve analyses (sand)
1 determination of percent fines passing No. 200 sieve

These tests were performed on samples delivered to our office. The results of the laboratory tests are presented on Figures 1 through 3.

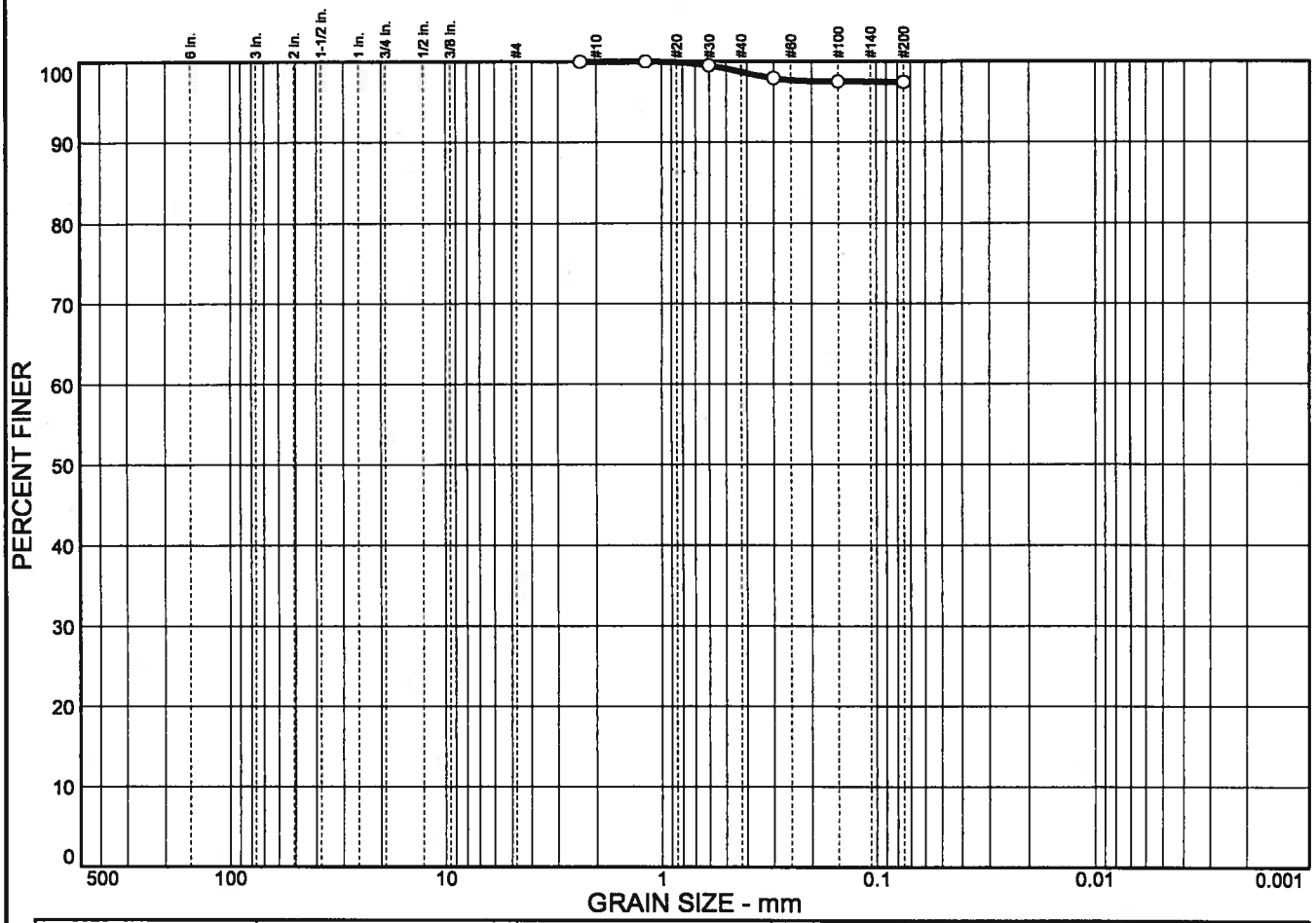
COMMENTS:

We appreciate the opportunity to be of service on this project. If you should have any questions concerning this report, please do not hesitate to call us.

REPORTED BY: _____
Construction Laboratory Manager

REVIEWED BY: RC Allred
Engineer

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	2.6	97.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#8	100.0		
#16	100.0		
#30	99.5		
#50	97.9		
#100	97.5		
#200	97.4		

* (no specification provided)

Soil Description

Tan silty clay (CL), with sand trace

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= D_{60}= D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= CL AASHTO=

Remarks

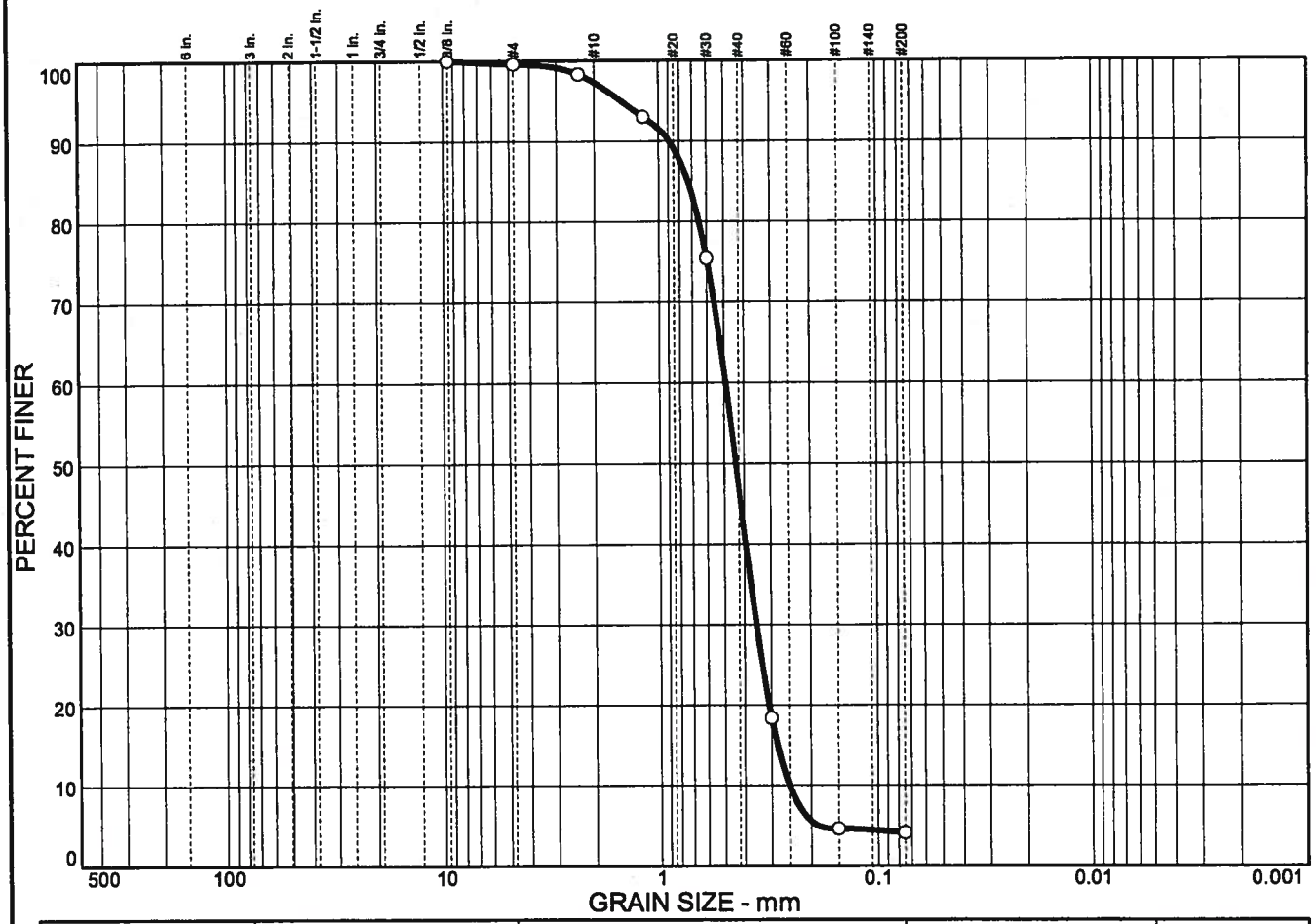
Sampled by Client

Sample No.: CM-3 **Source of Sample:** Submitted Sample **Date:** 3-3-03
Location: **Elev./Depth:**

BURNS COOLEY DENNIS, INC.

Client: Ecosystems
Project: Hercules Project # HER99072; Submitted Samples
Project No: 03123 **Figure** 1

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.4	95.5	4.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8 in.	100.0		
#4	99.6		
#8	98.3		
#16	93.0		
#30	75.4		
#50	18.4		
#100	4.6		
#200	4.1		

* (no specification provided)

Soil Description

Tan sand (SP), with silt trace

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.731 D_{60}= 0.492 D_{50}= 0.440
D_{30}= 0.352 D_{15}= 0.282 D_{10}= 0.250
C_u= 1.97 C_c= 1.01

Classification

USCS= SP AASHTO=

Remarks

Sampled by Client

Sample No.: CM-4 **Source of Sample:** Submitted Sample **Date:** 3-3-03
Location: **Elev./Depth:**

BURNS COOLEY DENNIS, INC.

Client: Ecosystems
Project: Hercules Project # HER99072; Submitted Samples
Project No: 03123 **Figure** 2

Particle Size Distribution Report

% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	15.2	78.5	6.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4 in.	100.0		
1/2 in.	94.7		
3/8 in.	93.2		
#4	84.8		
#8	74.7		
#16	65.7		
#30	52.3		
#50	16.5		
#100	6.9		
#200	6.3		

* (no specification provided)

Soil Description

Tan gravelly sand (SP-SM), slightly silty

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 4.81 D_{60}= 0.774 D_{50}= 0.569
D_{30}= 0.394 D_{15}= 0.288 D_{10}= 0.237
C_u= 3.27 C_c= 0.85

Classification

USCS= SP-SM AASHTO=

Remarks

Sampled by Client

Sample No.: CM-5 **Source of Sample:** Submitted Sample **Date:** 3-3-02
Location: **Elev./Depth:**

BURNS COOLEY DENNIS, INC.

Client: Ecosystems
Project: Hercules Project # HER99072; Submitted Samples
Project No: 03123

Figure 3