Soil Removal Final Report Woods Industries Site Yakima, Washington

Volume III
Appendices F—K

October 13, 1993

Prepared for:

BURLINGTON NORTHERN RAILROAD
999 Third Avenue
Seattle, Washington 98104

BURLINGTON
ENVIRONMENTAL
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330

Project 12883088

F

APPENDIX F

Preliminary Data for TPH Samples

F-1 Chain-of-Custody Records
F-2 Sampling Data Sheets
F-3 TPH Analytical Results
F-4 Pesticide Analytical Results in TPH Excavation
F-5 Lead and Arsenic Analytical Results in TPH Excavation

APPENDIX F-1

Chain-of-Custody Records

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 6421

PROJECT NAME Woods Industries
PROJECT NUMBER 1288308 MAJOR TASK 7856
SAMPLERS John W. Dolan
LAB DESTINATION Lancaster

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: TPH	TYPE OF ANALYSIS: Oil & Grease	PRESERVATIVES: ICED	PRESERVATIVES: CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
POU-1	5-11-93	See			datasheet	1	✓	✓			

RELINQUISHED BY

SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
John W. Dolan	5-11-93	1228	Tamra Root	5/11/93	12:28

SHIPPING NOTES
May Contain hazardous materials.

LAB NOTES

BE-34 (1/92)

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CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5605

PROJECT NAME WOODS INDUSTRIES
PROJECT NUMBER 12883088 MAJOR TASK 7856
SAMPLERS M.S. MARTIN
LAB DESTINATION LAUCKS

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: BEST LIST	VOA	TPH	ASAP/RUSH				PRESERVATIVES: ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
PV11-01	5/18/93	6:30-7:00 PM	Y		WOODS INDUSTRIES	1	1									BEST Possible Turnaround
PV12-01						1	1									
PV13-01						1	1									
PV14-01						1	1	1								
PV15-01						1	1									
PV16-01						1	1		1							
PV17-01						1	1									
PV18-01						1	1									
[redacted]						2										
VL-1						1	1			1						

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
Michael A. Martin	5/18/93	8072	Timothy E. Runyan	May 18 93	8:10A

SHIPPING NOTES
May contain hazardous materials.

LAB NOTES

BE-34 (1/92)

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CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 6425

PROJECT NAME: Woods Industries
PROJECT NUMBER: 12883088 MAJOR TASK: 7556
SAMPLERS: [illegible]
LAB DESTINATION: Laucks - Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pest List	Dieldrin	Quantity	TPH, oil + grease				ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
PNE25-01	5-22-93	See data sheets				1	✓	✓	✓	✓						
PNE26-03						1	✓	✓	✓							
PNE27-03						1	✓	✓	✓	✓						
PNE28-03						1	✓	✓	✓							
PNE29-01						1	✓	✓	✓							
PNE30-03						1	✓	✓	✓							
PNE31-03						1	✓	✓	✓	✓						
PNE32-03						1	✓	✓	✓							
PNE33-01						1	✓	✓	✓							
PNE34-03						1	✓	✓	✓							
PNE35-03						1	✓	✓	✓	✓						
PNE36-03						1	✓	✓	✓	✓						
PNE37-01						1	✓	✓	✓							
PNE38-03						1	✓	✓	✓							
						14	14	14	14	5						

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
John W. [illegible]	5-22-93	9:50	Timothy E. Runyan	May 22 '93	9:50

SHIPPING NOTES: May contain hazardouse materials.

LAB NOTES:

BE-34 (1/92)

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CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 6426

PROJECT NAME Woods Industries
PROJECT NUMBER 12883088 MAJOR TASK 3856
SAMPLERS [illegible]
LAB DESTINATION Lancaster - Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: PEST LIST	Dieldrin	Quantify	TPH Oil & Grease			PRESERVATIVES: ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
ANE39-03	5-22-93				Separate sheets.	1	✓	✓	✓						
ANE40-03						1	✓	✓	✓						
ANE41-01						1	✓	✓	✓						
ANE42-03						1	✓	✓	✓						
ANE43-03						1	✓	✓	✓						
ANE44-03						1	✓	✓	✓						
ANE45-01						1	✓	✓	✓	✓					
ANE46-03						1	✓	✓	✓	✓					
ANE47-03						1	✓	✓	✓	✓					
ANE48-03						1	✓	✓	✓	✓					
ANE25-01						1	✓	✓	✓						

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
John W. Dolan	5-22-93	9:30 am	Timothy E. Runyan	may 22 '93	9:50

SHIPPING NOTES: May contain hazardous materials.

LAB NOTES:

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CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 6427

PROJECT NAME Woods Industries
PROJECT NUMBER 128830856 MAJOR TASK 7856
SAMPLERS John W. Dolan
LAB DESTINATION Lancks - Yakima.

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Acid Test	Addition	Quantify	TPH/oil & grease				ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
AHE49.05	5-22-93	See data sheet.				1	✓	✓	✓	✓						

RELINQUISHED BY / RECEIVED BY

SIGNATURE	DATE	TIME	SIGNATURE	DATE	TIME
John W. Dolan	5-22-93	1117	Timothy E. Runyan	May 22 '93	11:20A

SHIPPING NOTES May contain hazardous materials

LAB NOTES

BE-34 (1/92)

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CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. C428

PROJECT NAME Woods Industries
PROJECT NUMBER 288 3088 MAJOR TASK 7856
SAMPLERS Kurt
LAB DESTINATION Lucks - Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: PEST LIST	Dieldrin	TPH Oil & Grease	PRESERVATIVES: ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
PNE4905	5-24-93	5:45			data sheets	1	✓	✓				
PNES005						1	✓	✓	✓			
PNES1-05						1	✓	✓	✓			
PNES2-05						1	✓	✓				
PNES3-05						1	✓	✓				
PNES4-05						1	✓	✓				
PNES5-05						1	✓	✓				
PNES6-04						1	✓	✓				
PNES7-04						1	✓	✓				
PNES8-04						1	✓	✓				
PNES9-04						1	✓	✓	✓			
PNE60-04						1	✓	✓				

12 12 12 3

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
John W. Dolan	5-24-93	3:08	Timothy E. Runyan	May 24 '93	3:12p

SHIPPING NOTES
May contain hazardous materials

LAB NOTES

BE-34 (1/92)

9305A00

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CHAIN-OF-CUSTODY RECORD

Rush!

C.O.C. SERIAL NO. 6436

PROJECT NAME: Woods Industries
PROJECT NUMBER: 12883088 MAJOR TASK: 7856
SAMPLERS:
LAB DESTINATION: Laucks - Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	Pest List	Dioxin	Bioassay	TPH oil			ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
AES-1-01	5-26-93				See data sheets	1	✓	✓	✓						7305138-4
AES-2-0.5						1	✓	✓	✓						5
AES-3-01						1	✓	✓	✓						6
AES-4-0.5						1	✓	✓	✓						7
AES-5-01						1	✓	✓	✓						8
SWP-1						1	✓	✓	✓	✓					9
SWP-2						1	✓	✓	✓	✓					10

7 7 7 7 3

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
John W. Dolan	5-26-93	3:00	Timothy E. Runyan	May 26 '93	3:00 p.

SHIPPING NOTES: May contain hazardouse materials.

LAB NOTES:

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CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5555

PROJECT NAME Woods Industries
PROJECT NUMBER 12883088 MAJOR TASK 7856
SAMPLERS John W. Dolan
LAB DESTINATION Lancks - Yakima.

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pest List	Dieldrin	TPH/Rush	Quantity			PRESERVATIVES: ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
PSL-176-02	6-8-93	see data sheets.				1	✓	✓		✓					
PSL-177-02	↓		↓		↓	1	✓	✓		✓					
PSL-180-02						1	✓	✓		✓					
PSL-181-02						1	✓	✓		✓					
PSL-182-04						1	✓	✓		✓					
PSL-183-04						1	✓	✓		✓					
WA32-03						1	✓	✓		✓					
WA33-03						1	✓	✓		✓					
WA34-01						1	✓	✓		✓					
WA35-01						1	✓	✓		✓					
TANE1-08						1			✓	✓					
TANES1-08	↓		↓		↓	1			✓	✓					
						12	10	10	2	12					

RELINQUISHED BY / RECEIVED BY

SIGNATURE	DATE	TIME	SIGNATURE	DATE	TIME
John W. Dolan	6-8-93	2:21	Timothy E. Runyan	June 8 '93	2:30

SHIPPING NOTES May contains hazardouse materials.

LAB NOTES

BE-34 (1/92)

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~~T306193~~ T306205 (TPH)

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5590

PROJECT NAME Woods Industries
PROJECT NUMBER 12883088 MAJOR TASK 78.56
SAMPLERS John W. Dolan
LAB DESTINATION Laucks - Yakima

Type of analysis: Pest List; Dieldrin; Quantity; TPH oil/grease

	SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	Pest List	Dieldrin	Quantity	TPH oil/grease			ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
1 ~~7~~	SAPS-1	6-29-93				see data sheets	1	✓	✓	✓	✓					
2 ~~8~~	SAPS-2	↓			↓	↓	1	✓	✓	✓	✓					
3 ~~9~~	SAPS-3	↓			↓	↓	1	✓	✓	✓	✓					
4 ~~10~~	SAPS-4	↓			↓	↓	1	✓	✓	✓	✓					
5 ~~11~~	SAPS-5	↓			↓	↓	1	✓	✓	✓	✓					
							/5	/5	/5	/5	/5					

RELINQUISHED BY / RECEIVED BY

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
John W. Dolan	6-29-93	7:50	[signature]	6-30-93	8AM

SHIPPING NOTES may contain hazardous materials.

LAB NOTES

BE-34 (1/92)

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CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5592

PROJECT NAME Woods Industries
PROJECT NUMBER 1288 3088 MAJOR TASK 7856
SAMPLERS John W. Dolan
LAB DESTINATION Laucks - Yakima.

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pest List	Dioxin	Quantify	TPH oily grease				ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
SAAS-6	6-29-93	see	data		sheets	1	✓	✓	✓	✓						
SAAS-7	↓		↓		↓	1	✓	✓	✓	✓						
SAAS-8						1	✓	✓	✓	✓						
SAAS-9						1	✓	✓	✓	✓						
NEWL1-05						1	✓	✓	✓	✓						
NEWL2-04						1	✓	✓	✓	✓						
NEWL3-05						1	✓	✓	✓	✓						
NEWL4-05						1	✓	✓	✓	✓						
NEWL5-04						1	✓	✓	✓	✓						
NEWL6-04						1	✓	✓	✓	✓						
NEWL7-04						1	✓	✓	✓	✓						
NEWL8-03						1	✓	✓	✓	✓						

12/12/12/12/12

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
John W. Dolan	6-29-93	2:25pm	Timothy E. Runyan	6-29-93	2:30p.

SHIPPING NOTES may contain hazardous materials.

LAB NOTES

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T307038 ~~9307~~ TPH T307045-1 TO -6

9307271

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5751

PROJECT NAME	Woods Industries Site
PROJECT NUMBER	12883088
MAJOR TASK	7856
SAMPLERS	John Dolan - Greg Koester
LAB DESTINATION	Laucks Testing

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	Pest List	Dieldrin	Quantify	Lead - ASAP-Rush	Arsenic - ASAP-Rush	TPH		ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
5 SLS207-01	7-9-93	See data Sheets				1	✓	✓	✓							5
6 SLS208-01						1	✓	✓	✓							6
7 SLS209-01						1	✓	✓	✓							7
8 SLS210-01						1	✓	✓	✓							8
9 SLS211-01						1	✓	✓	✓							9
10 SLS212-01						1	✓	✓	✓							10
11 SLS213-02						1	✓	✓	✓							11
12 SLS214-02						1	✓	✓	✓							12
1 NEWL9.03	(1)					1	✓	✓	✓	✓	✓	✓				13
14 NEWL10.05						1	✓	✓	✓			✓				14
15 NEWL11-04						1	✓	✓	✓			✓				15
16 NEWL12.03						1	✓	✓	✓			✓				16
NEWL13-03	(2)					1	✓	✓	✓	✓	✓	✓				17
NEWL14-03	(3)					1	✓	✓	✓	✓	✓	✓				18
							14	14	14	4	4	6				

T307045 -1 TO -6 TPH

T307045 TPH 7 to 10

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
Greg Koester	7-9-93	2:05pm	Timothy E. Runyan	7-9-93	2:05
			Dave Johns	7/12/93	

SHIPPING NOTES
May Contain Hazardous Materials

LAB NOTES

LAUCKS TESTING
08/17/93 12:01 206 767 5083 002

BE-34 (1/92)

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Q307271

T307038 / T307039

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5752

PROJECT NAME: Woods Industries Site
PROJECT NUMBER: 12883088 MAJOR TASK: 7856
SAMPLERS: John Dolan Greg Koester
LAB DESTINATION: Lauck's - Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	Pest. List	Dieldrin	Quantify	Lead (ASAP-Rush)	Arsenic (ASAP-Rush)	TPH	ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
NCPL15-03	7-9-93	(1) See Data Sheets		✓		1	✓	✓	✓	✓	✓	✓			-19 T307038
NCPL16-04	✓			✓		1	✓	✓	✓			✓			-20 "
SPPS10-	✓			✓		1	✓	✓	✓			✓			-1 T307039
SPPS11-	✓			✓		1	✓	✓	✓			✓			-2 "
SPPS12	✓			✓		1	✓	✓	✓			✓			3 "
SPPS13-	✓			✓		1	✓	✓	✓			✓			4 "
SPPS14-	✓			✓		1	✓	✓	✓			✓			5 "
SPPS15-	✓			✓		1	✓	✓	✓			✓			6 "
SPPS16-	✓			✓		1	✓	✓	✓			✓			7 "
SPPS17-	✓			✓		1	✓	✓	✓			✓			8 "
						10	10	10	10	1	1	10			

T307045 -7 to -16 TPH

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
Greg D. Koester	7-9-93	11:05	Timothy E. Runyan	7-9-93	2:05

SHIPPING NOTES: May Contain Hazardous Materials

LAB NOTES:

BE-34 (1/92)

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T307039 / T307067

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5753

PROJECT NAME: Woods Industries
PROJECT NUMBER: 12883086 MAJOR TASK: 2856
SAMPLERS: John W. Dolan
LAB DESTINATION: Lacks - Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pest List	Dieldrin	TPH	Quantity			PRESERVATIVES: ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
15 NEWL17-05	7-14-93	See data sheets				1	✓	✓	✓	✓					TPH T307075-1 to -8
16 NEWL18-05	↓		↓		↓	1	✓	✓	✓	✓					
17 NEWL19-05						1	✓	✓	✓	✓					
18 NEWL20-06						1	✓	✓	✓	✓					
19 NEWL21-04						1	✓	✓	✓	✓					
20 NEWL22-06						1	✓	✓	✓	✓					
21 NEWL23-02						1	✓	✓	✓	✓					
22 NEWL24-06						1	✓	✓	✓	✓					

8/8/8

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
John W. Dolan	7-14-93	8:30am	Timothy E. Runyan	7-14-93	8:25A

SHIPPING NOTES: May contain hazardous material.

LAB NOTES:

BE-34 (1/92)

T307123 / T307134

WTPH 418.1
T307141

BURLINGTON ENVIRONMENTAL

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CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5844

PROJECT NAME: Woods Industries site
PROJECT NUMBER: 12883088 MAJOR TASK: 2856
SAMPLERS: JMD
LAB DESTINATION: Lancks - Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	Pest List	TPH	Quantity	Dioxins				ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE) Pest	WTPH 418.1
25-05		See	Data		sheet	1	X	X	X	X						-18	-1
26-05						1	X	X	X	X						-19	-2
27-04						1	X	X	X	X						-20	-3
28-04						1	X	X	X	X						-1	-4
29-02						1	X	X	X	X						-2	-5
30-06						1	X	X	X	X						-3	-6
31-06						1	X	X	X	X						-4	-7
32-06						1	X	X	X	X						-5	-8
33-05						1	X	X	X	X						-6	-9
34-04						1	X	X	X	X						-7	-10
35-05						1	X	X	X	X						-8	-11
36-06						1	X	X	X	X						-9	-12
37-03						1	X	X	X	X						-10	-13
38-06						1	X	X	X	X						-11	-14
							12	12	12	13							

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
Greg D. Kenton	7/22/93	1300	Jeff D. Eckert	7/23/93	12:55 PM

SHIPPING NOTES

LAB NOTES

BE-34 (1/92)

BURLINGTON ENVIRONMENTAL

T307134

WTPH418.1 T307141

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CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5845

PROJECT NAME Woods Industries site
PROJECT NUMBER 12883088 MAJOR TASK 7536
SAMPLERS JMD
LAB DESTINATION Lancks — Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pest List	TPH	Quantity Dilution				ICED	PRESERVATIVES: CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE): Pest	WTPH 418.1
NEW 39-04		See			Data sheet	1	X	✓	✓	✓					-12	-15
40-05						1	X	✓	✓	✓					-13	-16
41-02						1	X	✓	✓	✓					-14	-17
42-04						1	X	X	✓	✓					-15	-18
43-06						1	X	X	✓	✓					-16	-19
44-06						1	X	X	✓	✓					-17	-20
45A						1	X	X	✓	✓					~~-18~~	
46						1	X	X	✓	✓					≡	
47						1	X	X	✓	✓						
48						1	X	X	✓	✓						
							6	6	6	6						

RELINQUISHED BY: SIGNATURE	DATE	TIME	RECEIVED BY: SIGNATURE	DATE	TIME
Greg D. Kantz	7/23/93	1300	Jeff DiEckert	7/23/93	12:55 pm

SHIPPING NOTES

LAB NOTES

BE-34 (1/92)

BURLINGTON ENVIRONMENTAL

T307134 / T307142

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5851

PROJECT NAME Woods Industries
PROJECT NUMBER 12683088 MAJOR TASK 7856
SAMPLERS JMD
LAB DESTINATION Laucks - Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pest List	Quarterly	Drilling	TPH	ICED	CHEMICALS ADDED	PRESERVATIVES	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
													Pest	WTPH 418.1
NSS 117-		See	Data		sheets	1	✓	✓	✓				-18	
118-						1							-19	
119-						1							-20	
120-						1				X			-1	T307147-1
121-						1				X			-2	T307147-2
122-						1							-3	
123-						1							-4	
124-						1							-5	
125-						1							-6	
126-						1							-7	
127-						1							-8	
128-						1							-9	
129-						1							-10	
130-						1				X			-11	T307147-3

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
James M. Johnson	7-26-93	15:31	Timothy E. Runyan	7-26-93	3:30p

SHIPPING NOTES

LAB NOTES

BE-34 (1/92)

T307142

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5852

PROJECT NAME Woods Industries
PROJECT NUMBER 1288-3088 MAJOR TASK 78-56
SAMPLERS JMO
LAB DESTINATION Lacks – Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pest List	Quantity	Dioxin	TPH	ICED	CHEMICALS ADDED	PRESERVATIVES	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
USS 131-		SCC	Drip		sheets	1	✓	✓	✓				Pest	wtpH 418.1
132-						1							-12	
133-						1							-13	
134-						1							-14	
135-						1							-15	
136-						1			X				-16	T307147-4
							30	20	40				-17	

RELINQUISHED BY

SIGNATURE	DATE	TIME
James M Johnson	7-26-93	15:31

RECEIVED BY

SIGNATURE	DATE	TIME
Timothy E. Runyan	7-26-93	3:31

SHIPPING NOTES

LAB NOTES

BE-34 (1/92)

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5853

PROJECT NAME Woods Industries site
PROJECT NUMBER 12K3084 MAJOR TASK 7836
SAMPLERS TAD GAK
LAB DESTINATION Lancs - Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pest List	Quantity	Dioxin	TCLP			ICED	PRESERVATIVES: CHEMICALS ADDED		REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
															Pest	WTPH 418.1
SEE 45-03		SEE	Data		sheets -	1	X	X	X	X						T307150-1
46-06						1										-2
47-04						1										-3
48-02						1										-4
49-05						1										-5
50-02						1										-6
51-04						1										-7
52-03						1										-8
53-05						1										-9
54-03						1										-10
55-04						1										-11
56-04						1										-12
57-05						1										-13
SEE 58-04						1										-14

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
Danny M. Allen	7-28-93	08:13	Jeff D. Eckert	7/28/93	8:16 AM

SHIPPING NOTES

LAB NOTES

BURLINGTON
ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5854

PROJECT NAME Woods Industries sit.
PROJECT NUMBER 12483088 MAJOR TASK 7836
SAMPLERS JMD G.A.K.
LAB DESTINATION Knucks - Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pest List 1	Quarterly	Dieldrin	TPH				PRESERVATIVES: ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
																Pest / WTPH 418.1
EWL 59-04		Soil	Data		Shoots	1	X	X	X	X						T307150-15
60-03						1										-16
61-06						1										-17
62-06						1										-18
63-06						1										-19
64-06						1										-20

RELINQUISHED BY

SIGNATURE	DATE	TIME
James M. Hom	7-28-93	04:13

RECEIVED BY

SIGNATURE	DATE	TIME
Jeff D. Eckert	7/28	8:16 AM

SHIPPING NOTES

LAB NOTES

BURLINGTON ENVIRONMENTAL

Pest: T307151

210 West Sand Bank Road,
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5855

PROJECT NAME: Woods Industries
PROJECT NUMBER: 12553088 MAJOR TASK: 7856
SAMPLERS: Jim Dl[illegible]
LAB DESTINATION: Lancks - Yakima

	SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: TPh	Quantify	Pest List	Dieldrin			ICED	PRESERVATIVES: CHEMICALS ADDED	Pest	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE) WTPH 418.1
NEWL	65-07	7-29-93	See			Data sheets	1	X	X	X	X					7151-5	7160-1
NEWL	66-05	↓	↓			↓	1	↓		↓	↓					6	-2
NEWL	67-07						1									7	-3
NEWL	68-05						1									8	-4
NEWL	69-07						1									9	-5
NEWL	70-05						1									10	-6
NEWL	71-07						1									11	-7
NEWL	72-05						1									12	-8
NEWL	73-07						1									13	-9
NEWL	74-05						1									14	-10
NEWL	75-07						1									15	-11
NEWL	76-05						1									16	-12
																	-~~13~~

RELINQUISHED BY / RECEIVED BY

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
James M. [illegible]	7-29-93	3:37	Timothy E. Runyan	7-29-93	3:58p

SHIPPING NOTES

LAB NOTES

APPENDIX F-2

Sampling Data Sheets

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. 80 7856-
PAGE ___ OF ___

PROJECT NAME ______ SAMPLE LOCATION NO. SL
PROJECT NO. ______ MAJOR TASK 7856 SUBTASK 77
DATE 5-11-93 SAMPLERS ______

SAMPLING METHOD ______
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
POU-1	N/A	1220	1 PINT	Preliminary

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES/NO ______ TIME ______ SEALER ______

COC COMPLETED (YES/NO ______ TIME ______ COC NO. ______ COMPLETED BY

BG = [illegible]

POU = Preliminary (oil sample) [illegible]

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO 7856-
PAGE ___ OF ___

PROJECT NAME WOODS ENDUSTRIES SAMPLE LOCATION NO. SEE SITE BE
PROJECT NO. 1288.30EB MAJOR TASK 7856 SUBTASK 77
DATE 5/18/93 SAMPLERS MSM / JWD

SAMPLING METHOD SURFICIAL SOIL PER REFS
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
PV11-01		6:51		1' CUT - CINDERS - SILT
PV12-01		6:50		
PV13-01		6:47		
PV14-01		6:48		
PV15-01		6:45		
PV16-01		6:46		
PV17-01		6:44		
PV18-01		6:42		

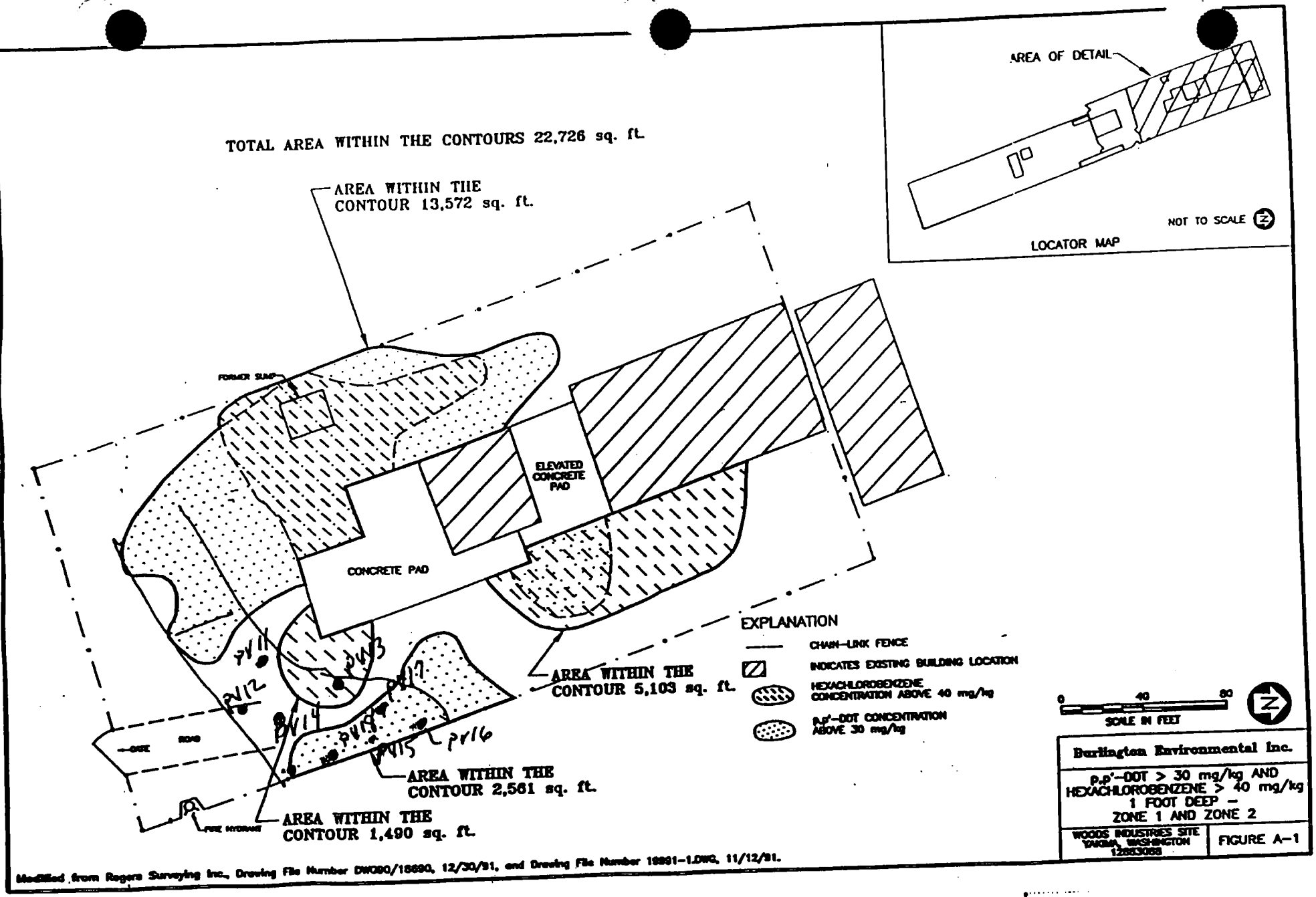
INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES)/NO 1035 TIME [illegible] SEALER
COC COMPLETED (YES)/NO 730 TIME 5605 COC NO. MSM COMPLETED BY

BG = Below Grade


TOTAL AREA WITHIN THE CONTOURS 22,726 sq. ft.
AREA WITHIN THE CONTOUR 13,572 sq. ft.
AREA OF DETAIL
NOT TO SCALE
LOCATOR MAP
FORMER SUMP
ELEVATED CONCRETE PAD
CONCRETE PAD
PV11
PV12
PV13
PV14
PV15
PV16
PV17
AREA WITHIN THE CONTOUR 5,103 sq. ft.
AREA WITHIN THE CONTOUR 2,561 sq. ft.
AREA WITHIN THE CONTOUR 1,490 sq. ft.
FIRE HYDRANT
EXPLANATION
CHAIN-LINK FENCE
INDICATES EXISTING BUILDING LOCATION
HEXACHLOROBENZENE CONCENTRATION ABOVE 40 mg/kg
p,p'-DDT CONCENTRATION ABOVE 30 mg/kg
0
40
80
SCALE IN FEET
Burlington Environmental Inc.
p,p'-DDT > 30 mg/kg AND HEXACHLOROBENZENE > 40 mg/kg
1 FOOT DEEP –
ZONE 1 AND ZONE 2
WOODS INDUSTRIES SITE
YAKIMA, WASHINGTON
12883088
FIGURE A-1
Modified from Rogers Surveying Inc., Drawing File Number DW090/18690, 12/30/91, and Drawing File Number 19891-1.DWG, 11/12/91.

5/18/93

SERIAL NO. 7856-
PAGE __ OF __

PROJECT [illegible]
PROJECT [illegible]
DATE 5-22-83

SAMPLE LOCATION NO. 56
[illegible] 7854 SUBTASK 77
SAMPLERS [illegible] / JIUD

SAMPLING [illegible] BER ... 85 113
TYPE OF [illegible] GRAB __ BACKGROUND __ COMPOSITE __
REASON FOR COLLECTION: LAB ANALYSIS __ HEADSPACE __ PHYSICAL TESTING __

SAMPLE NO.	[illegible]	TIME [illegible]	[illegible] COLLECTED	SAMPLE DESCRIPTION
Dupe 475 AVE25-01	N/A	0755	1 Amt	Arclimivary
AVE26-03		0756		
AVE27-03		0757		
AVE28-03		0759		
AVE29-01		0800		
AVE30-03		0800		
AVE31-03		0802		
AVE32-03		0804		
AVE 49-05		1054		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING / [illegible]	LOCATION OF READING

[illegible]

SAMPLE [illegible] 920 [illegible] JWD SEALER
[illegible] 920 [illegible] 6435 COC NO. JWD COMPLETED BY

BG = Below Grade
AVE = Arclimivary [illegible]
Dupe = Duplicate sample

4

APPENDIX F-3

TPH Analytical Results

SERIAL NO. 7826
PAGE __ OF __

PROJECT [illegible] SAMPLE LOCATION NO. 36
PROJECT [illegible] TASK 7736 SUBTASK 72
DATE 5-22-93 SAMPLERS [illegible] / JWD

SAMPLING [illegible] AIR [illegible]
TYPE OF [illegible] GRAB BACKGROUND ___ COMPOSITE ___
REASON FOR [illegible] HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE	[illegible]	[illegible]	VOLUME COLLECTED	SAMPLE DESCRIPTION
AWE33-01	N/A	0805	1 Pint	Preliminary
AWE34-03	↓	0806	↓	↓
AWE35-03	↓	0807	↓	↓
AWE36-03	↓	0810	↓	↓
AWE37-01	↓	0835	↓	↓
AWE38-03	↓	0836	↓	↓
AWE39-03	↓	0838	↓	↓
AWE40-03	↓	0840	↓	↓

[illegible] READINGS

TYPE OF INSTRUMENT	SERIAL NO.	[illegible]	LOCATION OF READING

SAMPLE [illegible] 920 TIME [illegible] SEALER
[illegible] 925 TIME 6425 [illegible] NO. [illegible] COMPLETED BY

BG = Background
AWE = Airborne [illegible] East
[illegible] [illegible] sample.

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD 7856-
PAGE ___ OF ___

PROJECT NAME WOODS INDUSTRIES SAMPLE LOCATION NO. SL
PROJECT NO. 1285.3CF6 MAJOR TASK 7856 SUBTASK 77
DATE 5-22-93 SAMPLERS MSM / JWD

SAMPLING METHOD SURFICIAL SOIL AGR REFS
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
ANE41-01	N/A	0843	1 Amt	Preliminary
ANE42-03		0846		
ANE43-03		0847		
ANE44-03		0849		
ANE45-01		0854		
ANE46-03		0856		
ANE47-03		0857		
ANE48-03	✓	0900		✓
Dupe 25 ANE75-01		0255		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES)/NO 930 TIME field SEALER
COC COMPLETED (YES)/NO 925 TIME 6426 COC NO. field COMPLETED BY

BG = Below Grade
PNE = Preliminary North East
Dupe = Duplicate sample.

EXPLANATION
CHAN-
25
29
33
37
41
45
26
30
34
38
42
46
49
27
31
35
37
43
47
28
32
36
40
44
48

5-24-93

SERIAL NO. [illegible]
PAGE ___ OF ___

PROJECT NAME [illegible] SAMPLE LOCATION NO. 5[illegible]
PROJECT NO. [illegible] MAJOR TASK [illegible] SUBTASK 77
DATE 5-24-93 SAMPLERS [illegible]

SAMPLING METHOD [illegible]
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TEST CONTAINER	VOLUME COLLECTED	SAMPLE DESCRIPTION
~~[illegible]-05~~	~~n/A~~	~~210~~	~~[illegible]~~	~~Preliminary~~
PNE50-05		212		
PNE51-05		213		
PNE52-05		217		
PNE53-05		219		
PNE54-05		221		
PNE55-05		224		
PNE56-04		225		
PNE57-04		226		

[illegible]

TYPE OF INSTRUMENT	SERIAL NO.	READING, CONCENTRATION	LOCATION OF READING

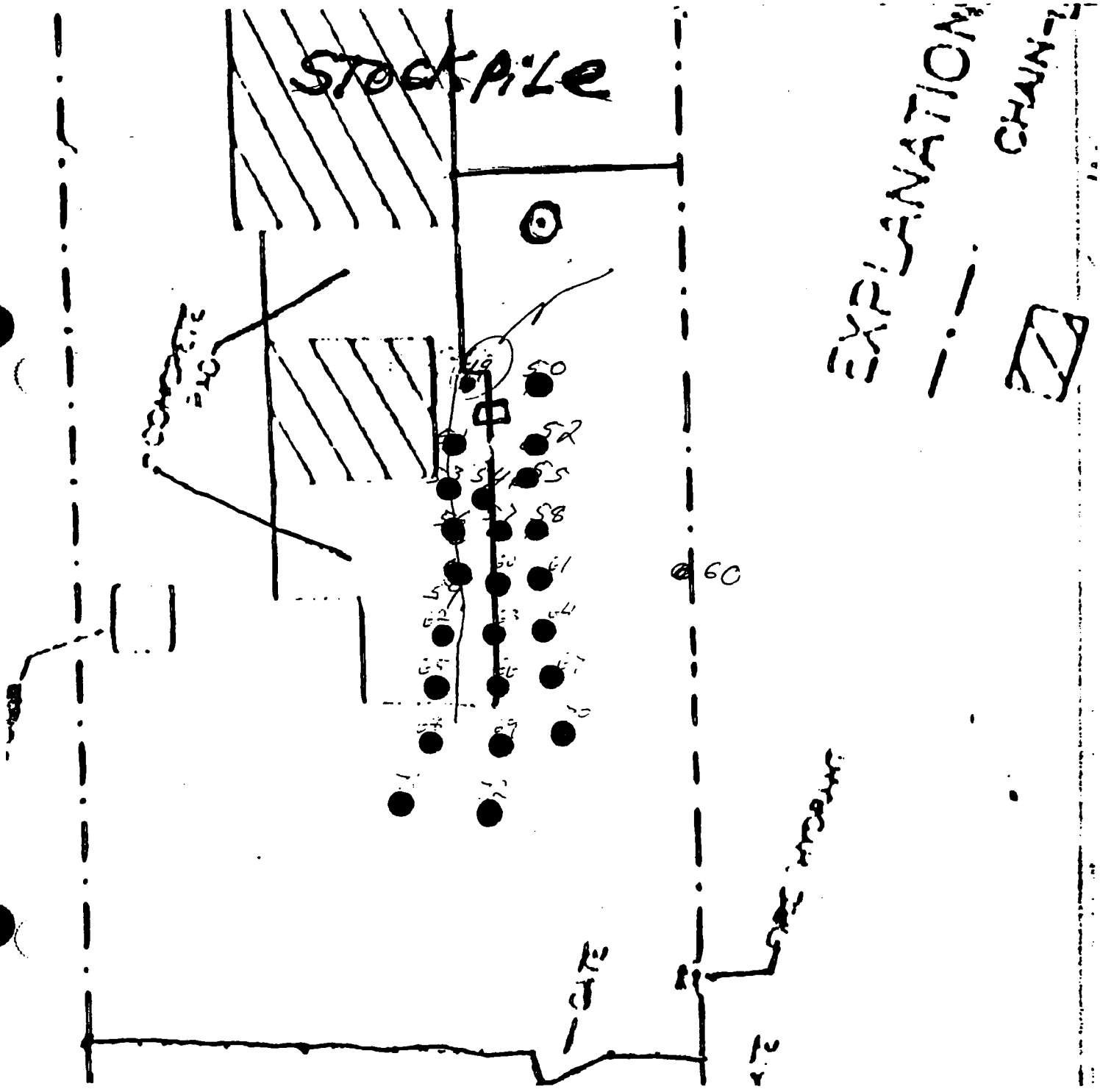
[illegible]

SAMPLE [illegible] 255 [illegible] [signature]
[illegible] COMPLETED [illegible] 255 TIME 6408 [illegible] [signature] COMPLETED BY

BG = Below Grade
PNE = Preliminary North East
Dupe = Duplicate sample

[initials]

5-24-93



BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 124830.88 MAJOR TASK 2856 SUBTASK 77
DATE 5-26-93 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
SWP-1	N.A	2:15	1 Pint	Preliminary
SWP-2		2:17		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED YES/NO 2:25 TIME [illegible] SEALER
COC COMPLETED YES/NO 2:30 TIME 6436 COC NO. [illegible] COMPLETED BY
LAB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

SWP = Surface Water Pump

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830.58 MAJOR TASK 7856 SUBTASK 22
DATE 6-8-93 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
WA32-03	N/A	1:10	1 PINT	Preliminary
WA33-03		1:11		
WA34-01		1:13		
WA-35-01		1:15		
TANE1-08				
TANE57-09				

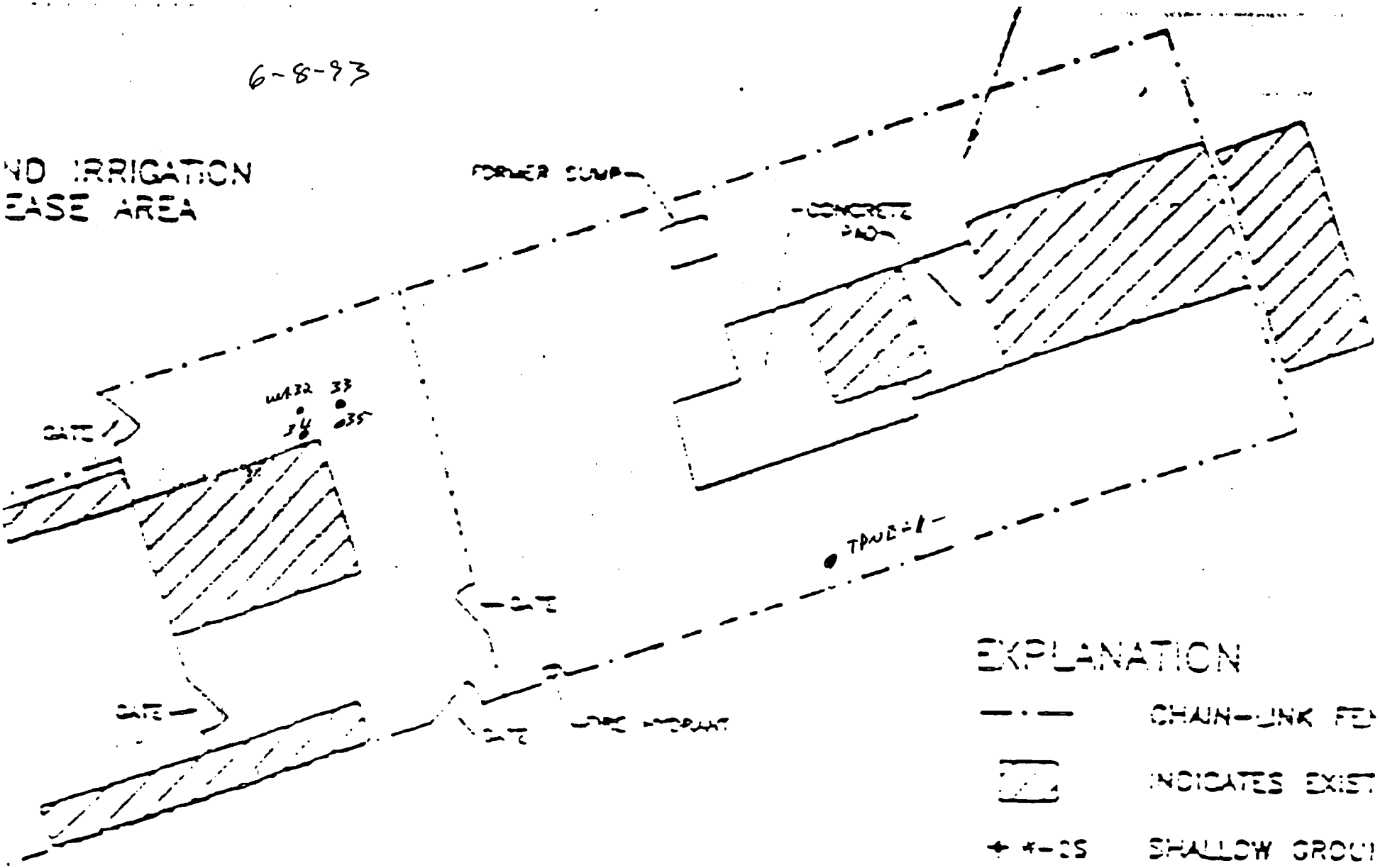
INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED YES/NO 2.00 TIME [illegible] SEALER
COC COMPLETED YES/NO 2.05 TIME 5555 COC NO. [illegible] COMPLETED BY
LAB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

6-8-93


ND IRRIGATION
EASE AREA
FORMER SUMP
CONCRETE PAD
MW32 33
34 035
GATE
GATE
GATE
GATE
TPWL-1
EXPLANATION
CHAIN-LINK FE
INDICATES EXIST
SHALLOW GROU
DEEP GROUNDW
APPROXIMATE L
(ABA ONED FE

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woodstock Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830.06 MAJOR TASK 2556 SUBTASK 22
DATE 6-24-93 SAMPLERS John W. Adam

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
SLS163-01	N/A	3:55	1 Pint	Preliminary -
SLS164-04		3:56		
SLS165-02		3:57		
SLS166-04		3:58		
SLS167-01		4:00		
SLS168-01		4:01		
SLS169-03		4:02		
SLS170-02	↓	4:03	↓	↓

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED YES/NO 4:30 TIME JWA SEALER
COC COMPLETED YES/NO 4:35 TIME 5548 COC NO. JWA COMPLETED BY
LAB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

SLS = South Lagoon Survey

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830 88 MAJOR TASK 2856 SUBTASK 22
DATE 6-29-93 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
SPAS-1	N/A	0620	1 Pint	Preliminary -
SPAS-2		0621		
SPAS-3		0623		
SPAS-4		0624		
SPAS-5		0625		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED YES/NO _____ TIME _____ SEALER

COC COMPLETED YES/NO _____ TIME _____ COC NO. _____ COMPLETED BY

LAB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

Stockpile petroleum soil

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830.88 MAJOR TASK 2456 SUBTASK 22
DATE 6-29-93 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
SPAS-6	N/A	1:20	1 Pint	Preliminary -
SPAS-7		1:21		
SPAS-8		1:22		
SPAS-9		1:23		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED YES/NO _____ TIME _____ SEALER

COC COMPLETED YES/NO _____ TIME _____ COC NO. _____ COMPLETED BY

LAB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

SPAS = stockpiled Petroleum soil.

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 28830885 MAJOR TASK 2456 SUBTASK 22
DATE 6-29-93 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
NEWL1-05	N/A	2:00	1 Pint	Preliminary -
NEWL2-04		2:10		
NEWL3-05		2:11		
NEWL4-05		2:12		
NEWL5-04		2:15		
NEWL6-04		2:16		
NEWL7-04		2:17		
NEWL8-03		2:19		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

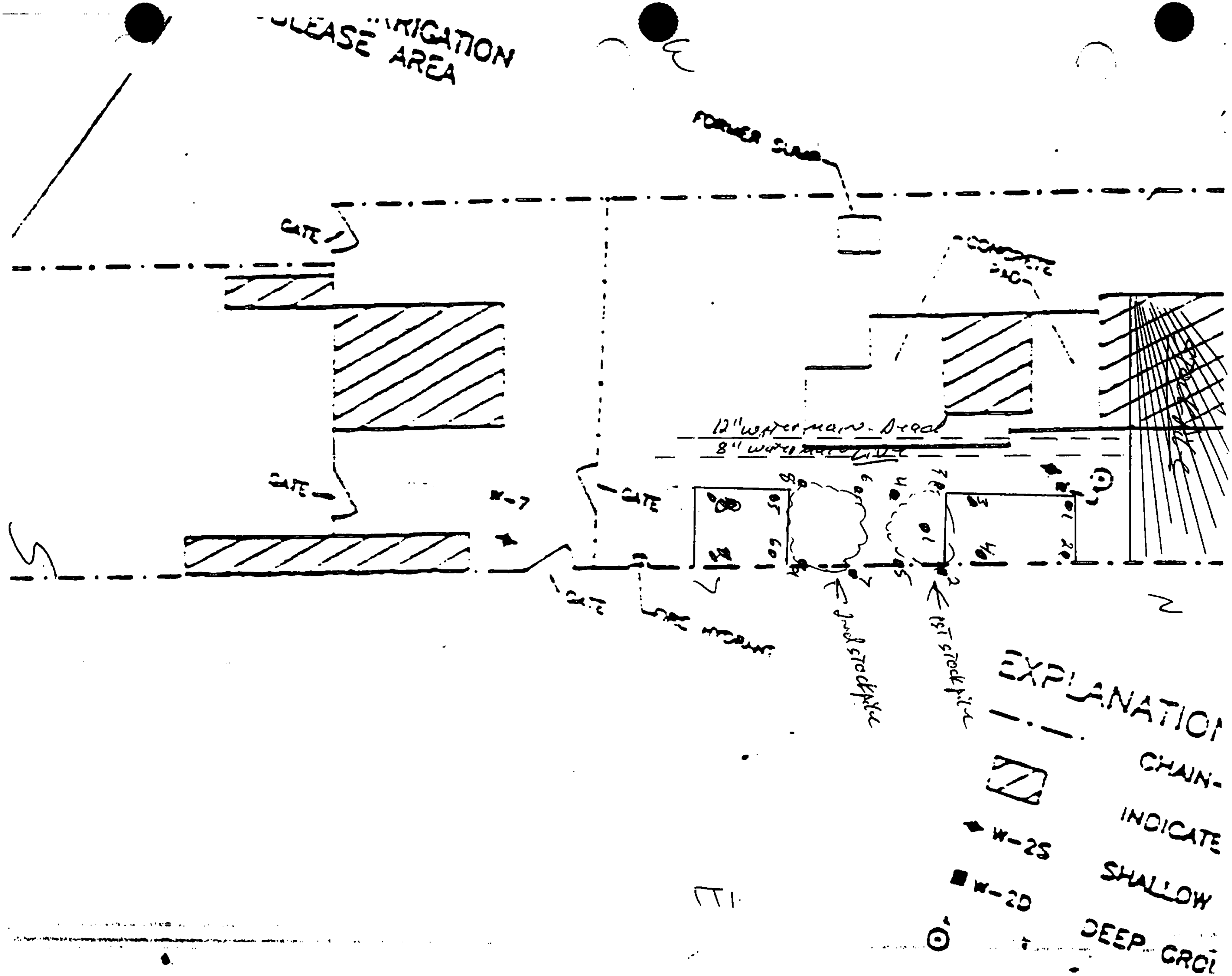
DOCUMENTATION

SAMPLE SEALED YES/NO _____ TIME _____ SEALER

COC COMPLETED YES/NO _____ TIME _____ COC NO. _____ COMPLETED BY

LAB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

NEWL = North East of Water Line.



LEASE AREA
IRRIGATION
FORMER SLAB
GATE
CONCRETE PAD
12" water main
8" water line
W-7
GATE
FIRE HYDRANT
2nd stockpile
1st stockpile
EXPLANATION
CHAIN-
INDICATE
W-2S
SHALLOW
W-2D
DEEP GRO

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO _____
PAGE ___ OF ___

PROJECT NAME Woodstock Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830 88 MAJOR TASK 2456 SUBTASK 22
DATE 1-9-93 SAMPLERS John Dolan - Greg Koester

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ✓ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
NEWL9 -03	n/a		1 Pint	Preliminary -
NEWL10 -05				
NEWL11 -04				
NEWL12 -03				
NEWL13 -03				
NEWL14 -03				
NEWL15 -03				
NEWL16 -04				

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED YES/NO _____ TIME GAK SEALER
COC COMPLETED YES/NO _____ TIME 5751/5752 COC NO. GAK COMPLETED BY
AB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830 88 MAJOR TASK 2456 SUBTASK 22
DATE 07-09-93 SAMPLERS John Dolan - Greg Koester

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ✓ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
SPPS10 -	n/a		1 Pint	Preliminary -
SPPS11 -				
SPPS12 -				
SPPS13 -				
SPPS14 -				
SPPS15 -				
SPPS16 -				
SPPS17 -				

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED YES/NO _____ TIME GAK SEALER
COC COMPLETED YES/NO _____ TIME 5752 COC NO. GAK COMPLETED BY
AB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830.04 MAJOR TASK 2456 SUBTASK 22
DATE 2-19-97 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
NEWL17-05	N/A	7:20	1 Pint	Preliminary -
NEWL18-05		7:21		
NEWL19-05		7:22		
NEWL20-04		7:23		
NEWL21-04		7:25		
NEWL22-06		7:26		
NWL23-02		7:27		
NEWL24-06		7:30		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

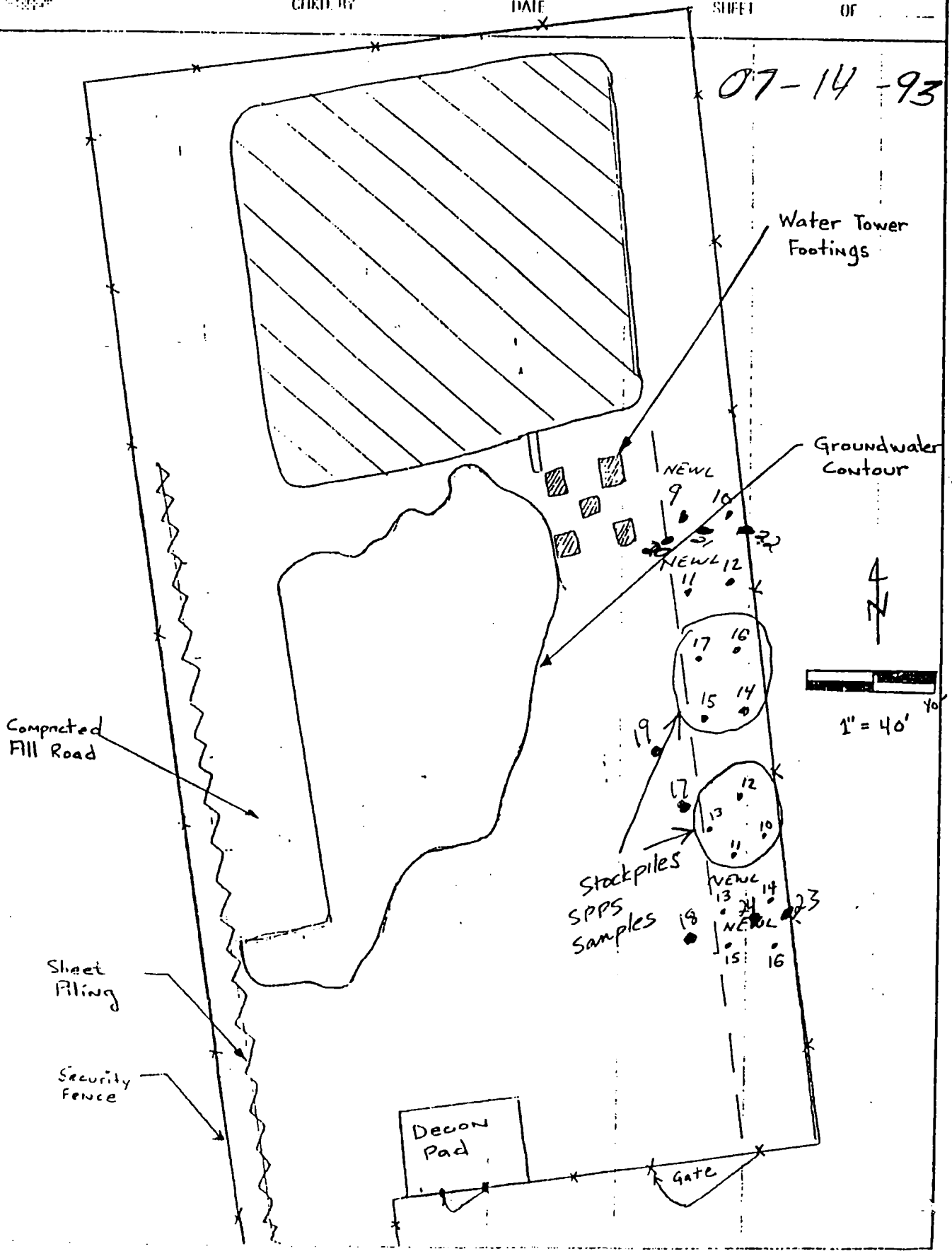
SAMPLE SEALED YES/NO 8:40 TIME [illegible] SEALER
COC COMPLETED YES/NO 8:50 TIME 5753 COC NO [illegible] COMPLETED BY
ANALYSIS REQUEST COMPLETED ___ TIME ___ AR NO. ___ COMPLETED BY

NEWL = North East of water line

BURLINGTON ENVIRONMENTAL

PROJECT # | PROJECT NAME
DATE | CLIENT | BY
CHKD BY | DATE | SHEET | OF

07-14-93



BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830 MAJOR TASK 2456 SUBTASK 22
DATE 7-23-93 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
WSWL 25 -05	WL	1150	1 Pint	Preliminary -
26 -05		1150		
27 -04		1155		
28 -04		1155		
29 -02		1200		
30 -06		1200		
31 -06		1205		
32 -06	↓	1205	↓	↓

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED YES/NO 1245 TIME JD SEALER
COC COMPLETED YES/NO 1245 TIME 5844 COC NO. GAK COMPLETED BY
ANALYSIS REQUEST COMPLETED _____ TIME _____ LAB NO. _____ COMPLETED BY

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830 MAJOR TASK 2456 SUBTASK 22
DATE 7-23-93 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
NEWL 33-05	N/A	1205	1 Pint	Preliminary -
34-05		1205		
35-05		1210		
36-06		1210		
37-03		1211		
38-06		1212		
39-06		1213		
40-05		1215		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES)/NO 1245 TIME J.D. SEALER
COC COMPLETED (YES)/NO 1245 TIME 5844 5845 COC NO. GAK COMPLETED BY
ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO _____
PAGE ___ OF ___

PROJECT NAME Woods-Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830 MAJOR TASK 2456 SUBTASK 22
DATE 7-23-93 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
NEWL 41-02	n/a	1215	1 Pint	Preliminary -
42-04		1215		
43-06		1220		
44-06		1220		
~~45-~~				
~~46-~~				
~~47-~~				
~~48-~~				

44 is duplicate for 43

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

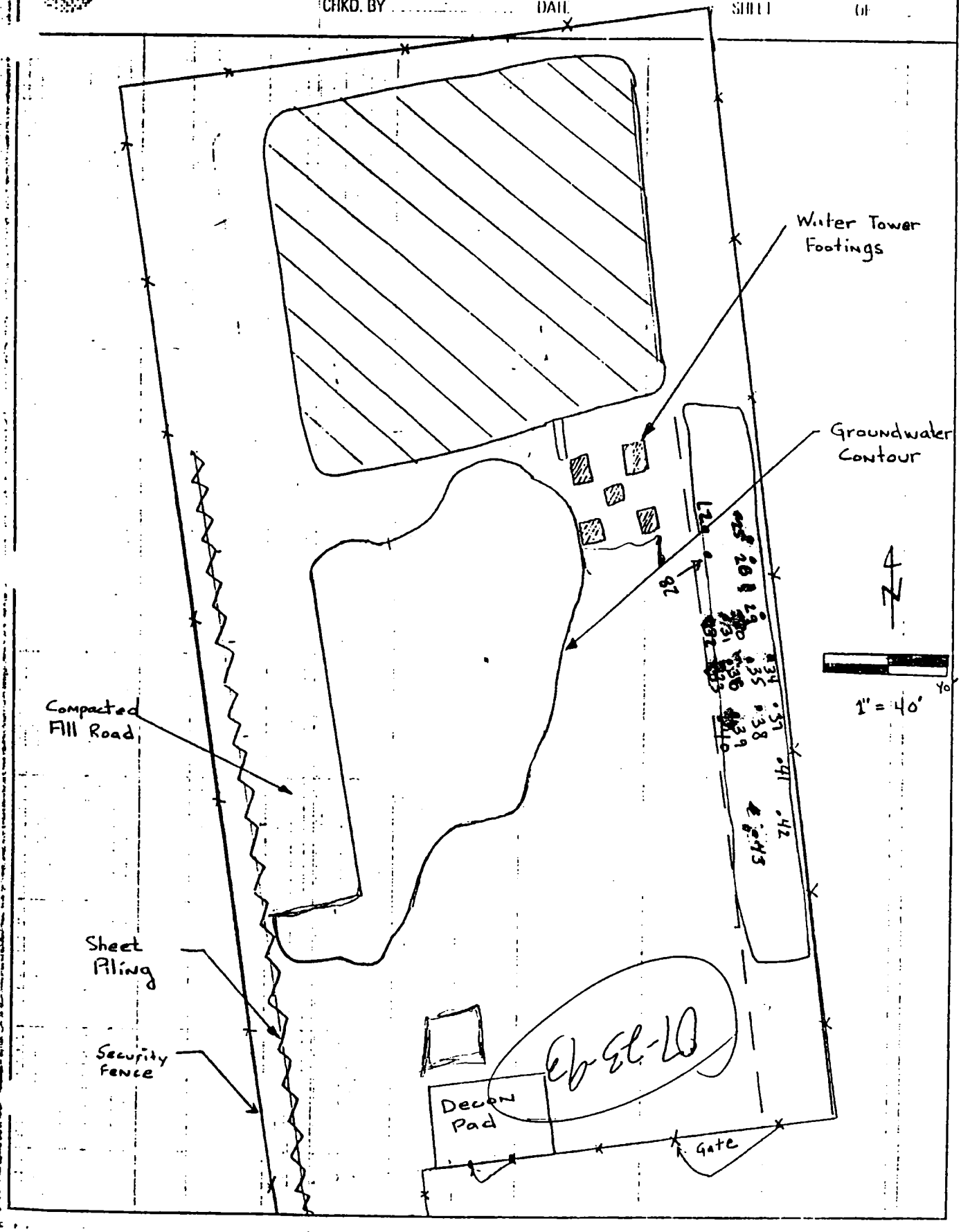
SAMPLE SEALED (YES)/NO 1245 TIME JD SEALER
COC COMPLETED (YES)/NO _____ TIME 5845 COC NO. GAK COMPLETED BY
ANALYSIS REQUEST COMPLETED _____ TIME _____ LAB NO. _____ COMPLETED BY

BURLINGTON ENVIRONMENTAL

PROJECT # PROJECT NAME

DATE CLIENT BY

CHKD. BY DATE SHEET OF



BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SU _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830 MAJOR TASK 2456 SUBTASK 22
DATE 07-26-93 SAMPLERS Jim Dolan / G. Koester

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ✓ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

	SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
WSS	117 - 03	N/A	14:10	1 Pint	Preliminary -
WSS	118 - 03		14:10		
WSS	119 - 03		14:11		
WSS	120 - 03		1412		
WSS	121 - 03		1414		
WSS	122 - 03		1415		
WSS	123 - 03		1415		
WSS	124 - 03		1416		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES) / NO JMD TIME 304 SEALER
COC COMPLETED (YES) / NO 3.04 TIME 3831 COC NO. JMD COMPLETED BY
LAB ANALYSIS REQUEST COMPLETED 321 TIME ___ LAR NO. ___ COMPLETED BY

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830 88 MAJOR TASK 2456 SUBTASK 22
DATE 7-26-93 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
USS 125-04	N/A	1416	1 Pint	Preliminary -
126-04		1418		
127-04		1419		
128-04		1420		
129-04		1420		
130-04		1421		
31-04		1423		
32-05	↓	1425	↓	↓

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES)/NO 321 TIME 5631 SEALER JMB
COC COMPLETED (YES)/NO 3:21 TIME 5632 COC NO. JMB COMPLETED BY
AB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 28830866 MAJOR TASK 2456 SUBTASK 22
DATE 7/26/93 SAMPLERS Jim Dolan

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ✓ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

	SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
VSS	133- 04	N/A	1428	1 Pint	Preliminary -
VSS	134- 04		1428		
VSS	135- 03		1430		
VSS	136- 05		1430		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED YES/NO 3-21 TIME JMD SEALER
COC COMPLETED YES/NO 3-21 TIME 1552 COC NO. JMD COMPLETED BY
LAB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

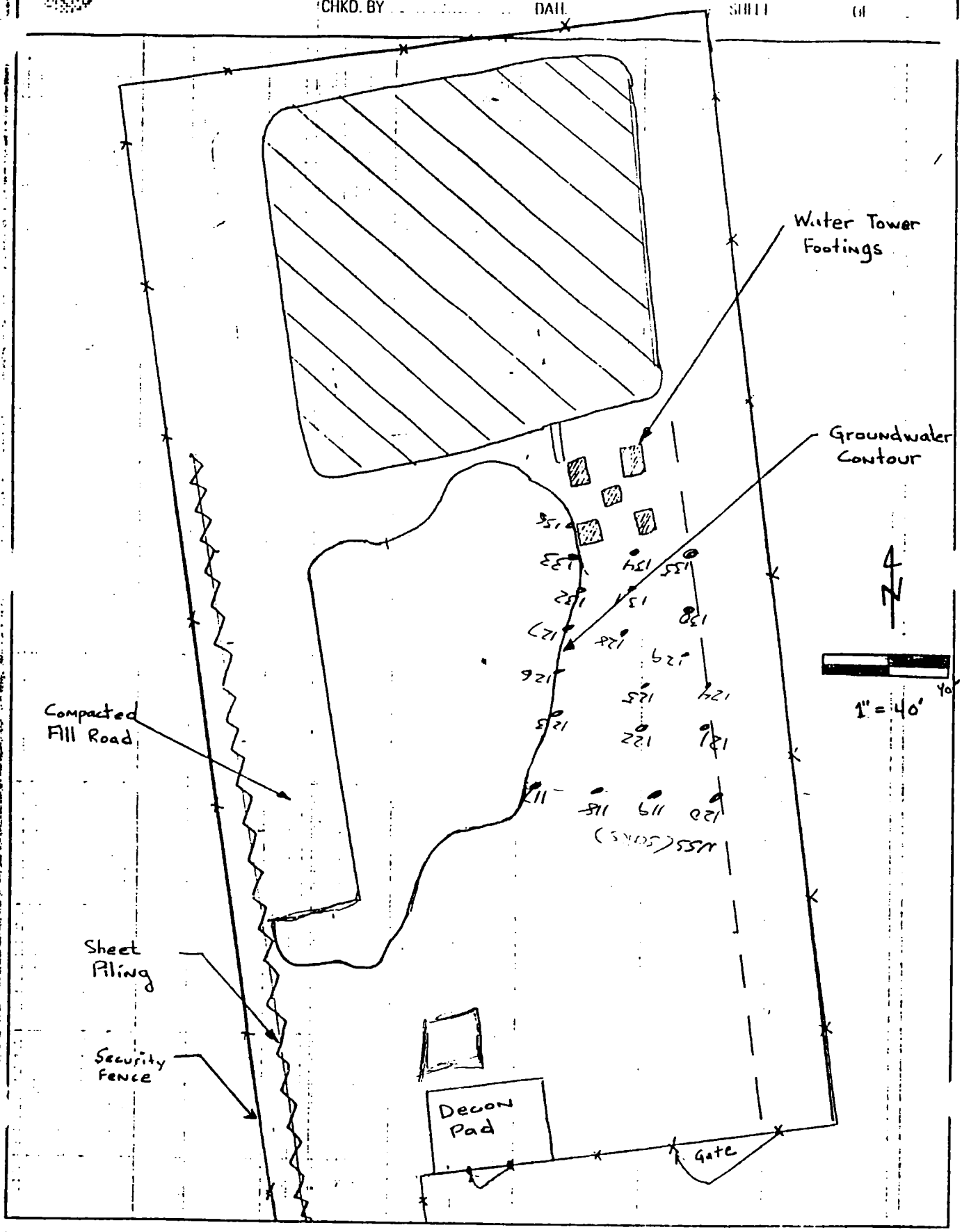
VSS = North Side Survey

BURLINGTON ENVIRONMENTAL

PROJECT # PROJECT NAME

DATE 7-26-93 CLIENT

CHKD. BY DATE SHEET OF



BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries Site SAMPLE LOCATION NO. _____
PROJECT NO. 128830.88 MAJOR TASK 7856 SUBTASK _____
DATE 7-28-93 SAMPLERS JWD / GAK

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ✓ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
45-03	07:30			
46-06	07:32			
47-04	07:34			
48-02	07:36			
49-05	07:38			
50-02	07:40			
51-04	07:42			
52-03	07:44			

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES) NO 8:13 TIME _____ SEALER
COC COMPLETED (YES) NO 8:13 TIME _____ COC NO. _____ COMPLETED BY
AB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries Site SAMPLE LOCATION NO. _____
PROJECT NO. 12883088 MAJOR TASK 7856 SUBTASK _____
DATE 7-28-93 SAMPLERS JMD / GAK

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB V BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
NOW 33-05		07:46		
34-03		07:48		
35-04		07:50		
36-04		07:52		
37-05		07:54		
38-04		07:56		
39-04		07:58		
40-03		08:00		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES)/NO 8:15 TIME JMD SEALER
COC COMPLETED (YES)/NO 8:15 TIME JMD COC NO. _____ COMPLETED BY
AB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries Site SAMPLE LOCATION NO. _____
PROJECT NO. 12883088 MAJOR TASK 7856 SUBTASK _____
DATE 7-28-93 SAMPLERS JWD / GAK

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB V BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
61-06		08:02		
62-06		08:04		
63-06		08:06		
64-06		08:08		

64 is Duplicate of 63.

INSTRUMENT READINGS

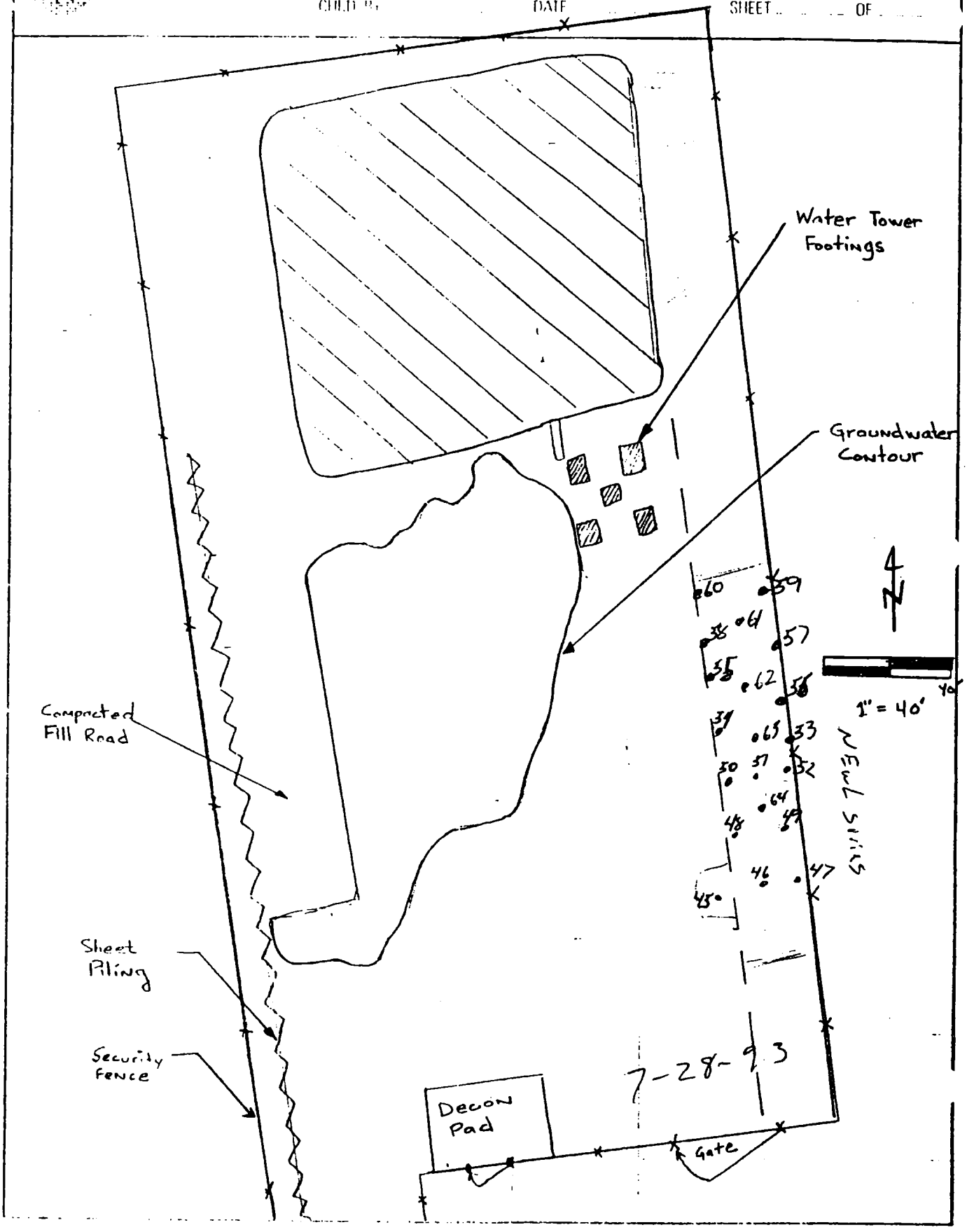
TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED YES/NO 8:13 TIME _____ SEALER _____
COC COMPLETED YES/NO 8:13 TIME 38-34 COC NO. _____ COMPLETED BY _____
AB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

BURLINGTON ENVIRONMENTAL

PROJECT # | PROJECT NAME Woods Industries
DATE 7-28-93 | CLIENT | BY
CHKD BY | DATE | SHEET | OF



BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830 MAJOR TASK 2456 SUBTASK 22
DATE 2-29-93 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ✓ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
wd65-07	n/a	3:27	1 Pint	Preliminary -
wd-66-05		3:29		
wd67-07		3:31		
wd68-05		3:33		
wd69-07		3:35		
wd70-05		3:37		
wd -07		3:39		
wd 2-05	↓	3:41	↓	↓

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES)/NO 4:00 TIME [illegible] SEALER
COMPLETED YES/NO 4:00 TIME 5855 COC NO. [illegible] COMPLETED BY
ANALYSIS REQUEST COMPLETED _____ TIME _____ LAB NO. _____ COMPLETED BY

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO ____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. ____
PROJECT NO. 12BR3088 MAJOR TASK 2456 SUBTASK 22
DATE 7-29-93 SAMPLERS ____

SAMPLING METHOD ____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ✓ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

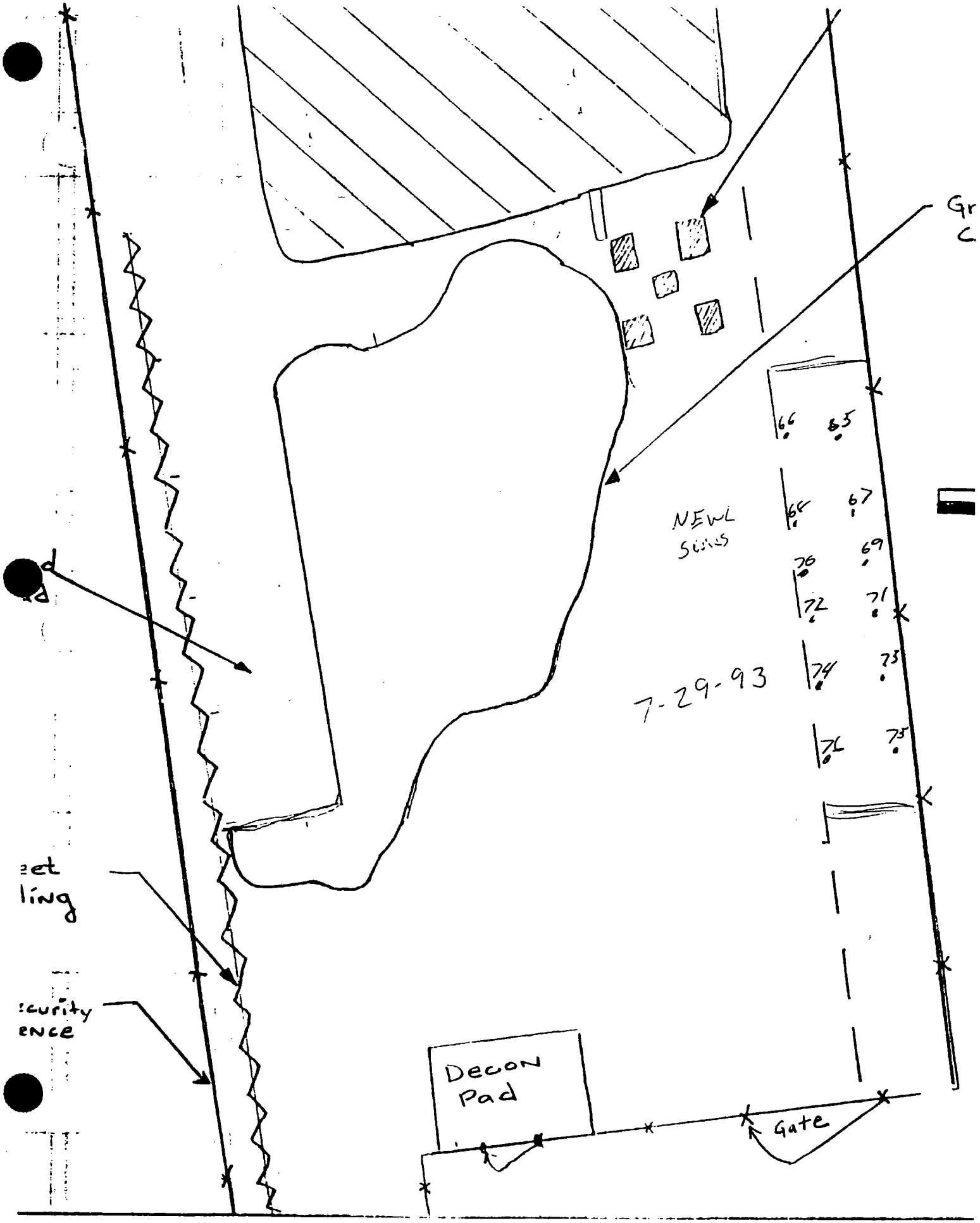
SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
vent 73-07	ditto	3:43	1 Pint	Preliminary -
vent-74-05		3:45		
vent-75-07		3:47		
vent 76-05		3:49		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED YES/NO 4:00 TIME JMP SEALER
COMPLETED YES/NO 4:00 TIME 5855 COC NO. JMP COMPLETED BY
ANALYSIS REQUEST COMPLETED ____ TIME ____ LAB NO. ____ COMPLETED BY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APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O.m Box 330
Columbia, IL 62236-0330
ATTN : David Eagleton

Certificate of Analysis

Work Order# : 93-05-514
DATE RECEIVED : 05/12/93
DATE OF REPORT: 05/19/93
CLIENT JOB ID : 12883088 Woods Industries

Work ID : -
Taken By : Client
Transported by: Laucks
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date
01	POV-1 Woods Industries	05/11/93

Unless otherwise instructed all samples will be discarded on 07/02/93

Respectfully submitted,
TR Applied Science, Inc.

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # 93-05-514

TESTS PERFORMED AND RESULTS:

Analyte	Units	01
Total Solids	%	85.7
WTPH-418.1	mg/kg DB	19000.

A division of
Laucks
Testing Laboratories, Inc.

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Certificate of Analysis

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN : David Eagleton

Work Order# : 93-05-790
DATE RECEIVED : 05/21/93
DATE OF REPORT: 05/27/93

Work ID : -
Taken By : Client
Transported by: Laucks
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description
01	PV16-01

Unless otherwise instructed all samples will be discarded on 07/11/93

Respectfully submitted,
TR Applied Science, Inc.

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # 93-05-790

TESTS PERFORMED AND RESULTS:

Analyte	Units	01
Total Solids	%	83.9
WTPH-418.1	mg/kg DB	73.

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN : David Eagleton

Certificate of Analysis

Work Order# : 93-05-894
DATE RECEIVED : 05/25/93
DATE OF REPORT: 06/01/93

Work ID : -
Taken By : Client
Transported by: GH 1183012897
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date		Sample Description	Collection Date
01	PNE25-01	05/22/93	06	PNE45-01	05/22/93
02	PNE27-03	05/22/93	07	PNE46-03	05/22/93
03	PNE31-03	05/22/93	08	PNE47-03	05/22/93
04	PNE35-03	05/22/93	09	PNE48-03	05/22/93
05	PNE36-03	05/22/93	10	PNE49-05	05/22/93

KEY

< indicates "less than"

Unless otherwise instructed all samples will be discarded on 07/16/93

Respectfully submitted,
TR Applied Science, Inc.

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # 93-05-894

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
Total Solids	%	86.7	85.8	80.3	84.2
WTPH-418.1	mg/kg DB	18000.	520.	< 20.	370.

Analyte	Units	05	06	07	08
Total Solids	%	88.5	95.6	85.6	87.3
WTPH-418.1	mg/kg DB	73.	250.	5100.	220.

Analyte	Units	09	10
Total Solids	%	82.5	88.7
WTPH-418.1	mg/kg DB	220.	1700.

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN : David Eagleton

Certificate of Analysis

Work Order# : 93-05-940
DATE RECEIVED : 05/26/93
DATE OF REPORT: 06/01/93

Work ID : -
Taken By : Client
Transported by: GH 1157614854
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date		Sample Description	Collection Date
01	PNE50-05	05/24/93	03	PNE59-04	05/24/93
02	PNE51-05	05/24/93			

Unless otherwise instructed all samples will be discarded on 07/16/93

Respectfully submitted,
TR Applied Science, Inc.

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # 93-05-940

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03
Total Solids	%	95.3	96.3	96.3
WTPH-418.1	mg/kg DB	25.	250.	39.

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN : David Eagleton

Certificate of Analysis

Work Order# : 93-05-A00
DATE RECEIVED : 05/28/93
DATE OF REPORT: 06/03/93

Work ID : TPH Analysis
Taken By : Client
Transported by: GH
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date		Sample Description	Collection Date
01	8WP-1	05/26/93	02	8WP-2	05/26/93

KEY

< indicates "less than"

Unless otherwise instructed all samples will be discarded on 07/18/93

Respectfully submitted,
TR Applied Science, Inc.

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # 93-05-A00

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02
Total Solids	%	88.7	91.0
WTPH-418.1	mg/kg DB	23.	< 20.

Laucks Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

CLIENT: T.R. Applied Science, Inc.
1106 Ledwich
Yakima, WA 98902

ATTN : Tamis Root

Certificate of Analysis

Work Order# : 93-05-A00
DATE RECEIVED : 05/28/93
DATE OF REPORT: 06/03/93

Work ID : TPH Analysis
Taken By : Client
Transported by: GH
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date
01	8WP-1	05/26/93
02	8WP-2	05/26/93

FLAGGING:

The flag "U" indicates the analyte of interest was not detected, to the limit of detection indicated.

ATTACHMENTS:

Following presentation of sample results, the following appendices are attached to this report:

Appendix A: Method Blank Report
Appendix B: MS/Dup and Duplicate Report
Appendix C: Chain-of-Custody

Laucks 85 YEARS
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

CLIENT : T.R. Applied Science, Inc.

Certificate of Analysis

Work Order# : 93-05-A00

Unless otherwise instructed all samples will be discarded on 07/17/93

Respectfully submitted,
Laucks Testing Laboratories, Inc.

J. M. Owens

Laucks 85 YEARS
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

CLIENT : T.R. Applied Science, Inc.

Certificate of Analysis

Work Order # 93-05-A00

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02
Total Solids	%	88.7	91.0
WTPH-418.1	mg/kg DB	23.	20. U

Laucks 85
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

APPENDIX A

Method Blank Report

Laucks 85 YEARS
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Quality Control Report
Method Blanks for Work Order 9305A00

Blank Name	Samples Verified	Test Description	Result	Units	Control Limit
B060193_OG_S01	1-2	WTPH 418.1	20 U	mg/kg DB	40

A method blank can validate more than one analyte on more than one work order. The method blanks in this report may validate analytes not determined on this work order, but nonetheless determined in the associated blank.

Because they validate more than one work order, method blank results are not always reported in the same concentration units used for sample results.

* = blank exceeds control limit

Laucks Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

APPENDIX B

MS/Dup and Duplicate Report

Laucks 85 Years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Quality Control Report
Duplicate Report for Work Order 9305A00

Duplicate Name	Sample Fractions Verified	Sample	Analyte	RPD	Limit
D060193_TSS04	1-2	9305A00-02	Total Solids	0.66	30

* = Value Exceeds Control Limit
RPD = Relative Percent Difference
L = RPD control limit for this analyte is 5x the detection limit. The value appearing in the RPD column is the absolute difference of the duplicates.
-1 for recovery value indicates that recovery could not be calculated

A duplicate pair can validate the results for more than one work order. For this reason, results for analytes not requested on this work order may appear in this duplicate report.

Laucks Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Quality Control Report
Matrix Spike/Duplicate Report for Work Order 9305A00

MS/Dupe Name	Sample Fractions Verified	Sample	Analyte	RPD	MS Recov	Cont. Limits RPD	LCL	LCL
M060193_OGS01	1-2	9305973-02	WTPH 418.1	2.7 L	90	100	51	122

* = Value Exceeds Control Limit
RPD = Relative Percent Difference
LCL = Lower Control Limit
UCL = Upper Control Limit
L = RPD control limit for this analyte is 5x the detection limit. The value appearing in the RPD column is the absolute difference of the duplicates.
-1 for recovery value indicates that recovery could not be calculated

An MS/Duplicate pair can validate the results for more than one work order. For this reason, results for analytes not requested on this work order may appear in this MS/Duplicate report.

APPLIED SCIENCE

mathes

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-

Chemistry, Microbiology, and Technical Services

copy
TPH - results
for Test Pits
8080

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN : David Eagleton

Certif

Work Orde
DATE RECEI
DATE OF RE

Work ID : Woods Industry
Taken By : Client
Transported by: GH 1183011929
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date		Sample Description	Collection Date
01	TPNE1-08	06/08/93	02	TPNE51-08	06/08/93

Unless otherwise instructed all samples will be discarded on 07/25/93

Respectfully submitted,
TR Applied Science, Inc.

Tamis Root

Tamis Root
Manager

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # 93-06-361

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02
Total Solids	%	95.5	95.8
WTPH-418.1	mg/kg DB	90.	73.

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN :

Certificate of Analysis

Work Order# : T3-06-205
DATE RECEIVED : 06/29/93
DATE OF REPORT:
CLIENT JOB ID : Proj# 12883088, task 7856

Work ID : Woods Industries-TPH
Taken By : Client
Transported by: Client
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date		Sample Description	Collection Date
01	SPPS-1	06/29/93	04	SPPS-4	06/29/93
02	SPPS-2	06/29/93	05	SPPS-5	06/29/93
03	SPPS-3	06/29/93			

Unless otherwise instructed all samples will be discarded on 08/14/93

Respectfully submitted,
Laucks Testing Laboratories, Inc.
TR Applied Science Division

Tamis Root

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # T3-06-205

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
WTPH-418.1	mg/kg AR	310	< 20	< 20	230

Analyte	Units	05
WTPH-418.1	mg/kg AR	130

APPLIED SCIENCE

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Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN :

Certificate of Analysis

Work Order# : T3-06-206
DATE RECEIVED : 06/29/93
DATE OF REPORT: 06/30/93
CLIENT JOB ID : Proj# 12883088, task 7856

Work ID : Woods Industries-TPH
Taken By : Client
Transported by: Client
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date		Sample Description	Collection Date
01	SPPS-6	06/29/93	07	NEWL3-05	06/29/93
02	SPPS-7	06/29/93	08	NEWL4-05	06/29/93
03	SPPS-8	06/29/93	09	NEWL5-04	06/29/93
04	SPPS-9	06/29/93	10	NEWL6-04	06/29/93
05	NEWL-05	06/29/93	11	NEWL7-04	06/29/93
06	NEWL2-04	06/29/93	12	NEWL8-07	06/29/93

Unless otherwise instructed all samples will be discarded on 08/14/93

Respectfully submitted,
Laucks Testing Laboratories, Inc.
TR Applied Science Division

Tamis Root

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # T3-06-206

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
WTPH-418.1	mg/kg DB	61.	116.	104.	153.

Analyte	Units	05	06	07	08
WTPH-418.1	mg/kg DB	< 20.	22.	< 20.	88.

Analyte	Units	09	10	11	12
WTPH-418.1	mg/kg DB	87.	58.	46.	127.

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Certificate of Analysis

CLIENT: Burlington Environmental
210 West Sand Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN: David Eagleton

Work Order # T306205/T306206
DATE RECEIVED 6-29-93 / 6-30-93
DATE OF REPORT 8-6-93
CLIENT JOB ID PROJ# 12883088, TASK 7856

Work ID Woods Industries - TPH
Taken By Client
Transportation By Client
Type Soil

Client ID	Laboratory Identification	Total Petroleum Hydrocarbons 'As Received' mg/kg	Total Solids percent	Total Petroleum Hydrocarbons 'Dry Basis' mg/kg
SPPS-3	T306205-3	< 20	90	< 20
SPPS-4	T306205-4	230	95	240
SPPS-5	T306205-5	130	93	140
SPPS-6	T306206-1	61	85	72
SPPS-8	T306206-3	104	87	120

Respectfully submitted
Laucks Testing Laboratories, Inc.
TR Applied Science Division

Tamis Root

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN :

Certificate of Analysis

Work Order# : T3-07-045
DATE RECEIVED : 07/09/93
DATE OF REPORT: 08/17/93
CLIENT JOB ID : Proj# 12883088, task 7856

Work ID : Woods Industries Site
Taken By : Client
Transported by: Client
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date		Sample Description	Collection Date
01	NEWL10-03	07/09/93	09	SPPS10-	07/09/93
02	NEWL10-05	07/09/93	10	SPPS11-	07/09/93
03	NEWL11-04	07/09/93	11	SPPS12-	07/09/93
04	NEWL12-03	07/09/93	12	SPPS13-	07/09/93
05	NEWL13-03	07/09/93	13	SPPS14-	07/09/93
06	NEWL14-03	07/09/93	14	SPPS15-	07/09/93
07	NEWL15-03	07/09/93	15	SPPS16-	07/09/93
08	NEWL16-04	07/09/93	16	SPPS17-	07/09/93

Unless otherwise instructed all samples will be discarded on 07/12/93

Respectfully submitted,
Laucks Testing Laboratories, Inc.
TR Applied Science Division

Tamis Root

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # T3-07-045

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
Arsenic in Soil by ICP-MS	mg/kg AR	1.4			
Lead in Soil by ICP-MS	mg/Kg AR	4.2			
WTPH-418.1, As Received	mg/kg AR	1,100	6.5	390	5,100

Analyte	Units	05	06	07	08
Arsenic in Soil by ICP-MS	mg/kg AR	3.0	13.8	28.	
Lead in Soil by ICP-MS	mg/Kg AR	2.5	62.	570.	
WTPH-418.1, As Received	mg/kg AR	160	250	3,700	21

Analyte	Units	09	10	11	12
WTPH-418.1, As Received	mg/kg AR	160	17,000	2,600	500

Analyte	Units	13	14	15	16
WTPH-418.1, As Received	mg/kg AR	3,900	4,100	150	5,000

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN :

Certificate of Analysis

Work Order# : T3-07-075
DATE RECEIVED : 07/14/93
DATE OF REPORT: 08/17/93
CLIENT JOB ID : Proj# 12883088, task 7856

Work ID : Woods Industries
Taken By : Client
Transported by: Client
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date		Sample Description	Collection Date
01	NEWL17-05	07/14/93	05	NEWL21-04	07/14/93
02	NEWL18-05	07/14/93	06	NEWL22-06	07/14/93
03	NEWL19-05	07/14/93	07	NEWL23-02	07/14/93
04	NEWL20-06	07/14/93	08	NEWL24-06	07/14/93

Unless otherwise instructed all samples will be discarded on 08/14/93

Respectfully submitted,
Laucks Testing Laboratories, Inc.
TR Applied Science Division

Tamis Root

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # T3-07-075

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
WTPH-418.1, As Received	mg/kg AR	< 20	< 20	< 20	2,200

Analyte	Units	05	06	07	08
WTPH-418.1, As Received	mg/kg AR	< 20	420	28	2,900

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN :

Certificate of Analysis

Work Order# : T3-07-141
DATE RECEIVED : 07/25/93
DATE OF REPORT: 07/30/93
CLIENT JOB ID : Proj# 12683066, task 7656

Work ID : WTPH 418.1
Taken By : Client
Transported by: Client
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date		Sample Description	Collection Date
01	NEWL 25-05	07/23/93	11	NEWL 35-05	07/23/93
02	NEWL 26-05	07/23/93	12	NEWL 36-06	07/23/93
03	NEWL 27-04	07/23/93	13	NEWL 37-03	07/23/93
04	NEWL 28-04	07/23/93	14	NEWL 38-06	07/23/93
05	NEWL 29-02	07/23/93	15	NEWL 39-06	07/23/93
06	NEWL 30-06	07/23/93	16	NEWL 40-05	07/23/93
07	NEWL 31-06	07/23/93	17	NEWL 41-02	07/23/93
08	NEWL 32-06	07/23/93	18	NEWL 42-04	07/23/93
09	NEWL 33-05	07/23/93	19	NEWL 43-06	07/23/93
10	NEWL 34-04	07/23/93	20	NEWL 44-06	07/23/93

Notice:

Sample will be returned to site.

Unless otherwise instructed all samples will be discarded on 07/27/93

Respectfully submitted,
Laucks Testing Laboratories, Inc.
TR Applied Science Division

Tamis Root

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # T3-07-141

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
WTPH-418.1, As Received	mg/kg AR	1,000	1,600	33	30

Analyte	Units	05	06	07	08
WTPH-418.1, As Received	mg/kg AR	45	23,000	14,000	12,000

Analyte	Units	09	10	11	12
WTPH-418.1, As Received	mg/kg AR	5,300	18,000	8,900	5,900

Analyte	Units	13	14	15	16
WTPH-418.1, As Received	mg/kg AR	190	2,900	5,700	4,000

Analyte	Units	17	18	19	20
WTPH-418.1, As Received	mg/kg AR	120	76	4,300	3,700

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN :

Certificate of Analysis

Work Order# : T3-07-147
DATE RECEIVED : 07/26/93
DATE OF REPORT: 07/27/93
CLIENT JOB ID : Proj# 12883088, task 7856

Work ID : WTPH 418.1 Analyses
Taken By : Client
Transported by: Client
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date		Sample Description	Collection Date
01	NSS 120-	07/26/93	03	NSS 130-	07/26/93
02	NSS 121-	07/26/93	04	NSS 135-	07/26/93

Notice: Samples will be returned to site.

Unless otherwise instructed all samples will be discarded on 07/28/93

Respectfully submitted,
Laucks Testing Laboratories, Inc.
TR Applied Science Division

Tamis Root

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # T3-07-147

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
WTPH-418.1, As Received	mg/kg AR	65	50	36	36

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN :

Certificate of Analysis

Work Order# : T3-07-150
DATE RECEIVED : 07/28/93
DATE OF REPORT: 07/29/93
CLIENT JOB ID : Proj# 12883088, task 7856

Work ID : WTPH 418.1 Analyses
Taken By : Client
Transported by: Client
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date		Sample Description	Collection Date
01	NEWL 45-03	07/28/93	11	NEWL 55-04	07/28/93
02	NEWL 46-06	07/28/93	12	NEWL 56-04	07/28/93
03	NEWL 47-04	07/28/93	13	NEWL 57-05	07/28/93
04	NEWL 48-02	07/28/93	14	NEWL 58-04	07/28/93
05	NEWL 49-05	07/28/93	15	NEWL 59-04	07/28/93
06	NEWL 50-02	07/28/93	16	NEWL 60-03	07/28/93
07	NEWL 51-04	07/28/93	17	NEWL 61-06	07/28/93
08	NEWL 51-03	07/28/93	18	NEWL 62-06	07/28/93
09	NEWL 53-05	07/28/93	19	NEWL 63-06	07/28/93
10	NEWL 54-03	07/28/93	20	NEWL 64-06	07/28/93

Unless otherwise instructed all samples will be discarded on 07/30/93

Respectfully submitted,
Laucks Testing Laboratories, Inc.
TR Applied Science Division

Tamis Root

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # T3-07-150

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
WTPH-418.1, As Received	mg/kg AR	907	180	32	84

Analyte	Units	05	06	07	08
WTPH-418.1, As Received	mg/kg AR	660	430	640	290

Analyte	Units	09	10	11	12
WTPH-418.1, As Received	mg/kg AR	2,700	540	850	2,100

Analyte	Units	13	14	15	16
WTPH-418.1, As Received	mg/kg AR	1,600	910	15,000	9,900

Analyte	Units	17	18	19	20
WTPH-418.1, As Received	mg/kg AR	2,200	2,000	1,400	1,400

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN :

Certificate of Analysis

Work Order# : T3-07-160
DATE RECEIVED : 07/29/93
DATE OF REPORT: 07/30/93
CLIENT JOB ID : Proj# 12883088, task 7856

Work ID : WTPH 418.1 Analyses
Taken By : Client
Transported by: Client
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date		Sample Description	Collection Date
01	NEWL 65-07	07/29/93	07	NEWL 71-07	07/29/93
02	NEWL 66-05	07/29/93	08	NEWL 72-05	07/29/93
03	NEWL 67-07	07/29/93	09	NEWL 73-07	07/29/93
04	NEWL 68-05	07/29/93	10	NEWL 74-05	07/29/93
05	NEWL 69-07	07/29/93	11	NEWL 75-07	07/29/93
06	NEWL 70-05	07/29/93	12	NEWL 76-05	07/29/93

Unless otherwise instructed all samples will be discarded on 07/31/93

Respectfully submitted,
Laucks Testing Laboratories, Inc.
TR Applied Science Division

Tamis Root

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # T3-07-160

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
WTPH-418.1, As Received	mg/kg AR	9,300	4,600	3,900	7,200

Analyte	Units	05	06	07	08
WTPH-418.1, As Received	mg/kg AR	2,300	830	71	710

Analyte	Units	09	10	11	12
WTPH-418.1, As Received	mg/kg AR	620	560	270	1,700

APPENDIX F-4

Pesticide Analytical Results in TPH Excavation

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T305088

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
PV11-01	01	05/18/93	05/18/93	05/18/93	4	35	25	87	
PV12-01	02	05/18/93	05/18/93	05/18/93	(1	(1	(1	(1	
PV13-01	03	05/18/93	05/18/93	05/18/93	2	1	(1	2	
PV14-01	04	05/18/93	05/18/93	05/18/93	(1	1	(1	2	
PV15-01	05	05/18/93	05/18/93	05/18/93	(1	(1	(1	(1	
PV16-01	06	05/18/93	05/18/93	05/18/93	1	2	1	3	
PV17-01	07	05/18/93	05/18/93	05/18/93	(1	1	(1	1	
PV18-01	08	05/18/93	05/18/93	05/18/93	(1	1	(1	(1	
VL-1	09	05/18/93	05/18/93	05/18/93	4,400	740	470	7,300	
VSL-3	10	05/18/93	05/18/93	05/18/93	4	8	27	33	22
VSL-7	11	05/18/93	05/18/93	05/18/93	1	51	540	260	54
VSL-5	12	05/18/93	05/18/93	05/18/93	1	38	120	83	23
PB2-74-9.5	13	05/19/93	05/19/93	05/19/93	3	(1	1	3	
PB2-75-10	14	05/19/93	05/19/93	05/19/93	1	(1	1	2	
PB2-76-10	15	05/19/93	05/19/93	05/19/93	(1	(1	1	2	
PB2-77-10	16	05/19/93	05/19/93	05/19/93	4	2	8	4	
PB2-78-10	17	05/19/93	05/19/93	05/19/93	23	14	330	87	
PB2-79-10	18	05/19/93	05/19/93	05/19/93	10	38	170	230	
PB2-124-9.5	19	05/19/93	05/19/93	05/19/93	3	(1	1	3	
PB80-05	20	05/20/93	05/20/93	05/20/93	(1	3	(1	5	

(= less than
) = greater than
)) = much greater than
M = quantitated with matrix interference

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1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T305111

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
PNE11-03	01	05/21/93	05/21/93	05/21/93	< 1	< 1	< 1	< 1	< 0.4
PNE12-03	02	05/21/93	05/21/93	05/21/93	< 1	< 1	< 1	< 1	< 0.4
PNE56-02	03	05/21/93	05/21/93	05/21/93	2	1	< 1	2	< 0.4
PNE13-01	04	05/21/93	05/21/93	05/21/93	< 1	< 1	1	4	0.4
PNE14-02	05	05/21/93	05/21/93	05/21/93	< 1	< 1	< 1	< 1	< 0.4
PNE15-03	06	05/21/93	05/21/93	05/21/93	1	1	2	10	< 0.4
PNE16-03	07	05/21/93	05/21/93	05/21/93	2	2	62	260	14
PNE17-01	08	05/21/93	05/21/93	05/21/93	< 1	< 1	< 1	1	< 0.4
PNE18-03	09	05/21/93	05/21/93	05/21/93	< 1	< 1	< 1	1	< 0.4
PNE19-03	10	05/21/93	05/21/93	05/21/93	1	1	1	3	< 0.4
PNE20-03	11	05/21/93	05/21/93	05/21/93	1	1	3	10	0.4
PNE21-01	12	05/21/93	05/21/93	05/21/93	< 1	1	1	6	< 0.4
PNE22-03	13	05/21/93	05/21/93	05/21/93	< 1	< 1	< 1	< 1	< 0.4
PNE23-03	14	05/21/93	05/21/93	05/21/93	< 1	< 1	< 1	1	< 0.4
PNE24-03	15	05/21/93	05/21/93	05/21/93	1	2	19	27	2
PNE25-01	16	05/22/93	05/22/93	05/22/93	87	6	18	200	5
PNE26-03	17	05/22/93	05/22/93	05/22/93	< 1	< 1	< 1	< 1	< 0.4
PNE27-03	18	05/22/93	05/22/93	05/22/93	< 1	1	1	7	< 0.4
PNE28-03	19	05/22/93	05/22/93	05/22/93	8	4	2	62	2
PNE29-01	20	05/22/93	05/22/93	05/22/93	< 1	1	1	8	0.7

< = less than
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M = quantitated with matrix interference

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1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T305118

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
PNE30-03	01	05/22/93	05/22/93	05/22/93	6	2	3	29	0.6
PNE31-03	02	05/22/93	05/22/93	05/22/93	(1	1	(1	2	(0.4
PNE32-03	03	05/22/93	05/22/93	05/22/93	(1	(1	1	1	(0.4
PNE33-01	04	05/22/93	05/22/93	05/22/93	13	1	2	26	0.4
PNE34-03	05	05/22/93	05/22/93	05/22/93	(1	(1	(1	(1	(0.4
PNE35-03	06	05/22/93	05/22/93	05/22/93	(1	(1	(1	1	(0.4
PNE36-03	07	05/22/93	05/22/93	05/22/93	13	5	8	35	5
PNE37-01	08	05/22/93	05/22/93	05/22/93	1	(1	(1	3	(0.4
PNE38-03	09	05/22/93	05/22/93	05/22/93	37	1	7	78	1
PNE39-03	10	05/22/93	05/22/93	05/22/93	1	1	2	12	(0.4
PNE40-03	11	05/22/93	05/22/93	05/22/93	(1	(1	(1	1	(0.4
PNE41-01	12	05/22/93	05/22/93	05/22/93	1	(1	(1	1	(0.4
PNE42-03	13	05/22/93	05/22/93	05/22/93	(1	(1	(1	(1	(0.4
PNE43-03	14	05/22/93	05/22/93	05/22/93	(1	(1	(1	(1	(0.4
PNE44-03	15	05/22/93	05/22/93	05/22/93	(1	(1	1	(1	(0.4
PNE45-01	16	05/22/93	05/22/93	05/22/93	4	79	75	(1	8
PNE47-03	17	05/22/93	05/22/93	05/22/93	3	1	2	4	(0.4
PNE47-03	18	05/22/93	05/22/93	05/22/93	19	9	18 M	84	(0.4
PNE48-03	19	05/22/93	05/22/93	05/22/93	12	2	3	59	1
PNE75-01	20	05/22/93	05/22/93	05/22/93	25	2	6	81	0.9

(= less than
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Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T305119

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
PNE49-05A	01	05/22/93	05/22/93	05/22/93	(1	(1	(1	2	(0.4
PNE49-05B	02	05/24/93	05/24/93	05/24/93	100	21	86	250	78
PNE50-05	03	05/24/93	05/24/93	05/24/93	(1	(1	(1	(1	(0.4
PNE51-05	04	05/24/93	05/24/93	05/24/93	11	5	22	48	16
PNE52-05	05	05/24/93	05/24/93	05/24/93	(1	(1	(1	(1	(0.4
PNE53-05	06	05/24/93	05/24/93	05/24/93	(1	(1	(1	(1	(0.4
PNE54-05	07	05/24/93	05/24/93	05/24/93	(1	1	(1	1	(0.4
PNE55-05	08	05/24/93	05/24/93	05/24/93	1	1	(1	6	(0.4
PNE56-04	09	05/24/93	05/24/93	05/24/93	(1	(1	10	6	2
PNE57-04	10	05/24/93	05/24/93	05/24/93	(1	(1	(1	(1	(0.4
PNE58-04	11	05/24/93	05/24/93	05/24/93	(1	(1	(1	(1	(0.4
PNE59-04	12	05/24/93	05/24/93	05/24/93	(1	1	18 M	11	1
PNE60-01	13	05/24/93	05/24/93	05/24/93	(1	(1	(1	(1	(0.4
PNE63-04	14	05/24/93	05/24/93	05/24/93	(1	(1	4	3	(0.4
PNE64-04	15	05/24/93	05/24/93	05/24/93	(1	(1	(1	(1	(0.4
PNE65-04	16	05/24/93	05/24/93	05/24/93	(1	(1	1	1	(0.4
PNE66-04	17	05/24/93	05/24/93	05/24/93	(1	(1	2	2	(0.4
PNE67-04	18	05/24/93	05/24/93	05/24/93	(1	(1	(1	1	(0.4
PNE68-04	19	05/24/93	05/24/93	05/24/93	(1	(1	(1	(1	(0.4
PNE69-04	20	05/24/93	05/24/93	05/24/93	9	4	8	75	5

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M = quantitated with matrix interference

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Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T305138

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
PSL163-05	01	05/26/93	05/26/93	05/26/93	(1	6	7	41	4
PSL190-03	02	05/26/93	05/26/93	05/26/93	(1	(1	1	(1	(0.4
PSL145-05	03	05/26/93	05/26/93	05/26/93	(1	(1	(1	(1	(0.4
PE5-1-01	04	05/26/93	05/26/93	05/26/93	1	12	5	58	4
PE5-2-0.5	05	05/26/93	05/26/93	05/26/93	(1	8	5	52	3
PE5-3-01	06	05/26/93	05/26/93	05/26/93	4	15	6	77	3
PE-4-0.5	07	05/26/93	05/26/93	05/26/93	(1	2	2	13	0.6
PE5-5-01	08	05/26/93	05/26/93	05/26/93	7	14	17	180	6
8WP-1	09	05/26/93	05/26/93	05/26/93	(1	1	1 M	4	(0.4
8WP-2	10	05/26/93	05/26/93	05/26/93	(1	1	1	3	(0.4
FS1-01	11	05/27/93	05/27/93	05/27/93	(1	(1	(1	(1	(0.4
FS2-01	12	05/27/93	05/27/93	05/27/93	(1	(1	(1	(1	(0.4
FS3-01	13	05/27/93	05/27/93	05/27/93	(1	5	6 M	3	0.6
FS4-01	14	05/27/93	05/27/93	05/27/93	(1	(1	(1	(1	(0.4
FS5-01	15	05/27/93	05/27/93	05/27/93	(1	2	2 M	2	(0.4
FS6-01	16	05/27/93	05/27/93	05/27/93	(1	6	12 M	6	0.6
FS7-01	17	05/27/93	05/27/93	05/27/93	(1	(1	(1	(1	(0.4
FS8-01	18	05/27/93	05/27/93	05/27/93	(1	(1	(1	(1	(0.4
FS9-01	19	05/27/93	05/27/93	05/27/93	(1	3	6 M	3	0.4
FS10-01	20	05/27/93	05/27/93	05/27/93	(1	(1	(1	(1	(0.4

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APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T306193

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
SWA43-02	01	06/28/93	06/28/93	06/28/93	1	1	5	20	(0.4
SWA44-04	02	06/28/93	06/28/93	06/28/93	(1	(1	1	5	(0.4
SWA45-06	03	06/28/93	06/28/93	06/28/93	(1	(1	(1	(1	(0.4
SWA46-01	04	06/28/93	06/28/93	06/28/93	1	2	3	15	(0.4
SWA47-04	05	06/28/93	06/28/93	06/28/93	(1	(1	(1	(1	(0.4
SWA48-05	06	06/28/93	06/28/93	06/28/93	(1	(1	(1	(1	(0.4
SPPS-1	07	06/29/93	06/29/93	06/29/93	(1	(1	(1	(1	(0.4
SPPS-2	08	06/29/93	06/29/93	06/29/93	(1	(1	(1	(1	(0.4
SPPS-3	09	06/29/93	06/29/93	06/29/93	(1	(1	(1	(1	(0.4
SPPS-4	10	06/29/93	06/29/93	06/29/93	(1	(1	(1	(1	(0.4
SPPS-5	11	06/29/93	06/29/93	06/29/93	(1	(1	(1	(1	(0.4
SPPS-6	12	06/29/93	06/29/93	06/30/93	(1	(1	(1	1	(0.4
SPPS-7	13	06/29/93	06/29/93	06/30/93	(1	1	(1	2	(0.4
SPPS-8	14	06/29/93	06/29/93	06/30/93	(1	1	1	4	(0.4
SPPS-9	15	06/29/93	06/29/93	06/30/93	(1	2	1	3	(0.4
NEWL1-05	16	06/29/93	06/29/93	06/30/93	(1	(1	(1	1	(0.4
NEWL2-04	17	06/29/93	06/29/93	06/30/93	(1	(1	(1	(1	(0.4
NEWL3-05	18	06/29/93	06/29/93	06/30/93	(1	(1	(1	(1	(0.4
NEWL4-05	19	06/29/93	06/29/93	06/30/93	(1	(1	(1	1	(0.4
NEWL5-04	20	06/29/93	06/29/93	06/30/93	1	1	(1	12	(0.4

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Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T306199

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
NEW66-04	01	06/29/93	06/29/93	06/30/93	< 1	2	1	6	< 0.4
NEWL7-04	02	06/29/93	06/29/93	06/30/93	< 1	20	< 1	30	< 0.4
NEWL8-03	03	06/29/93	06/29/93	06/30/93	1	9	< 1	9	< 0.4
SLS183-02	04	06/30/93	06/30/93	06/30/93	< 1	1	1	2	< 0.4
SLS184-01	05	06/30/93	06/30/93	06/30/93	< 1	6	2	52	< 0.4
SLS185-04	06	06/30/93	06/30/93	06/30/93	< 1	12	5	78	0.4
SLS186-02	07	06/30/93	06/30/93	06/30/93	< 1	2	1	2	0.4
SLS187-02	08	06/30/93	06/30/93	06/30/93	< 1	< 1	< 1	1	< 0.4
SLS188-05	09	06/30/93	06/30/93	06/30/93	< 1	2	2	9	2
SLS189-05	10	06/30/93	06/30/93	06/30/93	1	4	54 M	15	1

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Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307038

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
NSS105-03	01	07/09/93	07/09/93	07/09/93	1	1	11 M	8	(0.4
NSS106-04	02	07/09/93	07/09/93	07/09/93	(1	1	(1	8	(0.4
NSS107-06	03	07/09/93	07/09/93	07/09/93	(1	(1	(1	1	(0.4
NSS108-06	04	07/09/93	07/09/93	07/09/93	(1	1	(1	17	(0.4
SLS207-02	05	07/09/93	07/09/93	07/09/93	(1	(1	(1	1	(0.4
SLS208-01	06	07/09/93	07/09/93	07/09/93	1	11	5	80	0.4
SLS209-02	07	07/09/93	07/09/93	07/09/93	(1	1	(1	7	(0.4
SLS210-01	08	07/09/93	07/09/93	07/09/93	(1	1	(1	4	(0.4
SLS211-01	09	07/09/93	07/09/93	07/09/93	(1	2	(1	16	(0.4
SLS212-01	10	07/09/93	07/09/93	07/09/93	(1	1	(1	17	(0.4
SLS213-02	11	07/09/93	07/09/93	07/09/93	(1	1	(1	10	(0.4
SLS214-02	12	07/09/93	07/09/93	07/09/93	(1	12	(1	86	0.4
NEWL9-03	13	07/09/93	07/09/93	07/09/93	(1	(1	(1	1	(0.4
NEWL10-05	14	07/09/93	07/09/93	07/09/93	(1	(1	(1	(1	(0.4
NEWL11-04	15	07/09/93	07/09/93	07/09/93	(1	(1	(1	(1	(0.4
NEWL12-03	16	07/09/93	07/09/93	07/09/93	1	1	(1	6	(0.4
NEWL13-03	17	07/09/93	07/09/93	07/09/93	(1	(1	(1	1	(0.4
NEWL14-03	18	07/09/93	07/09/93	07/09/93	4	7	(1	23	(0.4
NEWL15-03	19	07/09/93	07/09/93	07/09/93	1	(1	(1	3	(0.4
NEWL16-04	20	07/09/93	07/09/93	07/09/93	(1	(1	(1	(1	(0.4

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APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307039

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
SPPS 10	01	07/09/93	07/09/93	07/09/93	4	3	(1	7	(0.4
SPPS 11	02	07/09/93	07/09/93	07/09/93	1	(1	(1	2	(0.4
SPPS 12	03	07/09/93	07/09/93	07/09/93	2	(1	(1	2	(0.4
SPPS 13	04	07/09/93	07/09/93	07/09/93	1	(1	(1	5	(0.4
SPPS 14	05	07/09/93	07/09/93	07/09/93	(1	(1	(1	1	(0.4
SPPS 15	06	07/09/93	07/09/93	07/09/93	(1	(1	(1	(1	(0.4
SPPS 16	07	07/09/93	07/09/93	07/09/93	(1	(1	(1	(1	(0.4
SPPS17	08	07/09/93	07/09/93	07/09/93	(1	(1	(1	(1	(0.4
SLS215-01	09	07/12/93	07/12/93	07/12/93	(1	6	(1	33	(0.4
SLS216-01	10	07/12/93	07/12/93	07/12/93	(1	(1	(1	(1	(0.4
SLS217-03	11	07/12/93	07/12/93	07/12/93	(1	2	(1	28	(0.4
SLS218-03	12	07/12/93	07/12/93	07/12/93	1	4	(1	17	1
SLS219-03	13	07/12/93	07/12/93	07/12/93	(1	4	(1	66	(0.4
SLS220-03	14	07/12/93	07/12/93	07/12/93	(1	2	(1	26	(0.4
NEWL17-05	15	07/14/93	07/14/93	07/14/93	(1	(1	(1	(1	(0.4
NEWL18-05	16	07/14/93	07/14/93	07/14/93	(1	(1	(1	1	(0.4
NEWL19-05	17	07/14/93	07/14/93	07/14/93	(1	(1	(1	1	(0.4
NEWL20-06	18	07/14/93	07/14/93	07/14/93	(1	(1	(1	(1	(0.4
NEWL21-04	19	07/14/93	07/14/93	07/14/93	(1	(1	(1	(1	(0.4
NEWL22-06	20	07/14/93	07/14/93	07/14/93	(1	1	(1	9	(0.4

(= less than
) = greater than
)) = much greater than
M = quantitated with matrix interference

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307067

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
NEWL23	01	07/14/93	07/14/93	07/14/93	3	3	(1	10	(0.4
NEWL24-06	02	07/14/93	07/14/93	07/14/93	1	(1	(1	6	(0.4
SLS221-05	03	07/14/93	07/14/93	07/14/93	(1	4	(1	11	(0.4
SLS222-05	04	07/14/93	07/14/93	07/14/93	(1	(1	(1	4	(0.4
SLS223-05	05	07/14/93	07/14/93	07/14/93	(1	1	(1	8	(0.4
SLS224-05	06	07/14/93	07/14/93	07/14/93	(1	2	(1	4	(0.4

(= less than
) = greater than
)) = much greater than
M = quantitated with matrix interference

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307123

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
NSS115-05	01	07/22/93	07/22/93	07/22/93	(1	(1	(1	1	(0.4
NSS116-05	02	07/22/93	07/22/93	07/22/93	(1	(1	(1	2	(0.4
SLS247-05	03	07/22/93	07/22/93	07/22/93	(1	6	(1	14	0.5
SLS248-04	04	07/22/93	07/22/93	07/22/93	1	5	(1	15	0.4
SLS249-04	05	07/22/93	07/22/93	07/22/93	1	13	11	35	(1 M
LA13-02	06	07/23/93	07/23/93	07/23/93	(1	1	(1	9	(0.4
LA14-02	07	07/23/93	07/23/93	07/23/93	(1	2	(1	15	(0.4
LA15-04	08	07/23/93	07/23/93	07/23/93	(1	(1	(1	6	(0.4
LA16-05	09	07/23/93	07/23/93	07/23/93	(1	1	(1	19	(0.4
NSS17-03	10	07/23/93	07/23/93	07/23/93	(1	(1	1	1	(0.4
NSS18-03	11	07/23/93	07/23/93	07/23/93	1	1	2	19	(0.4
NSS19-06	12	07/23/93	07/23/93	07/23/93	(1	(1	1	2	(0.4
NSS20-06	13	07/23/93	07/23/93	07/23/93	(1	(1	(1	2	(0.4
NSS21-04	14	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
NSS22-04	15	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
SLS250	16	07/23/93	07/23/93	07/23/93	1	3	(10 M	23	0.7
SLS251	17	07/23/93	07/23/93	07/23/93	(1	2	(10 M	14	0.5
NEWL25-05	18	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
NEWL26-05	19	07/23/93	07/23/93	07/23/93	(1	1	(1	5	(0.4
NEWL27-04	20	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4

(= less than
) = greater than
)) = much greater than
M = quantitated with matrix interference

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307134

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
NEWL28-04	01	07/23/93	07/23/93	07/23/93	(1	(1	(1	1	(0.4
NEWL29-02	02	07/23/93	07/23/93	07/23/93	(1	(1	(1	1	(0.4
NELW30-06	03	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
NEWL31-06	04	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
NEWL32-06	05	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
NEWL33-05	06	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
NEWL34-04	07	07/23/93	07/23/93	07/23/93	5	4	2	78	(0.4
NEWL35-05	08	07/23/93	07/23/93	07/23/93	1	(1	(1	3	(0.4
NEWL36-06	09	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
NEWL37-03	10	07/23/93	07/23/93	07/23/93	4	3	(1	5	(0.4
NEWL38-06	11	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
NEWL39-06	12	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
NEWL40-05	13	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
NEWL41-02	14	07/23/93	07/23/93	07/23/93	3	2	(1	3	(0.4
NEWL42-04	15	07/23/93	07/23/93	07/23/93	1	5	1	35	(0.4
NEWL43-06	16	07/25/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
NEWL44-06	17	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
NSS117	18	07/26/93	07/26/93	07/26/93	(1	(1	(1	4	(0.4
NSS118	19	07/26/93	07/26/93	07/26/93	(1	1	1	4	(0.4
NSS119	20	07/26/93	07/26/93	07/26/93	1	1	(1	2	(0.4

(= less than
) = greater than
)) = much greater than
M = quantitated with matrix interference

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307142

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
NSS120	01	07/26/93	07/26/93	07/26/93	(1	(1	(1	1	(0.4
NSS121	02	07/26/93	07/26/93	07/26/93	(1	(1	(1	2	(0.4
NSS122	03	07/26/93	07/26/93	07/26/93	(1	(1	(1	1	(0.4
NSS123	04	07/26/93	07/26/93	07/26/93	1	1	1	10	(0.4
NSS124	05	07/26/93	07/26/93	07/26/93	1	1	1	8	(0.4
NSS125	06	07/26/93	07/26/93	07/26/93	(1	(1	(1	1	(0.4
NSS126	07	07/26/93	07/26/93	07/26/93	1	3	(5 M	27	(0.4
NSS127	08	07/26/93	07/26/93	07/26/93	(1	(1	(1	1	(0.4
NSS128	09	07/26/93	07/26/93	07/26/93	(1	(1	(1	2	(0.4
NSS129	10	07/26/93	07/26/93	07/26/93	(1	(1	(1	(1	(0.4
NSS130	11	07/26/93	07/26/93	07/26/93	(1	(1	(1	1	(0.4
NSS131	12	07/26/93	07/26/93	07/26/93	(1	(1	(1	1	(0.4
NSS132	13	07/26/93	07/26/93	07/26/93	(1	(1	1	1	(0.4
NSS133	14	07/26/93	07/26/93	07/26/93	(1	(1	1	2	(0.4
NSS134	15	07/26/93	07/26/93	07/26/93	(1	(1	1	2	(0.4
NSS135	16	07/26/93	07/26/93	07/26/93	(1	(1	18	(1	(0.4
NSS136	17	07/26/93	07/26/93	07/26/93	4	8	(1	87	3
LA17-02	18	07/27/93	07/27/93	07/27/93	(1	(1	(1	(1	(0.4
LA18-02	19	07/27/93	07/27/93	07/27/93	(1	2	5	13	(0.4
LA29-03	20	07/27/93	07/27/93	07/27/93	(1	2	(1	10	(0.4

(= less than
) = greater than
)) = much greater than
M = quantitated with matrix interference

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307149

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
LA20-03	01	07/27/93	07/27/93	07/27/93	(1	2	3	12	1
LA21-04	02	07/27/93	07/27/93	07/27/93	(1	(1	1	1	(0.4
LA22-04	03	07/27/93	07/27/93	07/27/93	(1	2	3	6	(0.4
LA23-04	04	07/27/93	07/27/93	07/27/93	(1	1	3	6	(0.4
NEWL45-03	05	07/28/93	07/28/93	07/30/93	(1	1	(1	2	(0.4
NEWL46-06	06	07/28/93	07/28/93	07/30/93	(1	(1	(1	(1	(0.4
NEWL47-04	07	07/28/93	07/28/93	07/30/93	1	1	(1	5	(0.4
NEWL48-02	08	07/28/93	07/28/93	07/30/93	(1	(1	(1	(1	(0.4
NEWL49-05	09	07/28/93	07/28/93	07/30/93	(1	2	1	(1	(0.4
NEWL50-02	10	07/28/93	07/28/93	07/30/93	10	4	(1	2	(0.4
NEWL51-04	11	07/28/93	07/28/93	07/30/93	(1	(1	(1	(1	(0.4
NEWL52-03	12	07/28/93	07/28/93	07/30/93	1	(1	(1	2	(0.4
NEWL53-05	13	07/28/93	07/28/93	07/30/93	(1	(1	(1	2	(0.4
NEWL54-05	14	07/28/93	07/28/93	07/30/93	(1	(1	(1	(1	(0.4
NEWL55-04	15	07/28/93	07/28/93	07/30/93	(1	(1	(1	2	(0.4
NEWL56-04	16	07/28/93	07/28/93	07/30/93	(1	1	1	2	(0.4
NEWL57-05	17	07/28/93	07/28/93	07/30/93	2	(1	1	8	(0.4
NEWL58-04	18	07/28/93	07/28/93	07/30/93	1	1	1	2	(0.4
NEWL59-04	19	07/28/93	07/28/93	07/30/93	1	(1	(1	2	(0.4
NEWL60-03	20	07/28/93	07/28/93	07/30/93	(1	(1	1	1	(0.4

(= less than
) = greater than
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M = quantitated with matrix interference

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307151

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
NEWL61-06	01	07/28/93	07/28/93	07/30/93	1	(1	(1	1	(0.4
NEWL62-06	02	07/28/93	07/28/93	07/30/93	(1	(1	(1	(1	(0.4
NEWL63-06	03	07/28/93	07/28/93	07/30/93	(1	(1	(1	(1	(0.4
NEWL64-06	04	07/28/93	07/28/93	07/30/93	(1	(1	(1	(1	(0.4
NEWL65-07	05	07/29/93	07/29/93	07/29/93	(1	(1	(1	(1	(0.4
NEWL66-05	06	07/29/93	07/29/93	07/29/93	(1	(1	(1	(1	(0.4
NEWL67-07	07	07/29/93	07/29/93	07/29/93	(1	(1	(1	(1	(0.4
NEWL68-05	08	07/29/93	07/29/93	07/29/93	1	(1	1	5	(0.4
NEWL69-07	09	07/29/93	07/29/93	07/29/93	(1	(1	(1	(1	(0.4
NEWL70-05	10	07/29/93	07/29/93	07/29/93	1	(1	1	4	(0.4
NEWL71-07	11	07/29/93	07/29/93	07/29/93	(1	(1	(1	1	(0.4
NEWL72-05	12	07/29/93	07/29/93	07/29/93	(1	1	(1	6	(0.4
NEWL73-07	13	07/29/93	07/29/93	07/29/93	(1	(1	(1	(1	(0.4
NEWL74-05	14	07/29/93	07/29/93	07/29/93	(1	(1	(1	3	(0.4
NEWL75-07	15	07/29/93	07/29/93	07/29/93	(1	(1	(1	(1	(0.4
NEWL76-05	16	07/29/93	07/29/93	07/29/93	(1	(1	(1	2	(0.4
LA24-03	17	07/30/93	07/30/93	07/30/93	(1	(1	(1	1	(0.4
LA25-03	18	07/30/93	07/30/93	07/30/93	1	3	2	37	(0.4
LA26-04	19	07/30/93	07/30/93	07/30/93	(1	1	(1	16	(0.4
LA27-04	20	07/30/93	07/30/93	07/30/93	(1	(1	(1	2	(0.4

(= less than
) = greater than
)) = much greater than
M = quantitated with matrix interference

APPENDIX F-5

Lead and Arsenic Analytical Results in TPH Excavation

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN :

Certificate of Analysis

Work Order# : T3-07-045
DATE RECEIVED : 07/09/93
DATE OF REPORT: 08/17/93
CLIENT JOB ID : Proj# 12883088, task 7856

Work ID : Woods Industries Site
Taken By : Client
Transported by: Client
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date		Sample Description	Collection Date
01	NEWL90-03	07/09/93	09	SPPS10-	07/09/93
02	NEWL10-05	07/09/93	10	SPPS11-	07/09/93
03	NEWL11-04	07/09/93	11	SPPS12-	07/09/93
04	NEWL12-03	07/09/93	12	SPPS13-	07/09/93
05	NEWL13-03	07/09/93	13	SPPS14-	07/09/93
06	NEWL14-03	07/09/93	14	SPPS15-	07/09/93
07	NEWL15-03	07/09/93	15	SPPS16-	07/09/93
08	NEWL16-04	07/09/93	16	SPPS17-	07/09/93

Unless otherwise instructed all samples will be discarded on 08/17/93

Respectfully submitted,
Laucks Testing Laboratories, Inc.
TR Applied Science Division

Tamis Root

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # T3-07-045

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
Arsenic in Soil by ICP-MS	mg/kg AR	1.4			
Lead in Soil by ICP-MS	mg/Kg AR	4.2			
WTPH-418.1, As Received	mg/kg AR	1,100	6.5	390	5,100

Analyte	Units	05	06	07	08
Arsenic in Soil by ICP-MS	mg/kg AR	3.0	13.8	28.	
Lead in Soil by ICP-MS	mg/Kg AR	2.5	62.	570.	
WTPH-418.1, As Received	mg/kg AR	160	250	3,700	21

Analyte	Units	09	10	11	12
WTPH-418.1, As Received	mg/kg AR	160	17,000	2,600	500

Analyte	Units	13	14	15	16
WTPH-418.1, As Received	mg/kg AR	3,900	4,100	150	5,000

Laucks 85 Years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN : David Eagleton

Certificate of Analysis

Work Order# : 93-07-271
DATE RECEIVED : 07/12/93
DATE OF REPORT: 07/19/93
CLIENT JOB ID : Project No. 12883088

Work ID : Woods Industries Site
Taken By : Client
Transported by: TR Applied
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date		Sample Description	Collection Date
01	NEWL9-03	07/09/93	03	NEWL14-03	07/09/93
02	NEWL13-03	07/09/93	04	NEWL15-03	07/09/93

KEY

< indicates "less than"

Unless otherwise instructed all samples will be discarded on 08/28/93

Respectfully submitted,
Laucks Testing Laboratories, Inc.

Tim Runyan

Tim Runyan

Laucks 85 YEARS
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # 93-07-271

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
Arsenic (Method 6010)	mg/kg DB	1.4	3.2	16.	31.
Lead (Method 6010)	mg/kg DB	< 10.	26.	70.	640.
Total Solids	%	98.4	94.4	88.4	89.1

Laucks 85 Years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Quality Control Report
Method Blanks for Work Order 9307271

Blank Name	Samples Verified	Test Description	Result	Units	Control Limit
B071293_ICM_S01	1-4	Arsenic by ICP/MS	0.10 U	mg/kg DB	0.2
		Lead by ICP/MS	0.10 U		0.2

A method blank can validate more than one analyte on more than one work order. The method blanks in this report may validate analytes not determined on this work order, but nonetheless determined in the associated blank.

Because they validate more than one work order, method blank results are not always reported in the same concentration units used for sample results.

= Blank exceeds control limit

Laucks 85 YEARS
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Quality Control Report
MS/MSD Report for Work Order 9307271

MS/MSD Name	Sample Fractions Verified	MS/MSD Sample	Analyte	Percent Recovery MS	MSD	RPD	Cont. Lim LCL	UCL
K071293_ICMS01	1-4	9307271-01	Arsenic	49*	53 *	8	70	127
			Lead	91	102	11	50	148

* = Value Exceeds Control Limit
RPD = Relative Percent Difference
LCL = Lower Control Limit
UCL = Upper Control Limit
-1 for recovery value indicates that recovery could not be calculated

An MS/MSD pair can validate the results for more than one work order. For this reason, results for analytes not requested on this work order may appear in this MS/MSD report.

Laucks 85 YEARS
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Quality Control Report
Blank Spike Report for Work Order 9307271

Blank Spike Names						
Database	Lab Assigned	Fractions Verified	Analyte Name	Recov	LCL	UCL
S071293_ICMS01	S071293ICMS1	1-4	Arsenic	120	70	127
			Lead	120	50	148

* = Value Exceeds Control Limit
LCL = Lower Control Limit
UCL = Upper Control Limit

A blank spike can validate the results for more than one work order. For this reason, results for analytes not requested on this work order may appear in this blank spike report.

Laucks 85 Years
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Quality Control Report
Duplicate Report for Work Order 9307271

Duplicate Name	Sample Fractions Verified	Sample	Analyte	RPD	Limit
D071393_TSS03	1 - 4	9307271-01	Total Solids	0.41	30

* = Value Exceeds Control Limit
RPD = Relative Percent Difference
L = RPD control limit for this analyte is 5x the detection limit. The value appearing in the RPD column is the absolute difference of the duplicates.
-1 for recovery value indicates that recovery could not be calculated

A duplicate pair can validate the results for more than one work order. For this reason, results for analytes not requested on this work order may appear in this duplicate report.

APPENDIX G

Preliminary Sample Data for Lead and Arsenic

APPENDIX G-1

Chain-of-Custody Records

9307694

T307104 / T307106

See Bill / 24-hour-Turn (9307694)

ASAP

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5599

PROJECT NAME: Woods Industries
PROJECT NUMBER: 12883088 | MAJOR TASK: 7856
SAMPLERS: J. Dolan
LAB DESTINATION: Laucks - Yakima

	SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	Pesticides	Dieldrin	Lead	Arsenic	Quantify			ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
1 13	LA1-03	7-20-93	See data sheets				1	✓	✓	✓	✓	✓					
2 14	LA2-03						1	✓	✓	✓	✓	✓					
3 15	LA3-01						1	✓	✓	✓	✓	✓					Transmitted
4 16	LA4-02						1	✓	✓	✓	✓	✓					No Paper
5 17	LA5-03						1	✓	✓	✓	✓	✓					Rush
6 18	LA6-03						1	✓	✓	✓	✓	✓					
7 19	LA7-02						1	✓	✓	✓	✓	✓					
8 20	LA8-03						1	✓	✓	✓	✓	✓					
9 - 1	LA9-03						1	✓	✓	✓	✓	✓					
10 - 2	LA10-03						1	✓	✓	✓	✓	✓					
11 - 3	LA11-03						1	✓	✓	✓	✓	✓					
12 4	LA12-03						1	✓	✓	✓	✓	✓					
							12	12	12	12	12	12					

LAUCKS TESTING

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
John W. Dolan	7-20-93	2:30	Timothy E. Runyan	7-20-93	2:30p
			[signature]	7-20-93	

SHIPPING NOTES: May contain hazardous materials

LAB NOTES

BE-34 (1/92)

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5849

PROJECT NAME Woods Industries
PROJECT NUMBER 12883088 MAJOR TASK 7656
SAMPLERS JMD
LAB DESTINATION Lancks - Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	Post List	Quantify	Pid Dix	Lead	Arsenic			ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
LA 13-02	7/23/93	SOC	DATA		sheets	1	✓	✓	✓	✓	✓					(Need Results by Monday a.m.)
LA 14-02	↓	↓			↓	1	✓	✓	✓	✓	✓					
LA 15-04						1	✓	✓	✓	✓	✓					
LA 16-05						1	✓	✓	✓	✓	✓					
~~LA 17~~																
~~LA 18~~																
~~LA 19~~																
~~LA 20~~																
					Totals		4	4	4	4	4					

RELINQUISHED BY

SIGNATURE	DATE	TIME
Greg A. Koester	7/23/93	0938

RECEIVED BY

SIGNATURE	DATE	TIME
Timothy E. Runyan	7-23-93	9:35 A

SHIPPING NOTES
May contain Hazardous materia

LAB NOTES

BE-34 (1/92)

9307899

4-C

Lead Arsenic T307148

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5850

PROJECT NAME Woods Industries
PROJECT NUMBER 12883088 MAJOR TASK 7856
SAMPLERS Jim Dub
LAB DESTINATION Laucks - Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Lead/Arsenic	Pesticides	[illegible]	Dieldrin				PRESERVATIVES: ICED	PRESERVATIVES: CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
LA 17-02	7/27/93	See	Data	sheets		1	X	X	X	X						-1
LA 18-02	↓					1	X	X	X	X						-2
LA 19-03						1	X	X	X	X						-3 Pb As
LA 20-03						1	X	X	X	X						-4 T307148
LA 21-04						1	X	X	X	X						-5
LA 22-04						1	X	X	X	X						-6
LA 23-04						1	X	X	X	X						-7
						7	7	7	7	7						

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
James M. [signature]	7-27-93	2:26	Jeff D. Eckert	7/27/93	2:29pm
Jeff D. Eckert	7/27/93	3:10pm	[signature]	7/28/93	8:30

SHIPPING NOTES

LAB NOTES: [redacted]

Lead Arsenic only

BE-34 (1/92)

BURLINGTON
ENVIRONMENTAL

210 West Sand Bank Road
P.O Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

Pest: T307151 / T307162
9307985

CHAIN-OF-CUSTODY RECORD ASAP - Rush

C.O.C. SERIAL NO. 5856

PROJECT NAME: Woods Industries
PROJECT NUMBER: 12883058 MAJOR TASK: 7856
SAMPLERS: Jim Dolan
LAB DESTINATION: Laucks - Yakima

	SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	Lead Arsenate	Pest List	Quant.	Dieldrin				ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE) AS - Pb
-17	LA 24-03	7-30-93	See	Data		sheets	1	X	X	X	X						-17 7179-1
18 LA	25-03						1										-18 -2
19 LA	26-04						1										-19 -3
20 LA	27-04						1										-20 -4
1 LA	28-05						1										-1 -5
2 LA	29-05						1										-2 -6
							6	6	6	6	6						

RELINQUISHED BY

SIGNATURE	DATE	TIME
James M. Dolan	7-30-93	9:24

RECEIVED BY

SIGNATURE	DATE	TIME
Timothy E. Runyan	July 30 1993	9:25A

SHIPPING NOTES

LAB NOTES

BE-34 (1/92)

08/05/93 13:49 206 767 5063 LAUCKS TESTING 009

BURLINGTON ENVIRONMENTAL
210 West Sand Bank Road
P.O Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5857

PROJECT NAME: Woods Industries site
PROJECT NUMBER: 12883058 MAJOR TASK: 7836
SAMPLERS: Jim Dylan
LAB DESTINATION: Loucks - Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	Pest List	Quantity	Daildrin	Lead Arsinate			ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
A 30-03	8-4-93	See Data sheet				1	X	X	X	X					
31-03		↓			↓	1	↓	↓	↓	↓					
32-03		↓			↓	1	↓	↓	↓	↓					
33-03		↓			↓	1	↓	↓	↓	↓					
34-03		↓			↓	1	↓	↓	↓	↓					
35-03		↓			↓	1	↓	↓	↓	↓					
36-05		↓			↓	1	↓	↓	↓	↓					
37-06		↓			↓	1	↓	↓	↓	↓					
38-06		↓			↓	1	↓	↓	↓	↓					
39-06		↓			↓	1	↓	↓	↓	↓					
40-03		↓			↓	1	↓	↓	↓	↓					
41-03		↓			↓	1	↓	↓	↓	↓					

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
James M. Dylan	8-4-93	8:28	Jeff D. Eckert	8/4/93	8:28

SHIPPING NOTES

LAB NOTES

BE-34 (1/92)

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

T308027
9308264

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5859

PROJECT NAME Woods Industries Site
PROJECT NUMBER 12893088 MAJOR TASK 7856
SAMPLERS Dolan
LAB DESTINATION Laucks Yakima

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pest List	Quantity	Pesticides	Lead Arsenate	ICED	PRESERVATIVES: CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
LA 42-04	8-6-93	See		Data Sheets		1	X	X	X	X			-3
LA 43-05	↓			↓		1	X	X	X	X			-4
LA 44-04						1	X	X	X	X			-5
LA 45-05						1	X	X	X	X			-6
						4	4	4	4	4			

RELINQUISHED BY

SIGNATURE	DATE	TIME
David Brot	8-6-93	840

RECEIVED BY

SIGNATURE	DATE	TIME
Timothy E. Rumsa	8-6-93	8:40A
	8/6/93	

SHIPPING NOTES May Contain Hazardous Waste

LAB NOTES

BE-34 (1/92)

APPENDIX G-2

Sampling Data Sheets

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO. _____
PAGE ___ OF ___

PROJECT NAME Woods-Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830 MAJOR TASK 2356 SUBTASK 22
DATE 2-26-93 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
LA1-0.5	N/A	1.30	1 Pint	Preliminary -
LA2-0.5		1.31		
LA3-01		1.32		
LA4-02		1.33		
LA5-03		1.34		
LA6-03		1.35		
A2-02		1.36		
A8-03	↓	1.40	↓	↓

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED YES/NO _____ TIME ~~1.40~~ SEALER 5599
COC COMPLETED YES/NO _____ TIME ~~1.40~~ COC NO. 5589 COMPLETED BY
LAB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

LA = Leachate sediment aq.

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830 MAJOR TASK 2456 SUBTASK 22
DATE 2-20-93 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
LA9-03	n/a	141	1 Pint	Preliminary -
LA10-03		142		
LA11-03		143		
LA12-03		145		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED YES/NO _____ TIME _____ SEALER _____
COC COMPLETED YES/NO _____ TIME _____ COC NO. 5569 COMPLETED BY
JB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

LA = Lead Arsenic Cadmium

BURLINGTON ENVIRONMENTAL

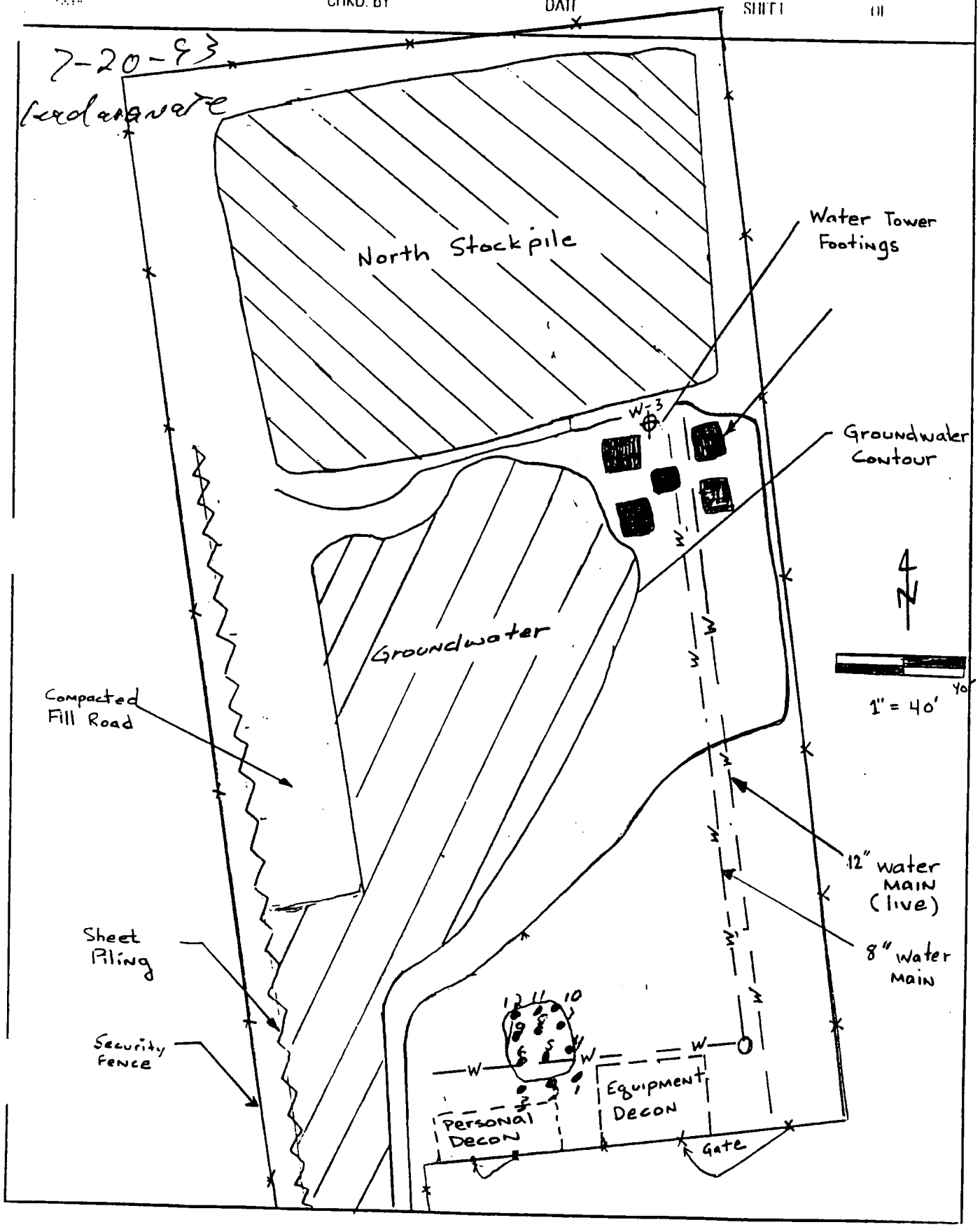
PROJECT # 12883088 PROJECT NAME Woods Ind

DATE CLIENT BY

CHKD. BY DATE SHEET OF

7-20-93

Groundwater



BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830 MAJOR TASK 2456 SUBTASK 22
DATE 7/23/93 SAMPLERS Jim Boland

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
LA13-02	N/A	900	1 Pint	Preliminary -
LA14-02		900		
LA15-02		900		
LA16-02		900		
~~LA17-02~~				
~~LA18-02~~				
~~LA19-02~~				
~~LA20-02~~				

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

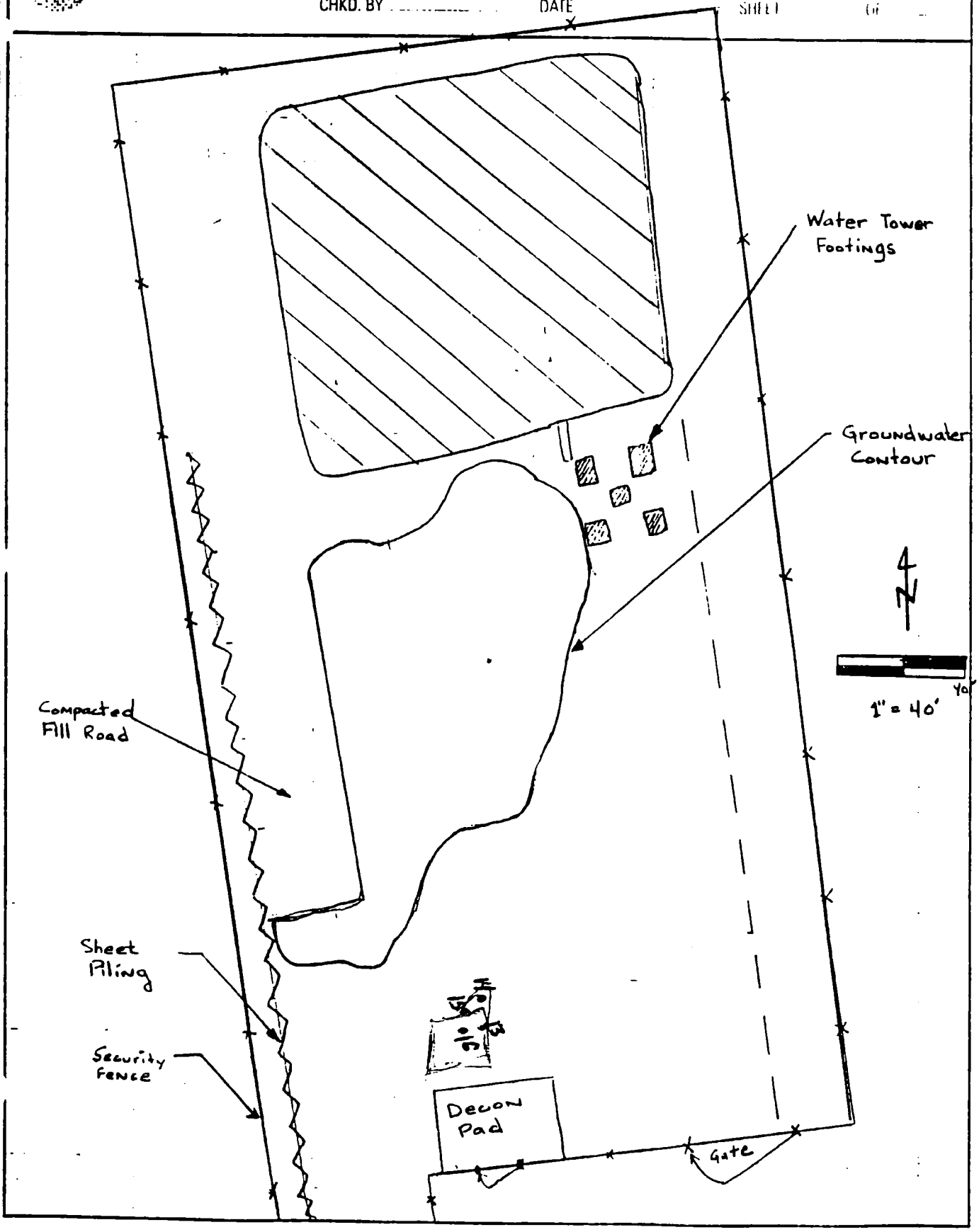
SAMPLE SEALED (YES) NO 935 TIME JD SEALER
COC COMPLETED (YES) NO 935 TIME _____ COC NO. 5849 COMPLETED BY
LAB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

BURLINGTON ENVIRONMENTAL

PROJECT # PROJECT NAME

DATE 7-23-93 CLIENT BY

CHKD. BY DATE SHEET OF



BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries Site SAMPLE LOCATION NO. _____
PROJECT NO. 12883088 MAJOR TASK 7856 SUBTASK _____
DATE 7-27-93 SAMPLERS JMD / GAK

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB V BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

	SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
LA	17-02		13:13		
LA	18-02		13:17		
LA	19-03		13:19		
LA	20-03		13:21		
LA	21-04		13:23		
LA	22-04		13:25		
LA	23-04		13:27		

LA 23 - Duplicate of 22 -

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

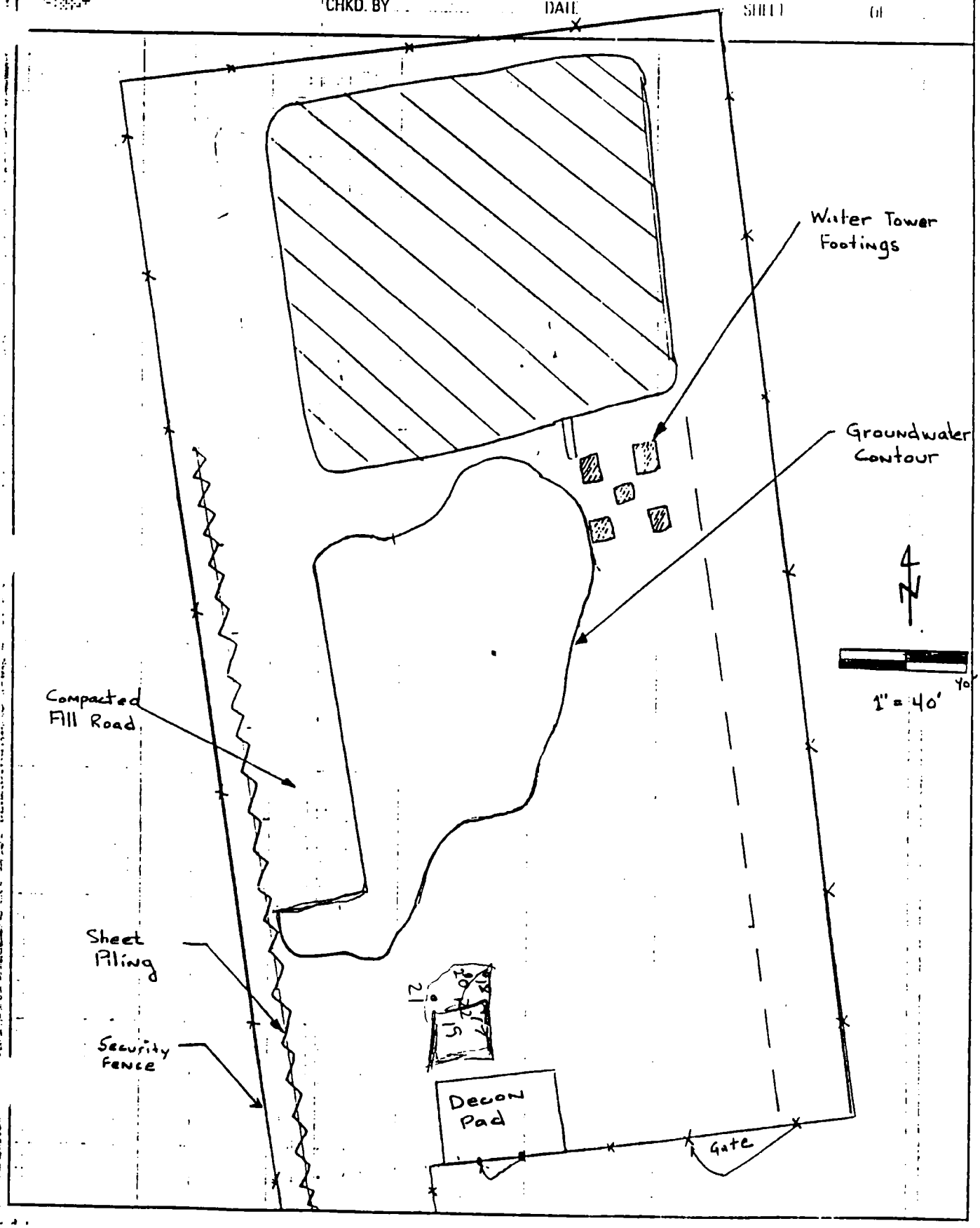
SAMPLE SEALED (YES) NO 13:47 TIME JMD SEALER
COC COMPLETED (YES) NO 13:47 TIME 1550 COC NO JMD COMPLETED BY
AB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

BURLINGTON ENVIRONMENTAL

PROJECT # PROJECT NAME

DATE 7-27-93 CLIENT BY

CHKD. BY DATE SHEET OF



BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SU _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830 MAJOR TASK 2456 SUBTASK 22
DATE 2-3-93 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ✓ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

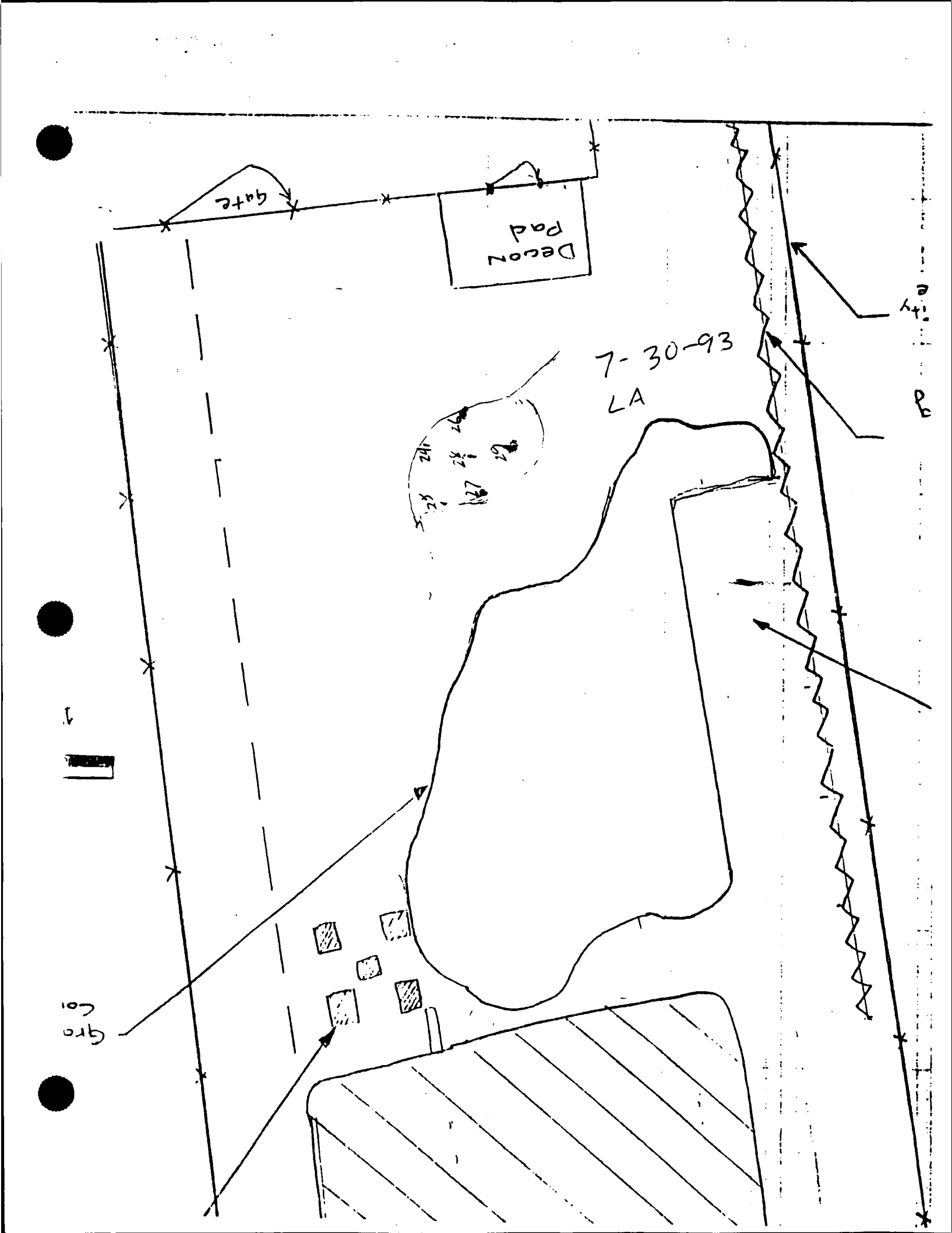
SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
LA-24-03	N/A	8:30	1 Pint	Preliminary -
LA-25-03		8:32		
LA-26-04		8:34		
LA-27-04		8:36		
LA-28-05		8:38		
LA-29-05		8:40		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES) NO 8:55 TIME JMB SEALER
COMPLETED (YES) NO 8:55 TIME 5856 COC NO. JMB COMPLETED BY
ANALYSIS REQUEST COMPLETED _____ TIME ___ LAB NO. ___ COMPLETED BY


Decon Pad
7-30-93
LA

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO. _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830 MAJOR TASK 2456 SUBTASK 22
DATE 8-4-93 SAMPLERS _____

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
LA30-03	n/a	07:43	1 Pint	Preliminary -
LA31-03		07:47		
LA32-03		07:49		
LA33-03		07:51		
LA34-03		07:53		
LA33-03		07:55		
LA34-05		07:57		
LA37-06		07:49		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES)/NO 8:20 TIME JMS SEALER
COC COMPLETED (YES)/NO 8:20 TIME 5837 COC NO. JMS COMPLETED BY
ANALYSIS REQUEST COMPLETED ___ TIME ___ LAB NO. ___ COMPLETED BY

30 31 32 33 34 35 36 37 38 39 40

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO. _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830.26 MAJOR TASK 2456 SUBTASK 22
DATE 8-4-93 SAMPLERS JMF

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ✓ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

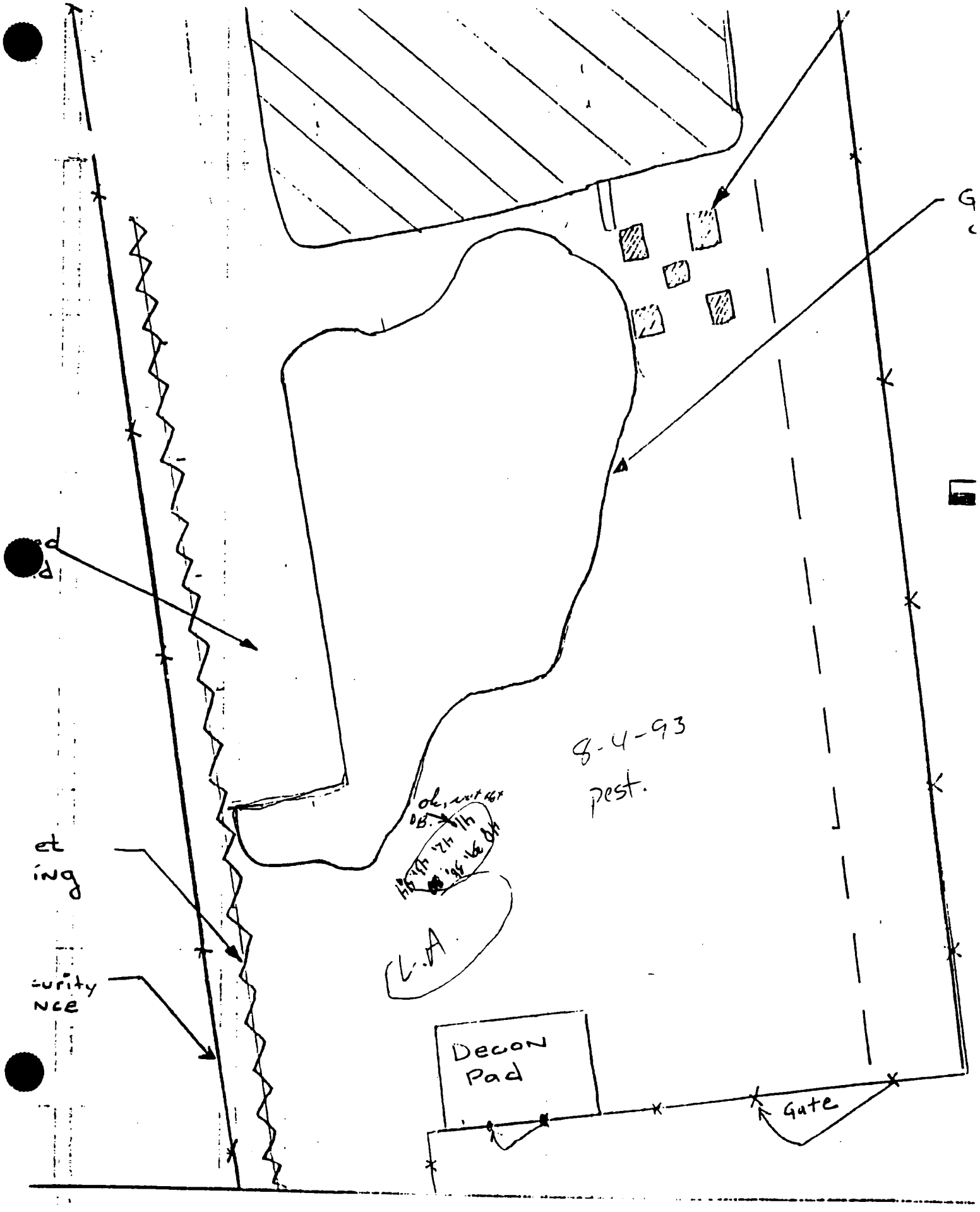
SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
LA38-06	n/a	08:01	1 Pint	Preliminary -
LA39-06		08:03		
LA40-05		08:05		
LA41-05		08:07		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES)/NO 8:20 TIME JMF SEALER
COC COMPLETED (YES)/NO 8:20 TIME 5857 COC NO. JMF COMPLETED BY
LAB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY


8-4-93
pest.
L.A
Decon
Pad
Gate

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO. _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 28830-22 MAJOR TASK 2456 SUBTASK 22
DATE 8-4-93 SAMPLERS J Dolan

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ✓ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

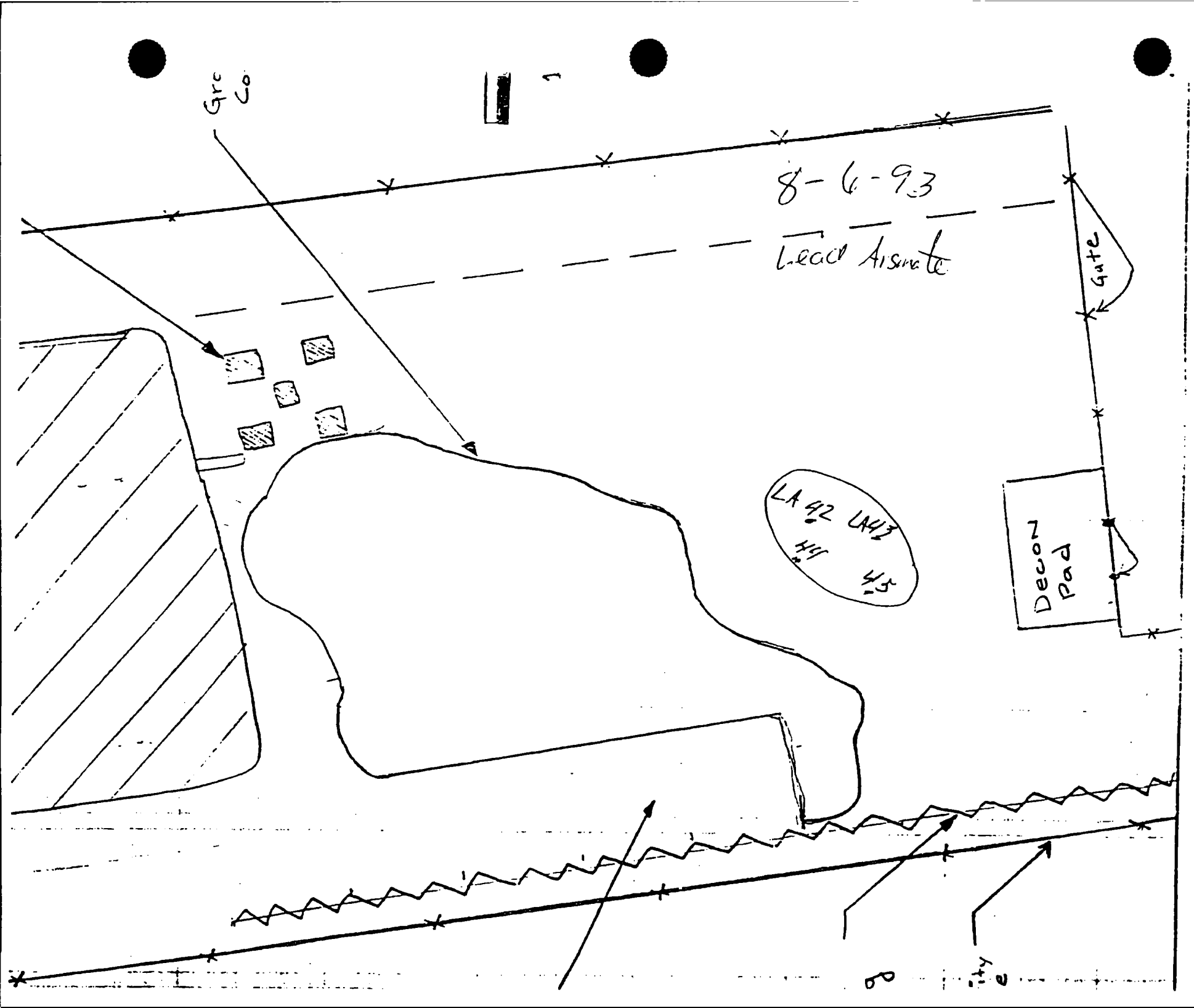
SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
LA42-02	N/A	07:40	1 Pint	Preliminary -
LA43-03		07:43		
LA44-04		07:45		
LA45-05		07:48		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES)/NO 0800 TIME DB SEALER
COMPLETED (YES)/NO 0800 TIME DB COC NO. _____ COMPLETED BY
ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY


8-6-93
Gate
LA 42 LA43
#4 #5
Decon Pad

APPENDIX G-3

Lead and Arsenic Analytical Results

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN : David Eagleton

Certificate of Analysis

Work Order# : 93-07-694
DATE RECEIVED : 07/21/93
DATE OF REPORT: 07/28/93

Work ID : Lead/Arsenic Analysis
Taken By : Client
Transported by: GH 1183018727
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date
01	LA1-0.5	07/20/93
02	LA2-0.5	07/20/93
03	LA3-01	07/20/93
04	LA4-02	07/20/93
05	LA5-03	07/20/93
06	LA6-03	07/20/93
07	LA7-02	07/20/93
08	LA8-03	07/20/93
09	LA9-03	07/20/93
10	LA10-02	07/20/93
11	LA11-03	07/20/93
12	LA12-03	07/20/93

Unless otherwise instructed all samples will be discarded on 09/11/93

Respectfully submitted,
Laucks Testing Laboratories, Inc.

Tamis Root

Tamis Root

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # 93-07-694

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
Arsenic (Method 6010)	mg/kg DB	88.	57.	100.	17.
Lead (Method 6010)	mg/kg DB	400.	330.	710.	22.
Total Solids	%	89.7	87.9	90.0	92.9

Analyte	Units	05	06	07	08
Arsenic (Method 6010)	mg/kg DB	63.	36.	370.	34.
Lead (Method 6010)	mg/kg DB	310.	200.	1400.	190.
Total Solids	%	89.0	85.5	87.2	92.9

Analyte	Units	09	10	11	12
Arsenic (Method 6010)	mg/kg DB	25.	160.	24.	4.
Lead (Method 6010)	mg/kg DB	22.	1000.	17.	17.
Total Solids	%	92.4	89.4	94.5	93.5

Laucks 85 Testing Laboratories, Inc.

940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN : David Eagleton

Certificate of Analysis

Work Order# : 93-07-796
DATE RECEIVED : 07/23/93
DATE OF REPORT:
CLIENT JOB ID : FOR TR CLIENTS ONLY

Work ID : Lead/Arsenic Analysis
Taken By : Client
Transported by: United
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date
01	LA 13-02	07/23/93 05:00
02	LA 14-02	07/23/93 05:00
03	LA 15-04	07/23/93 05:00
04	LA 16-05	07/23/93 05:00

Unless otherwise instructed all samples will be discarded on 09/09/93

Respectfully submitted,
Laucks Testing Laboratories, Inc.

Preliminary Results

Laucks 85 YEARS
Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # 93-07-796

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
Arsenic (Method 6010)	mg/kg DB	310.	110.	190.	100.
Lead (Method 6010)	mg/kg DB	1800.	760.	790.	470.
Total Solids	%	90.2	91.1	91.6	92.0

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Certificate of Analysis

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN : David Eagleton

Work Order# : 93-07-899
DATE RECEIVED : 07/28/93
DATE OF REPORT: 08/05/93

Work ID : Rush Lead/Arsenic Analysis
Taken By : Client
Transported by: GH 1183019101
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date
01	LA17-02	07/27/93
02	18-02	07/27/93
03	19-03	07/27/93
04	20-03	07/27/93
05	21-04	07/27/93
06	22-04	07/27/93
07	23-04	07/27/93

KEY

< indicates "less than"

Unless otherwise instructed all samples will be discarded on 09/11/93

Respectfully submitted,
TR Applied Science, Inc.

Tamis Root

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # 93-07-899

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
Arsenic (Method 6010)	mg/kg DB	< 20.	570.	33.	1000.
Lead (Method 6010)	mg/kg DB	200.	4100.	220.	6900.
Total Solids	%	83.6	90.3	89.8	88.7

Analyte	Units	05	06	07
Arsenic (Method 6010)	mg/kg DB	31.	150.	190.
Lead (Method 6010)	mg/kg DB	84.	1200.	1500.
Total Solids	%	96.3	80.7	82.4

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN : Jim Dolan

Certificate of Analysis

Work Order# : 93-07-989
DATE RECEIVED : 07/30/93
DATE OF REPORT: 08/05/93
CLIENT JOB ID : 12883088

Work ID : Woods Industries
Taken By : Client
Transported by: United Express 0943541
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date
01	LA24-03	07/30/93
02	LA25-03	07/30/93
03	LA26-04	07/30/93
04	LA27-04	07/30/93
05	LA28-05	07/30/93
06	LA29-05	07/30/93

Unless otherwise instructed all samples will be discarded on 09/19/93

Respectfully submitted,
TR Applied Science, Inc.

Tamis Root

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # 93-07-989

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
Arsenic (Method 6010)	mg/kg DB	74.	33.	3900.	230.
Lead (Method 6010)	mg/kg DB	280.	220.	19000.	920.
Total Solids	%	92.1	90.3	82.8	89.8

Analyte	Units	05	06
Arsenic (Method 6010)	mg/kg DB	200.	240.
Lead (Method 6010)	mg/kg DB	800.	330.
Total Solids	%	91.4	92.2

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

RECEIVED AUG 1 3 1993

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN : Jim Dolan

Certificate of Analysis

Work Order# : 93-08-189
DATE RECEIVED : 08/04/93
DATE OF REPORT: 08/06/93
CLIENT JOB ID : 12883088

Work ID : Woods Industries
Taken By : Client
Transported by: Yellow Cab
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date
01	LA 30-03	08/04/93
02	LA 31-03	08/04/93
03	LA 32-03	08/04/93
04	LA 33-03	08/04/93
05	LA 34-03	08/04/93
06	LA 35-03	08/04/93
07	LA 36-05	08/04/93
08	LA 37-06	08/04/93
09	LA 38-06	08/04/93
10	LA 39-06	08/04/93
11	LA 40-05	08/04/93
12	LA 41-05	08/04/93

KEY

< indicates "less than"

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order# : 93-08-189

Unless otherwise instructed all samples will be discarded on 09/19/93

Respectfully submitted,
TR Applied Science, Inc.

Tamis Root

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # 93-08-189

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
Arsenic (Method 6010)	mg/kg DB	76.	< 20.	76.	72.
Lead (Method 6010)	mg/kg DB	540.	15.	330.	260.
Total Solids	%	89.9	97.7	90.1	89.4

Analyte	Units	05	06	07	08
Arsenic (Method 6010)	mg/kg DB	30.	96.	< 20.	240.
Lead (Method 6010)	mg/kg DB	110.	330.	26.	220.
Total Solids	%	84.9	91.4	96.1	89.8

Analyte	Units	09	10	11	12
Arsenic (Method 6010)	mg/kg DB	120.	92.	120.	160.
Lead (Method 6010)	mg/kg DB	620.	340.	520.	1100.
Total Solids	%	90.8	92.6	95.1	93.6

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN : David Eagleton

Certificate of Analysis

Work Order# : 93-08-264
DATE RECEIVED : 08/06/93
DATE OF REPORT: 08/09/93

Work ID : Woods Industries
Taken By : Client
Transported by: Horizon Air
Type : Soil

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date
01	LA42-04	08/06/93
02	LA43-05	08/06/93
03	LA44-04	08/06/93
04	LA45-05	08/06/93

KEY

< indicates "less than"

Unless otherwise instructed all samples will be discarded on 09/23/93

Respectfully submitted,
TR Applied Science, Inc.

Tamis Root
Director

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order # 93-08-264

TESTS PERFORMED AND RESULTS:

Analyte	Units	01	02	03	04
Arsenic (Method 6010)	mg/kg DB	39.	54.	< 20.	< 20.
Lead (Method 6010)	mg/kg DB	22.	45.	< 10.	55.
Total Solids	%	95.0	94.2	95.0	94.7

APPENDIX G-4

Pesticide Analytical Results in Lead and Arsenic Excavation

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307104

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
SLS225-02	01	07/19/93	07/19/93	07/19/93	(1	3	(1	8	(0.4
SLS226-02	02	07/19/93	07/19/93	07/19/93	(1	1	(1	2	(0.4
SLS227-04	03	07/19/93	07/19/93	07/19/93	(1	1	(1	14	(0.4
SLS228-04	04	07/19/93	07/19/93	07/19/93	(1	(1	(1	4	(0.4
SLS229-04	05	07/19/93	07/19/93	07/19/93	(1	2	1	16	(0.4
SLS230-04	06	07/19/93	07/19/93	07/19/93	(1	10	3	65	0.4
SLS231-04	07	07/19/93	07/19/93	07/19/93	(1	1	(1	2	(0.4
SLS232-04	08	07/19/93	07/19/93	07/19/93	(1	(1	(1	2	(0.4
SLS233-03	09	07/19/93	07/19/93	07/19/93	(1	1	1	6	(0.4
SLS234-04	10	07/19/93	07/19/93	07/19/93	(1	1	1	32	(0.4
SLS235-03	11	07/19/93	07/19/93	07/19/93	(1	1	(1	2	(0.4
SLS236-04	12	07/19/93	07/19/93	07/19/93	(1	(1	(1	1	(0.4
LA1-0.5	13	07/20/93	07/20/93	07/20/93	(1	22	(1	50	0.4
LA2-0.5	14	07/20/93	07/20/93	07/20/93	2	10	(10	710	(0.4
LA3-01	15	07/20/93	07/20/93	07/20/93	2	8	(1	52	(0.4
LA4-02	16	07/20/93	07/20/93	07/20/93	(1	(1	(1	(1	(0.4
LA5-03	17	07/20/93	07/20/93	07/20/93	1	8	(1	38	0.4
LA6-03	18	07/20/93	07/20/93	07/20/93	1	3	(1	28	(0.4
LA7-02	19	07/20/93	07/20/93	07/20/93	(1	6	(10	680	(0.4
LA8-03	20	07/20/93	07/20/93	07/20/93	(1	(1	(1	1	(0.4

(= less than
) = greater than
)) = much greater than
M = quantitated with matrix interference

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307106

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
LA9-03	01	07/20/93	07/20/93	07/20/93	< 1	< 1	< 1	< 1	< 0.4
LA10-02	02	07/20/93	07/20/93	07/20/93	< 1	5	< 1	380	< 0.4
LA11-03	03	07/20/93	07/20/93	07/20/93	< 1	< 1	< 1	< 1	< 0.4
LA12-03	04	07/20/93	07/20/93	07/20/93	< 1	< 1	< 1	< 1	< 0.4
SLS237-06	05	07/21/93	07/21/93	07/21/93	< 1	< 1	< 1	< 1	< 0.4
SLS238-06	06	07/21/93	07/21/93	07/21/93	< 1	< 1	< 1	< 1	< 0.4
SLS239-06	07	07/21/93	07/21/93	07/21/93	< 1	< 1	< 1	< 1	< 0.4
SLS240-05	08	07/21/93	07/21/93	07/21/93	< 1	< 1	< 1	1	< 0.4
SLS241-06	09	07/21/93	07/21/93	07/21/93	< 1	< 1	< 1	1	< 0.4
SLS242-06	10	07/21/93	07/21/93	07/21/93	< 1	< 1	< 1	< 1	< 0.4
SLS243-06	11	07/21/93	07/21/93	07/21/93	< 1	< 1	< 1	< 1	< 0.4
SLS244-06	12	07/21/93	07/21/93	07/21/93	1	4	< 1	15	1
SLS245-06	13	07/21/93	07/21/93	07/21/93	1	8	< 10 M	51	2
SLS246-06	14	07/21/93	07/21/93	07/21/93	1	5	< 10 M	24	1
NSS109-05	15	07/22/93	07/22/93	07/22/93	< 1	3	< 1	24	0.6
NSS100-05	16	07/22/93	07/22/93	07/22/93	< 1	1	2	9	< 0.4
NSS111-05	17	07/22/93	07/22/93	07/22/93	< 1	< 1	< 1	2	< 0.4
NSS112-05	18	07/22/93	07/22/93	07/22/93	< 1	< 1	< 1	< 1	< 0.4
NSS113-05	19	07/22/93	07/22/93	07/22/93	< 1	< 1	< 1	< 1	< 0.4
NSS114-05	20	07/22/93	07/22/93	07/22/93	3	4	1	67	1
					< 1	< 1	24	2	< 0.4

< = less than
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>> = much greater than
M = quantitated with matrix interference

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307123

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
NSS115-05	01	07/22/93	07/22/93	07/22/93	(1	(1	(1	1	(0.4
NSS116-05	02	07/22/93	07/22/93	07/22/93	(1	(1	(1	2	(0.4
SLS247-05	03	07/22/93	07/22/93	07/22/93	(1	6	(1	14	0.5
SLS248-04	04	07/22/93	07/22/93	07/22/93	1	5	(1	15	0.4
SLS249-04	05	07/22/93	07/22/93	07/22/93	1	13	11	35	(1 M
LA13-02	06	07/23/93	07/23/93	07/23/93	(1	1	(1	9	(0.4
LA14-02	07	07/23/93	07/23/93	07/23/93	(1	2	(1	15	(0.4
LA15-04	08	07/23/93	07/23/93	07/23/93	(1	(1	(1	6	(0.4
LA16-05	09	07/23/93	07/23/93	07/23/93	(1	1	(1	19	(0.4
NSS17-03	10	07/23/93	07/23/93	07/23/93	(1	(1	1	1	(0.4
NSS18-03	11	07/23/93	07/23/93	07/23/93	1	1	2	19	(0.4
NSS19-06	12	07/23/93	07/23/93	07/23/93	(1	(1	1	2	(0.4
NSS20-06	13	07/23/93	07/23/93	07/23/93	(1	(1	(1	2	(0.4
NSS21-04	14	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
NSS22-04	15	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
SLS250	16	07/23/93	07/23/93	07/23/93	1	3	(10 M	23	0.7
SLS251	17	07/23/93	07/23/93	07/23/93	(1	2	(10 M	14	0.5
NEWL25-05	18	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4
NEWL26-05	19	07/23/93	07/23/93	07/23/93	(1	1	(1	5	(0.4
NEWL27-04	20	07/23/93	07/23/93	07/23/93	(1	(1	(1	(1	(0.4

(= less than
) = greater than
)) = much greater than
M = quantitated with matrix interference

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307142

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
NSS120	01	07/26/93	07/26/93	07/26/93	(1	(1	(1	1	(0.4
NSS121	02	07/26/93	07/26/93	07/26/93	(1	(1	(1	2	(0.4
NSS122	03	07/26/93	07/26/93	07/26/93	(1	(1	(1	1	(0.4
NSS123	04	07/26/93	07/26/93	07/26/93	1	1	1	10	(0.4
NSS124	05	07/26/93	07/26/93	07/26/93	1	1	1	8	(0.4
NSS125	06	07/26/93	07/26/93	07/26/93	(1	(1	(1	1	(0.4
NSS126	07	07/26/93	07/26/93	07/26/93	1	3	(5 M	27	(0.4
NSS127	08	07/26/93	07/26/93	07/26/93	(1	(1	(1	1	(0.4
NSS128	09	07/26/93	07/26/93	07/26/93	(1	(1	(1	2	(0.4
NSS129	10	07/26/93	07/26/93	07/26/93	(1	(1	(1	(1	(0.4
NSS130	11	07/26/93	07/26/93	07/26/93	(1	(1	(1	1	(0.4
NSS131	12	07/26/93	07/26/93	07/26/93	(1	(1	(1	1	(0.4
NSS132	13	07/26/93	07/26/93	07/26/93	(1	(1	1	1	(0.4
NSS133	14	07/26/93	07/26/93	07/26/93	(1	(1	1	2	(0.4
NSS134	15	07/26/93	07/26/93	07/26/93	(1	(1	1	2	(0.4
NSS135	16	07/26/93	07/26/93	07/26/93	(1	(1	18	(1	(0.4
NSS136	17	07/26/93	07/26/93	07/26/93	4	8	(1	87	3
LA17-02	18	07/27/93	07/27/93	07/27/93	(1	(1	(1	(1	(0.4
LA18-02	19	07/27/93	07/27/93	07/27/93	(1	2	5	13	(0.4
LA29-03	20	07/27/93	07/27/93	07/27/93	(1	2	(1	10	(0.4

(= less than
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)) = much greater than
M = quantitated with matrix interference

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307149

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
LA20-03	01	07/27/93	07/27/93	07/27/93	< 1	2	3	12	1
LA21-04	02	07/27/93	07/27/93	07/27/93	< 1	< 1	1	1	< 0.4
LA22-04	03	07/27/93	07/27/93	07/27/93	< 1	2	3	6	< 0.4
LA23-04	04	07/27/93	07/27/93	07/27/93	< 1	1	3	6	< 0.4
NEWL45-03	05	07/28/93	07/28/93	07/30/93	< 1	1	< 1	2	< 0.4
NEWL46-06	06	07/28/93	07/28/93	07/30/93	< 1	< 1	< 1	< 1	< 0.4
NEWL47-04	07	07/28/93	07/28/93	07/30/93	1	1	< 1	5	< 0.4
NEWL48-02	08	07/28/93	07/28/93	07/30/93	< 1	< 1	< 1	< 1	< 0.4
NEWL49-05	09	07/28/93	07/28/93	07/30/93	< 1	2	1	< 1	< 0.4
NEWL50-02	10	07/28/93	07/28/93	07/30/93	10	4	< 1	2	< 0.4
NEWL51-04	11	07/28/93	07/28/93	07/30/93	< 1	< 1	< 1	< 1	< 0.4
NEWL52-03	12	07/28/93	07/28/93	07/30/93	1	< 1	< 1	2	< 0.4
NEWL53-05	13	07/28/93	07/28/93	07/30/93	< 1	< 1	< 1	2	< 0.4
NEWL54-05	14	07/28/93	07/28/93	07/30/93	< 1	< 1	< 1	< 1	< 0.4
NEWL55-04	15	07/28/93	07/28/93	07/30/93	< 1	< 1	< 1	2	< 0.4
NEWL56-04	16	07/28/93	07/28/93	07/30/93	< 1	1	1	2	< 0.4
NEWL57-05	17	07/28/93	07/28/93	07/30/93	2	< 1	1	8	< 0.4
NEWL58-04	18	07/28/93	07/28/93	07/30/93	1	1	1	2	< 0.4
NEWL59-04	19	07/28/93	07/28/93	07/30/93	1	< 1	< 1	2	< 0.4
NEWL60-03	20	07/28/93	07/28/93	07/30/93	< 1	< 1	1	1	< 0.4

< = less than
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M = quantitated with matrix interference

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307151

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
NEWL61-06	01	07/28/93	07/28/93	07/30/93	1	< 1	< 1	1	< 0.4
NEWL62-06	02	07/28/93	07/28/93	07/30/93	< 1	< 1	< 1	< 1	< 0.4
NEWL63-06	03	07/28/93	07/28/93	07/30/93	< 1	< 1	< 1	< 1	< 0.4
NEWL64-06	04	07/28/93	07/28/93	07/30/93	< 1	< 1	< 1	< 1	< 0.4
NEWL65-07	05	07/29/93	07/29/93	07/29/93	< 1	< 1	< 1	< 1	< 0.4
NEWL66-05	06	07/29/93	07/29/93	07/29/93	< 1	< 1	< 1	< 1	< 0.4
NEWL67-07	07	07/29/93	07/29/93	07/29/93	< 1	< 1	< 1	< 1	< 0.4
NEWL68-05	08	07/29/93	07/29/93	07/29/93	< 1	< 1	< 1	< 1	< 0.4
NEWL69-07	09	07/29/93	07/29/93	07/29/93	1	< 1	1	5	< 0.4
NEWL70-05	10	07/29/93	07/29/93	07/29/93	< 1	< 1	< 1	< 1	< 0.4
NEWL71-07	11	07/29/93	07/29/93	07/29/93	1	< 1	1	4	< 0.4
NEWL72-05	12	07/29/93	07/29/93	07/29/93	< 1	< 1	< 1	1	< 0.4
NEWL73-07	13	07/29/93	07/29/93	07/29/93	< 1	1	< 1	6	< 0.4
NEWL74-05	14	07/29/93	07/29/93	07/29/93	< 1	< 1	< 1	< 1	< 0.4
NEWL75-07	15	07/29/93	07/29/93	07/29/93	< 1	< 1	< 1	3	< 0.4
NEWL76-05	16	07/29/93	07/29/93	07/29/93	< 1	< 1	< 1	< 1	< 0.4
LA24-03	17	07/30/93	07/30/93	07/30/93	< 1	< 1	< 1	2	< 0.4
LA25-03	18	07/30/93	07/30/93	07/30/93	1	3	2	1	< 0.4
LA26-04	19	07/30/93	07/30/93	07/30/93	< 1	1	< 1	37	< 0.4
LA27-04	20	07/30/93	07/30/93	07/30/93	< 1	< 1	< 1	16	< 0.4
								2	< 0.4

< = less than
> = greater than
>> = much greater than
M = quantitated with matrix interference

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T307162

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
LA28-05	01	07/30/93	07/30/93	07/30/93	(1	(1	(1	(1	(0.4
LA29-05	02	07/30/93	07/30/93	07/30/93	(1	(1	(1	1	(0.4
LA30-03	03	08/04/93	08/04/93	08/04/93	1	7	3	54	(0.4
LA31-03	04	08/04/93	08/04/93	08/04/93	1	(1	(1	(1	(0.4
LA32-03	05	08/04/93	08/04/93	08/04/93	2	5	4	35	(0.4
LA33-03	06	08/04/93	08/04/93	08/04/93	(1	8	2	19	(0.4
LA34-03	07	08/04/93	08/04/93	08/04/93	1	1	(1	1	(0.4
LA35-03	08	08/04/93	08/04/93	08/04/93	(1	2	1	8	(0.4
LA36-05	09	08/04/93	08/04/93	08/04/93	1	2	1	28	(0.4
LA37-06	10	08/04/93	08/04/93	08/04/93	(1	(1	(1	1	(0.4
LA38-06	11	08/04/93	08/04/93	08/04/93	(1	(1	(1	1	(0.4
LA39-06	12	08/04/93	08/04/93	08/04/93	(1	5	3	23	(0.4
LA40-05	13	08/04/93	08/04/93	08/04/93	(1	(1	(1	(1	(0.4
LA41-05	14	08/04/93	08/04/93	08/04/93	(1	(1	(1	4	(0.4
NSS137-04	15	08/04/93	08/04/93	08/04/93	1	6	14	82	(0.4
NSS138-04	16	08/04/93	08/04/93	08/04/93	(1	(1	(1	1	(0.4
NSS139-04	17	08/04/93	08/04/93	08/04/93	(1	(1	(1	1	(0.4
NSS140-04	18	08/04/93	08/04/93	08/04/93	(1	(1	(1	2	(0.4
NSS141-06	19	08/04/93	08/04/93	08/04/93	(1	(1	(1	1	(0.4
NSS142-06	20	08/04/93	08/04/93	08/04/93	1	(1	2	9	(0.4

(= less than
) = greater than
)) = much greater than
M = quantitated with matrix interference

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Laucks Testing Laboratories
Woods Industries Site
Screening Lab Results
for Work Order T308027

Report Date: 08/09/93

Sample ID	Frac	Date Collected	Date Received	Date Analyzed	Results, mg/kg As Received HCB	DDE	DDD	DDT	Dieldrin
NSS143-06	01	08/04/93	08/04/93	08/04/93	1	1	(1	4	(0.4
NSS144-06	02	08/04/93	08/04/93	08/04/93	(1	1	2	7	(0.4
LA42-04	03	08/06/93	08/06/93	08/06/93	1	1	(1	11	(0.4
LA43-05	04	08/06/93	08/06/93	08/06/93	(1	(1	(1	1	(0.4
LA44-04	05	08/06/93	08/06/93	08/06/93	(1	(1	(1	(1	(0.4
LA45-05	06	08/06/93	08/06/93	08/06/93	1	(1	(1	4	(0.4

(= less than
) = greater than
)) = much greater than
M = quantitated with matrix interference

H

APPENDIX H

Analytical Data From Southwest Labs

H-1 Samples Collected on April 7, 1993
H-2 Samples Collected on May 6, 1993
H-3 Samples Collected on May 10, 1993
H-4 Samples Collected on May 24, 1993
H-5 Samples Collected on June 4, 1993
H-6 Samples Collected on June 10, 1993
H-7 Samples Collected on July 28, 1993
H-8 Samples Collected on August 12-24, 1993

APPENDIX H-1

Samples Collected on April 7, 1993

PROJECT MEMORANDUM

DATE: October 11, 1993

TO: David Eagleton

FROM: Kathy Blaine

PROJECT: 12883088
Woods Industries, Inc.

SUBJECT: ANALYTICAL DATA QA REVIEW

I have completed a review of the analytical data for the two samples collected on April 07, 1993 and listed on COC# 6511. The samples were identified as PSLWBTM70 and PNLSW2-0.5. The Southwest Laboratories episode number was 13193.

A full CLP-type package was submitted by the laboratory and the review was conducted in accordance with the most recent USEPA Data Validation Functional Guidelines. Based on this information, the data appeared to be valid with the following comments. The samples were received at the laboratory with no ice remaining in the sample cooler. Although there should not be a significant affect on the samples, based on the reported high pesticide concentrations, USEPA guidelines require all the data to be 'J' qualified as estimated.

The method blank reporting levels were above those listed for sample PNLSW2-0.5. Therefore, it is unknown if any of the pesticides of interest were present in the method blank at a lower detection limit. The laboratory should have analyzed a low level blank with this sample set. The result of this deficiency is the conservative acceptance of the reported sample concentration.

If you have any questions or need additional information, please feel free to contact me.

kab/kab/DAT13193.MEM

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 2856-2
Page 1 of __

PROJECT NAME Woods Industries/Yakima Washington
PROJECT NO. 128830888
TASK DESCRIPTION Verification Soil Samples
PHASE 2856 TASK 22
SAMPLE TYPE(S) Soil

	BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
*	PSLWBTM20		0006	N/A	4-7-93		SOUTHWEST	4-8-93	4-8-93
*	PWLSW2-55		0006	N/A.	4-7-93		Southwest	4-8-93	4-8-93
	VSL-1	13631.01	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
	VSL-2	13631.02	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
	VSL-3	13631.03	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
	VSL-4	13631.04	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
	VSL-5	13631.05	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
	VSL-6	13631.06	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
	VSL-7	13631.07	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
	VSL-8	13631.08	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
	VSL-9	13631.09	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
	VSL-10	13631.10	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
	VSL-11	13631.11	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
	VE3-1	13676.01	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
	VE3-2	13676.02	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
	VE4-1	13676.04	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
	VE4-2	13676.03	6419	N/A.	5-10-93		Southwest	5-11-93	5-14-93
	AVE60-01	13942.01	6429	N/A.	5-24-93		Southwest	5-25 93	5-28-93
	VF-1		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
	VF-2		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
	CLP-SP1		5561	N/A	6-10-93		Southwest	6-11-93	6-14-93
	VSL-11-01	14739.01	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
	VSL-12-02	14739.02	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
	VSL-13-02	14739.03	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
	VSL-14-0	14739.04	5848	N/A	7-28-9		Southwest	7-29-93	8-2-93

BURLINGTON ENVIRONMENTAL

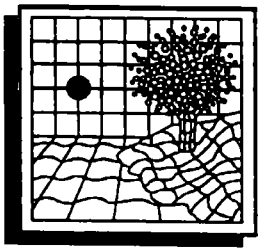
SAMPLE CONTROL LOG

Serial No. SCL 7856-3
Page 2 of 2

PROJECT NAME Woods Industries / Yakima Washington
TASK DESCRIPTION Verification Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 12883088
PHASE 7856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
VSL-15-04	14739.05	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-16-03	14739.06	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-17-02	14739.07	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-18-03	14739.08	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-19-05	14739.09	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-20-02	14739.10	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VNE01-00	14944.01	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE02-02	14944.02	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE03-03	14944.03	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE04-02	14944.04	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE05-02	14944.05	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE06-00	14944.06	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE07-06	14944.07	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE08-03	14944.08	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE09-03	14944.09	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE10-03	14944.10	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE11-03	14944.11	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE12	15107.01	5601	N/A	8-24-93		Southwest	8-25-93	8-27-93
VNE13	15107.02	5601	N/A	8-24-93		Southwest	8-25-93	8-27-93



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

April 14, 1993

Kathy Blaine
BURLINGTON ENVIRONMENTAL
210 West Sandbank Road
Columbia, IL 62236

SWLO ID: 13193.01 - 13193.02

Project ID: Woods Industries

Dear Ms. Blaine:

Enclosed please find one Organic accounting package and one full CLP package for your samples received in our laboratory on April 9, 1993 for the above captioned project. The rush results were faxed to you April 12th.

If, in your review, you should have any questions or require additional information, please call.

Sincerely,

Chuck Hoover

Chuck Hoover
Project Officer

CH/lk

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Level:(low/med) MED

	EPA SAMPLE NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	SBLK1	86	96	104	85	106	82			0
02	LCS1	8*	82	97	82	88	44			1
03	LCSD1	7*	88	98	69	98	51			1
04	PSLWBTM20#70	82D	65D	101D	95D	101D	77D			0
05	PNLSW2-0.5	80	86	81	148*	85	78			1
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

		QC LIMITS
S1	= 2-Fluorophenol	(25-121)
S2	= Nitrobenzene-d5	(23-120)
S3	= 2-Fluorobiphenyl	(30-115)
S4	= 2,4,6-Tribromophenol	(19-122)
S5	= Terphenyl-d14	(18-137)
S6	= Phenol-d5	(24-113)
S7	= N/A	
S8	= N/A	

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Matrix Spike - EPA Sample No.: LCS Level(low/med) MED

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Hexachlorobenzene	100000	0	98000	98	25-150
4,4'-DDT	100000	0	74000	74	25-150

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	100000	110000	110	12	50	25-150
4,4'-DDT	100000	77000	77	4	50	25-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

COMMENTS: _____

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Lab File ID: A801.D Lab Sample ID: BL040912S

Instrument ID: A Date Extracted: 04/09/93

Matrix: (soil/water) SOIL Date Analyzed: 04/11/93

Level:(low/med) MED Time Analyzed: 1439

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS1	LCS:13193	A805.D	04/11/93
02	LCSD1	LCSD:13193	A806.D	04/11/93
03	PSLWBTM20#70	13193.01	A817.D	04/12/93
04	PNLSW2-0.5	13193.02	A818.D	04/12/93
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Lab File ID (Standard): A797.D Date Analyzed: 04/11/93

Instrument ID: A Time Analyzed: 1237

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
	12 HOUR STD	494674		4.62		1645354		6.31		977868		9.11	
	UPPER LIMIT	1236685		5.12		4113385		6.81		2444670		9.61	
	LOWER LIMIT	247337		4.12		822677		5.81		488934		8.61	
	EPA SAMPLE No.												
01	SBLK1	329969		4.63		1079807		6.30		587454		9.09	
02	LCS1	328538		4.65		1104446		6.30		615515		9.09	
03	LCSD1	319972		4.65		1071402		6.29		598367		9.08	
04													
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +150% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Lab File ID (Standard): A797.D Date Analyzed: 04/11/93

Instrument ID: A Time Analyzed: 1237

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	1507319		11.56		580912		16.08		221122		18.34	
	UPPER LIMIT	3768298		12.06		1452280		16.58		552805		18.84	
	LOWER LIMIT	753660		11.06		290456		15.58		110561		17.84	
	EPA SAMPLE No.												
01	SBLK1	913191		11.55		321714		16.07		130905		18.34	
02	LCS1	894280		11.54		326491		16.07		165893		18.34	
03	LCSD1	860080		11.55		300089		16.06		134325		18.34	
04													
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +150% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Lab File ID (Standard): A815.D Date Analyzed: 04/12/93

Instrument ID: A Time Analyzed: 1028

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
	12 HOUR STD	330009		4.64		1053143		6.32		557864		9.11	
	UPPER LIMIT	825022		5.14		2632858		6.82		1394660		9.61	
	LOWER LIMIT	165004		4.14		526572		5.82		278932		8.61	
	EPA SAMPLE No.												
01	PSLWBTM20#70	268248		4.63		913287		6.32		511463		9.10	
02	PNLSW2-0.5	315357		4.64		1011278		6.33		591951		9.11	
03													
04													
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +150% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Lab File ID (Standard): A815.D Date Analyzed: 04/12/93

Instrument ID: A Time Analyzed: 1028

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	698861		11.56		188170		16.08		77847		18.36	
	UPPER LIMIT	1747152		12.06		470425		16.58		194618		18.86	
	LOWER LIMIT	349430		11.06		94085		15.58		38924		17.86	
	EPA SAMPLE No.												
01	PSLWBTM20#70	800672		11.56		279198		16.08		123274		18.36	
02	PNLSW2-0.5	788591		11.57		314342		16.09		138659		18.36	
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +150% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PNLSW2-0.5

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Matrix: (soil/water) SOIL Lab Sample ID: 13193.02

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A818.D

Level: (low/med) MED Date Received: 04/09/93

% Moisture: 18 decanted: (Y/N) N Date Extracted: 04/04/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/12/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	8200	U
72-54-8	4,4'-DDD	190000	
72-55-9	4,4'-DDE	41000	
50-29-3	4,4'-DDT	180000	
60-57-1	Dieldrin	4800	

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

PNLSW2-0.5

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Matrix: (soil/water) SOIL Lab Sample ID: 13193.02

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A818.D

Level: (low/med) MED Date Received: 04/09/93

% Moisture: 18 decanted: (Y/N) N Date Extracted: 04/04/93

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/12/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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28.					
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30.					

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PSLWBTM20#70

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Matrix: (soil/water) SOIL Lab Sample ID: 13193.01

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A817.D

Level: (low/med) MED Date Received: 04/09/93

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/09/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/12/93

Injection Volume: 1.0(uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	390000	U
72-54-8	4,4'-DDD	820000	
72-55-9	4,4'-DDE	210000	
50-29-3	4,4'-DDT	6200000	
60-57-1	Dieldrin	390000	U

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

PSLWBTM20#70

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Matrix: (soil/water) SOIL Lab Sample ID: 13193.01

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A817.D

Level: (low/med) MED Date Received: 04/09/93

% Moisture: 22 decanted: (Y/N) N Date Extracted: 04/09/93

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/12/93

Injection Volume: 1.0(uL) Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH: 6.0

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Matrix: (soil/water) SOIL Lab Sample ID: BL040912S

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A801.D

Level: (low/med) MED Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 04/09/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/11/93

Injection Volume: 1.0 ~~0.0~~(uL) 4/11/93 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	10000	U
72-54-8	4,4'-DDD	10000	U
72-55-9	4,4'-DDE	10000	U
50-29-3	4,4'-DDT	10000	U
60-57-1	Dieldrin	10000	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Matrix: (soil/water) SOIL Lab Sample ID: BL040912S

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A801.D

Level: (low/med) MED Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 04/09/93

Concentrated Extract Volume: 1000(uL) Date Analyzed: 04/11/93

Injection Volume: 1.0 ~~0.0~~(uL) 4/11/93 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Matrix: (soil/water) SOIL Lab Sample ID: LCS:13193

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A805.D

Level: (low/med) MED Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:04/09/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/11/93

Injection Volume: 1.0 ~~0.0~~(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	98000	
72-54-8	4,4'-DDD	10000	U
72-55-9	4,4'-DDE	10000	U
50-29-3	4,4'-DDT	74000	
60-57-1	Dieldrin	10000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13193

Matrix: (soil/water) SOIL Lab Sample ID: LCSD:13193

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A806.D

Level: (low/med) MED Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:04/09/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/11/93

Injection Volume: 1.0 ~~0.0~~(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	110000	
72-54-8	4,4'-DDD	10000	U
72-55-9	4,4'-DDE	10000	U
50-29-3	4,4'-DDT	77000	
60-57-1	Dieldrin	10000	U

APPENDIX H-2

Samples Collected on May 6, 1993

PROJECT MEMORANDUM

DATE: October 12, 1993

TO: David Eagleton

FROM: Kathy Blaine

PROJECT: 12883088
Woods Industries, Inc.

SUBJECT: ANALYTICAL DATA QA REVIEW

I have completed a review of the analytical data for the eleven samples collected on May 06, 1993 and listed on COC# 6415. The Southwest Laboratories episode number was 13631. The samples included in this group are as follows:

VSL-1
VSL-2
VSL-3
VSL-4
VSL-5
VSL-6
VSL-7
VSL-8
VSL-9
VSL-10
VNS-1C

A full CLP-type package was submitted by the laboratory and the review was conducted in accordance with the most recent USEPA Data Validation Functional Guidelines. Based on this information, the data appeared to be valid with the following comments. The internal standard area for chlorobenzene-d5 was below the acceptance range for sample VNS-1C and the reanalysis. Therefore, the following compounds that are associated with this internal standard need to be 'J' qualified as estimated for sample VNS-1C.

2-hexanone
tetrachloroethene
toluene
ethylbenzene
xylene (total)
4-methyl-2-pentanone
1,1,2,2-tetrachloroethane
chlorobenzene
styrene

Although appropriately qualified in the data package, it should be noted that dieldrin in samples VSL-10 had significant reporting concentration differences between the primary and secondary GC columns. What this translates into is, the reported concentration is questionable and should be considered estimated. There are no corrective action items required to be performed.

If you have any questions or need additional information, please feel free to contact me.

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 2856-2
Page 1 of —

PROJECT NAME Woods Industries/Yakima Washington
TASK DESCRIPTION Verification Soil Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 128830B8
PHASE 2856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
PSLWBTM20		0006	N/A	4-7-93		Southwest	4-8-93	4-8-93
PSLSW2-55		0006	N/A.	4-7-93		Southwest	4-8-93	4-8-93
VSL-1	13631.01	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-2	13631.02	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-3	13631.03	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-4	13631.04	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-5	13631.05	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-6	13631.06	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-7	13631.07	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-8	13631.08	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-9	13631.09	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-10	13631.10	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-11	13631.11	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VE3-1	13676.01	6419	N/A	5-10-93		Southwest	5-7-93	5-10-93
VE3-2	13676.02	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE4-1	13676.04	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE4-2	13676.03	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
AVE60-01	13942.01	6429	N/A.	5-24-93		Southwest	5-11-93	5-14-93
VE-1		5552	N/A.	6-4-93		Southwest	5-25 93	5-28-93
VE2		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
ELP-SP1		5561	N/A	6-10-93		Southwest	6-5-93	6-8-93
VSL-11-01	14739.01	5848	N/A	7-28-93		Southwest	6-11-93	6-14-93
VSL-12-02	14739.02	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-13-02	14739.03	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-14-03	14739.04	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
						Southwest	7-29-93	8-2-93

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 7856-3
Page 2 of 2

PROJECT NAME Woods Industries / Yakima, Washington
TASK DESCRIPTION Verification Samples
SAMPLE TYPE(S) Soil
PROJECT NO. 12883088
PHASE 7856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
VSL-15-04	14739.05	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-16-03	14739.06	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-17-02	14739.07	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-18-03	14739.08	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-19-05	14739.09	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-20-02	14739.10	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VNE01-00	14944.01	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE02-02	14944.02	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE03-03	14944.03	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE04-02	14944.04	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE05-02	14944.05	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE06-00	14944.06	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE07-06	14944.07	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE08-03	14944.08	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE09-03	14944.09	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE10-03	14944.10	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE11-03	14944.11	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE12	15107.01	5601	N/A	8-24-93		Southwest	8-25-93	8-27-93
VNE13	15107.02	5601	N/A	8-24-93		Southwest	8-25-93	8-27-93

SOUTHWEST LABORATORY
OF OKLAHOMA, INC.

May 20, 1993

Dave Eagleton
BURLINGTON ENVIRONMENTAL
210 West Sand Bank Road
Columbia, IL 67236

Project: Woods Industries
SWLO #: 1363176.01-1104

Dear Mr. Eagleton:

Enclosed we are submitting the Inorganic and Organic CLP package for your samples received in our laboratory on May 7, 1993 for the above-captioned project.

The rush results were faxed to Mike Martin per your instructions.

A copy of the Inorganic and Organic CLP package has been sent to Doug Mather.

If, in your review, you should have any questions or require additional information, please call.

Sincerely,

Chuck Hoover
Project Officer

CH/jt

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 6415

PROJECT NAME Woods Industries
PROJECT NUMBER 28830856 MAJOR TASK 2856
SAMPLERS John W. Shaw
LAB DESTINATION Southwest Lab - OKLAHOMA

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: PEST LIST	TYPE OF ANALYSIS: VOAs						ICED	PRESERVATIVES: CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
VSL-1	5-6-93	See	data	sheets		1	X							X		3 DAY Turnaround.
VSL-2						1	X							X		
VSL-3						1	X							X		
VSL-4						1	X							X		
VSL-5						1	X							X		
VSL-6						1	X							X		
VSL-7						1	X							X		
VSL-8						1	X							X		
VSL-9						3	X	2						X		
VSL-10						1	X							X		
VNS-10						3	X	2						X		

RELINQUISHED BY

SIGNATURE	DATE	TIME
Michael J. Mc	5/6/93	4:17

RECEIVED BY

SIGNATURE	DATE	TIME

SHIPPING NOTES 3 DAY Turnaround per contract

LAB NOTES

BE-34 (1/92)

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO 7856-
PAGE ___ OF ___

PROJECT NAME WYCKOFF INDUSTRIES ______ SAMPLE LOCATION NO. SL
PROJECT NO. [illegible] ______ MAJOR TASK 7ND4 SUBTASK 22
DATE 5-6-93 ______ SAMPLERS [illegible]

SAMPLING METHOD [illegible] NEW RE//S
TYPE OF SAMPLE: DUPLICATE __ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
VSL-1	N/A	1406	1 Pint	Verification
VSL-2	↓	1408	↓	↓
VSL-3	↓	1411	↓	↓
VSL-4	↓	1414	↓	↓
VSL-5	↓	1417	↓	↓
VSL-6	↓	1419	↓	↓
VSL-7	↓	1421	↓	↓
VSL-8	↓	1424	↓	↓

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES/NO) ______ TIME ______ SEALER
COC COMPLETED (YES/NO) ______ TIME ______ COC NO. ______ COMPLETE

BG = [illegible]

HARDING LAWSON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. 2886-
PAGE ___ OF ___

PROJECT NAME Words Industries ___ SAMPLE LOCATION NO. SL
PROJECT NO. 2663 ... ___ MAJOR TASK 7036 ___ SUBTASK 22
DATE 5-6-93 ___ SAMPLERS MSM / JWD

SAMPLING METHOD ... AER KEIFS
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
VSL-9	N/A	1426	1 Pint	Verification /
VSL-10	↓	1433	↓	↓
SL-... -9		1130		

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES/NO ___ TIME ___ SEALER ___
COC COMPLETED (YES/NO ___ TIME ___ COC NO. ___ COMPLETED

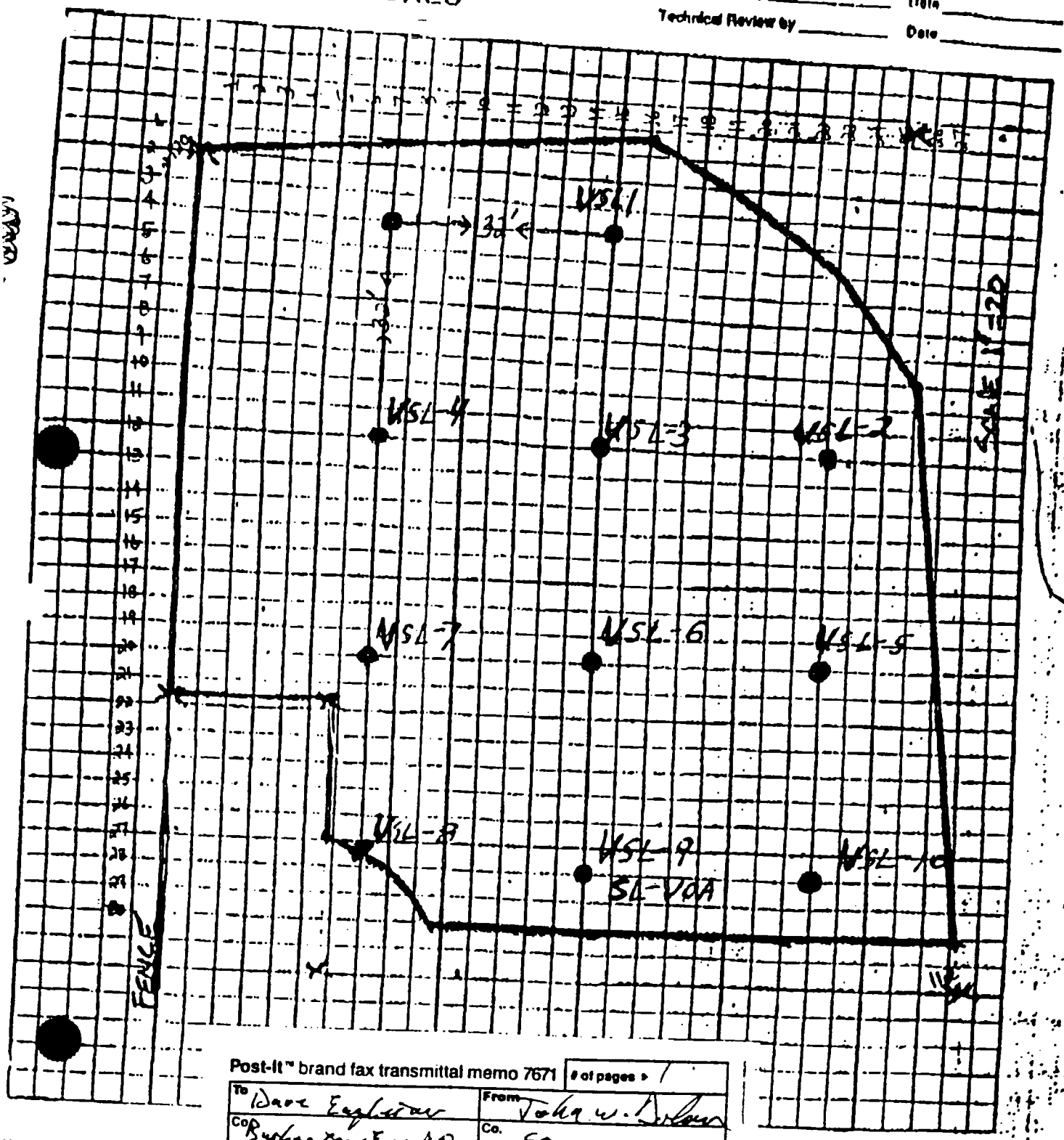
66 = R...

Burlington Environmental Inc.
Metals Division
210 West Sand Bank Road
Post Office Box 330
Columbia, Illinois 62236-0330
(618) 281-7173 FAX (618) 281-6170

5-6-93
VERIFICATION Sampling

Title Verification Sampling Grid - Lagoon Area
Project Name Woods Industries
Project No. 12B03000 Phase
File Name File No.
Calculation by JDC Date 4/27/93
Detail Check by Date
Technical Review by Date

CALCULATIONS/SKETCHES



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To Dave Eglestar	From John W. Dolan
Co. Burlington Env. RO	Co. Senes.
Dept.	Phone # 502-525-2853
Fax # 618-241-5113	Fax #

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. 80 7856-
PAGE ___ OF ___

PROJECT NAME WOODS INDUSTRIES ______ SAMPLE LOCATION NO. SL
PROJECT NO. [illegible] MAJOR TASK 7856 SUBTASK 77
DATE 5-6-93 SAMPLERS [illegible] / SWD

SAMPLING METHOD [illegible] ACL REIIS
TYPE OF SAMPLE: DUPLICATE __ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
VNS-1C	N/A	1447	1 Pint	Verification
VNS-1 VOA	↓	1435	2 VOAs	

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES/NO ______ TIME ______ SEALER
COC COMPLETED (YES/NO ______ TIME ______ COC NO. ______ COMPLETED

BG = Background

VNS-1C = Verification North Sump #1 Composite

2B

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Level: (low/med) LOW

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLK1	102	104	96		0
02	VSL-9	86	85	81		0
03	VNS-1C	93	84	76		0
04	VNS-1CRE	102	69	81		0
05	LCS1	96	103	88		0
06	LCSD1	93	102	105		0
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		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(84-138)
SMC2 (BFB)	= Bromofluorobenzene	(59-113)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

SOIL VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC/MS DEPARTMENT

LCS1

New Protocol

Lab Name: SWL-TULSA Inst. ID: L File ID: L6458

Client Code: BURLING Episode #: 1363

Matrix Spike–LCS No.: 5/10/93 Level (low/med): L

COMPOUND	SPIKE ADDED (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	62	124	65-145
Trichloroethene	↓	56	112	72-111
Benzene		60	120	74-126
Toluene		54	108	75-121
Chlorobenzene		54	108	84-126

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 1 out of 5 outside limits

5/11/93

Comments:

SURROGATE COMPOUND	% RECOVERED
Toluene-d8	96
Bromofluorobenzene	104
1,2-Dichloroethane-d4	88

SOIL VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC DEPARTMENT

New Protocol LCSD1

Lab Name: SWL-TULSA Inst. ID: L File ID: LG455

Client Code: BURLIAG Episode #: 1363

Matrix Spike–LCS No.: 5/10/93 Level (low/med): L

COMPOUND	SPIKE ADDED (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	49	98	65-145
Trichloroethene		50	100	72-111
Benzene		50	100	74-126
Toluene		53	106	75-121
Chlorobenzene		54	108	84-126

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

5/11/93

Comments:	SURROGATE COMPOUND	% RECOVERED
	Toluene-d8	92
	Bromofluorobenzene	102
	1,2-Dichloroethane-d4	104

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 W. ALBANY • BROKEN ARROW, OKLAHOMA 74012 • OFFICE (918) 251-2858 • FAX (918) 251-2599

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Lab File ID: LG454.D Lab Sample ID: VBLK1

Date Analyzed: 05/10/93 Time Analyzed: 1324

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: L

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VSL-9	13631.09	LG455.D	1349
02	VNS-1C	13631.11	LG456.D	1413
03	VNS-1CRE	13631.11RA	LG457.D	1458
04	LCS1	LCS1	LG458.D	1523
05	LCSD1	LCSD1	LG459.D	1549
06				
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COMMENTS:

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Lab File ID (Standard): LG453.D Date Analyzed: 05/10/93

Instrument ID: L Time Analyzed: 1215

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) Y

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	237851	3.89	675640	5.64	546373	11.95
	UPPER LIMIT	475702	4.39	1351280	6.14	1092746	12.45
	LOWER LIMIT	118926	3.39	337820	5.14	273186	11.45
	EPA SAMPLE No.						
01	VBLK1	235421	3.88	639236	5.64	495807	11.90
02	VSL-9	278283	3.88	800217	5.64	622886	11.91
03	VNS-1C	208833	3.89	413801	5.64	245805*	11.91
04	VNS-1CRE	212955	3.89	465418	5.64	235759*	11.92
05	LCS1	248211	3.89	649659	5.65	532641	11.93
06	LCSD1	252937	3.89	838970	5.64	670839	11.93
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNS-1C

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: LG456.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. 4 Data Analyzed: 05/10/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	8	J
67-64-1	Acetone	11	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VNS-1C

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: LG456.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. 4 Data Analyzed: 05/10/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNS-1CRE

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.11RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: LG457.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. 4 Data Analyzed: 05/10/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	6	J
67-64-1	Acetone	11	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VNS-1CRE

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.11RA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: LG457.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. 4 Data Analyzed: 05/10/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL-9

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: LG455.D

Level: (low/med) LOW Date Received: 05/07/93

% Moisture: not dec. 3 Data Analyzed: 05/10/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	16	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VSL-9

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: LG455.D

Level: (low/med) LOW- Date Received: 05/07/93

% Moisture: not dec. 3 Data Analyzed: 05/10/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: VBLK1

Sample wt/vol: 5.0 (g/mL) G Lab File ID: LG454.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Data Analyzed: 05/10/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: VBLK1

Sample wt/vol: 5.0 (g/mL) G Lab File ID: LG454.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Data Analyzed: 05/10/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: LCS1

Sample wt/vol: 5.0 (g/mL) G Lab File ID: LG458.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Data Analyzed: 05/10/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	48	
74-83-9	Bromomethane	55	
75-01-4	Vinyl Chloride	54	
75-00-3	Chloroethane	56	
75-09-2	Methylene Chloride	58	
67-64-1	Acetone	44	
75-15-0	Carbon Disulfide	61	
75-35-4	1,1-Dichloroethene	62	
75-34-3	1,1-Dichloroethane	58	
540-59-0	1,2-Dichloroethene (total)	59	
67-66-3	Chloroform	57	
107-06-2	1,2-Dichloroethane	48	
78-93-3	2-Butanone	36	
71-55-6	1,1,1-Trichloroethane	66	
56-23-5	Carbon Tetrachloride	66	
75-27-4	Bromodichloromethane	54	
78-87-5	1,2-Dichloropropane	54	
10061-01-5	cis-1,3-Dichloropropene	49	
79-01-6	Trichloroethene	56	
124-48-1	Dibromochloromethane	50	
79-00-5	1,1,2-Trichloroethane	46	
71-43-2	Benzene	60	
10061-02-6	trans-1,3-Dichloropropene	46	
75-25-2	Bromoform	50	
108-10-1	4-Methyl-2-Pentanone	43	
591-78-6	2-Hexanone	37	
127-18-4	Tetrachloroethene	57	
79-34-5	1,1,2,2-Tetrachloroethane	53	
108-88-3	Toluene	54	
108-90-7	Chlorobenzene	54	
100-41-4	Ethylbenzene	55	
100-42-5	Styrene	54	
1330-20-7	Xylene (Total)	160	

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: LCSD1

Sample wt/vol: 5.0 (g/mL) G Lab File ID: LG459.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Data Analyzed: 05/10/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	36	
74-83-9	Bromomethane	42	
75-01-4	Vinyl Chloride	40	
75-00-3	Chloroethane	43	
75-09-2	Methylene Chloride	49	
67-64-1	Acetone	52	
75-15-0	Carbon Disulfide	46	
75-35-4	1,1-Dichloroethene	49	
75-34-3	1,1-Dichloroethane	53	
540-59-0	1,2-Dichloroethene (total)	50	
67-66-3	Chloroform	54	
107-06-2	1,2-Dichloroethane	60	
78-93-3	2-Butanone	60	
71-55-6	1,1,1-Trichloroethane	44	
56-23-5	Carbon Tetrachloride	44	
75-27-4	Bromodichloromethane	53	
78-87-5	1,2-Dichloropropane	49	
10061-01-5	cis-1,3-Dichloropropene	54	
79-01-6	Trichloroethene	50	
124-48-1	Dibromochloromethane	52	
79-00-5	1,1,2-Trichloroethane	55	
71-43-2	Benzene	50	
10061-02-6	trans-1,3-Dichloropropene	52	
75-25-2	Bromoform	52	
108-10-1	4-Methyl-2-Pentanone	57	
591-78-6	2-Hexanone	55	
127-18-4	Tetrachloroethene	53	
79-34-5	1,1,2,2-Tetrachloroethane	54	
108-88-3	Toluene	53	
108-90-7	Chlorobenzene	54	
100-41-4	Ethylbenzene	51	
100-42-5	Styrene	54	
1330-20-7	Xylene (Total)	140	

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Level:(low/med) MED

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TBP)#	S4 (TPH)#	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	LCS	84	76	61	79					0
02	LCSD	86	80	68	85					0
03	VSL-1	82	74	66	82					0
04	VSL-2	77	76	68	78					0
05	VSL-3	85	81	81	79					0
06	VSL-4	85	76	76	70					0
07	VSL-5	86	81	67	83					0
08	VSL-6	88	79	75	92					0
09	VSL-7	86	78	77	75					0
10	VSL-8	84	76	71	89					0
11	VSL-9	86	82	66	77					0
12	VSL-10	83	81	57	80					0
13	VNS-1C	80	77	66	69					0
14	SBLK1	76	69	48	79					0
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(23-120)
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)
S3 (TBP)	= 2,4,6-Tribromophenol	(19-122)
S4 (TPH)	= Terphenyl-d14	(18-137)
S5	= N/A	
S6	= N/A	
S7	= N/A	
S8	= N/A	

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix Spike - EPA Sample No.: LCS Level(low/med) MED

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Hexachlorobenzene	100000	0	78000	78	25-150
4,4'-DDT	100000	0	73000	73	25-150

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	100000	76000	76	2	40	25-150
4,4'-DDT	100000	75000	75	3	40	25-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

COMMENTS: _____

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Lab File ID: A1332.D Lab Sample ID: BL050712S

Instrument ID: A Date Extracted: 05/07/93

Matrix: (soil/water) SOIL Date Analyzed: 05/10/93

Level:(low/med) MED Time Analyzed: 1518

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS	LCS:13631	A1316.D	05/10/93
02	LCSD	LCSD13631	A1317.D	05/10/93
03	VSL-1	13631.01	A1318.D	05/10/93
04	VSL-2	13631.02	A1319.D	05/10/93
05	VSL-3	13631.03	A1320.D	05/10/93
06	VSL-4	13161.04	A1321.D	05/10/93
07	VSL-5	13631.05	A1322.D	05/10/93
08	VSL-6	13631.06	A1323.D	05/10/93
09	VSL-7	13631.07	A1324.D	05/10/93
10	VSL-8	13631.08	A1325.D	05/10/93
11	VSL-9	13631.09	A1326.D	05/10/93
12	VSL-10	13631.10	A1327.D	05/10/93
13	VNS-1C	13631.11	A1328.D	05/10/93
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Lab File ID (Standard): A1310.D Date Analyzed: 05/10/93

Instrument ID: A Time Analyzed: 0835

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	944476	3.16	398578	5.08	457278	6.64
	UPPER LIMIT	1888952	3.66	797156	5.58	914556	7.14
	LOWER LIMIT	472238	2.66	199289	4.58	228639	6.14
	EPA SAMPLE No.						
01	LCS	1100299	3.15	492427	5.08	629257	6.64
02	LCSD	1201923	3.15	528315	5.08	731476	6.64
03	VSL-1	1220317	3.15	553982	5.08	709601	6.64
04	VSL-2	903974	3.16	374295	5.08	424835	6.64
05	VSL-3	854601	3.16	353229	5.08	434189	6.64
06	VSL-4	1094868	3.16	460611	5.08	607776	6.63
07	VSL-5	873595	3.16	348625	5.08	409310	6.64
08	VSL-6	981583	3.16	410926	5.08	520328	6.63
09	VSL-7	935621	3.16	397131	5.08	510900	6.63
10	VSL-8	974032	3.16	411256	5.08	505467	6.64
11	VSL-9	822391	3.17	331865	5.09	382839	6.64
12	VSL-10	898101	3.16	352927	5.09	401974	6.64
13	VNS-1C	996776	3.16	388961	5.08	372251	6.64
14	SBLK1	1076630	3.16	459264	5.09	537765	6.64
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Lab File ID (Standard): A1310.D Date Analyzed: 05/10/93

Instrument ID: A Time Analyzed: 0835

		IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	231651	9.45	283277	10.86	0	0.00
	UPPER LIMIT	463302	9.95	566554	11.36	0	0.50
	LOWER LIMIT	115826	8.95	141638	10.36	0	-0.50
	EPA SAMPLE No.						
01	LCS	353367	9.45	365886	10.86		
02	LCSD	394167	9.45	394194	10.87		
03	VSL-1	308593	9.46	276663	10.87		
04	VSL-2	227160	9.45	263081	10.87		
05	VSL-3	235427	9.45	250208	10.86		
06	VSL-4	375737	9.45	392211	10.87		
07	VSL-5	209371	9.45	192633	10.86		
08	VSL-6	227957	9.45	234939	10.86		
09	VSL-7	268753	9.45	241409	10.86		
10	VSL-8	222774	9.45	203546	10.86		
11	VSL-9	221504	9.46	220211	10.87		
12	VSL-10	199757	9.46	207903	10.87		
13	VNS-1C	182921	9.45	201101	10.86		
14	SBLK1	250201	9.46	284504	10.87		
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Chrysene-d12
IS5 = Perylene-d12
IS6 = N/A

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNS-1C

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.11

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1328.D

Level: (low/med) MED Date Received: 05/07/93

% Moisture: 4 decanted: (Y/N) N Date Extracted:05/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/10/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	75000	
72-54-8	4,4'-DDD	230000	
72-55-9	4,4'-DDE	23000	
50-29-3	4,4'-DDT	95000	
60-57-1	Dieldrin	10000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL-1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.01

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1318.D

Level: (low/med) MED Date Received: 05/07/93

% Moisture: 15 decanted: (Y/N) N Date Extracted:05/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/10/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	12000	U
72-54-8	4,4'-DDD	12000	U
72-55-9	4,4'-DDE	12000	U
50-29-3	4,4'-DDT	12000	U
60-57-1	Dieldrin	12000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL-2

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.02

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1319.D

Level: (low/med) MED Date Received: 05/07/93

% Moisture: 9 decanted: (Y/N) N Date Extracted: 05/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/10/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	11000	U
72-54-8	4,4'-DDD	6000	
72-55-9	4,4'-DDE	8500	
50-29-3	4,4'-DDT	30000	
60-57-1	Dieldrin	11000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL-3

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.03

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1320.D

Level: (low/med) MED Date Received: 05/07/93

% Moisture: 3 decanted: (Y/N) N Date Extracted:05/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/10/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	4000	
72-54-8	4,4'-DDD	20000	
72-55-9	4,4'-DDE	5500	
50-29-3	4,4'-DDT	30000	
60-57-1	Dieldrin	10000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL-4

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13161.04

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1321.D

Level: (low/med) MED Date Received: 05/07/93

% Moisture: 12 decanted: (Y/N) N Date Extracted:05/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/10/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	11000	U
72-54-8	4,4'-DDD	18000	
72-55-9	4,4'-DDE	4400	
50-29-3	4,4'-DDT	16000	
60-57-1	Dieldrin	11000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL-5

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.05

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1322.D

Level: (low/med) MED Date Received: 05/07/93

% Moisture: 2 decanted: (Y/N) N Date Extracted: 05/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/10/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	10000	U
72-54-8	4,4'-DDD	69000	
72-55-9	4,4'-DDE	16000	
50-29-3	4,4'-DDT	52000	
60-57-1	Dieldrin	10000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL-6

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.06

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1323.D

Level: (low/med) MED Date Received: 05/07/93

% Moisture: 2 decanted: (Y/N) N Date Extracted:05/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/10/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	10000	U
72-54-8	4,4'-DDD	6400	
72-55-9	4,4'-DDE	4700	
50-29-3	4,4'-DDT	21000	
60-57-1	Dieldrin	10000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL-7

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.07

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1324.D

Level: (low/med) MED Date Received: 05/07/93

% Moisture: 2 decanted: (Y/N) N Date Extracted:05/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/10/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	10000	U
72-54-8	4,4'-DDD	230000	
72-55-9	4,4'-DDE	38000	
50-29-3	4,4'-DDT	150000	
60-57-1	Dieldrin	10000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL-8

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.08

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1325.D

Level: (low/med) MED Date Received: 05/07/93

% Moisture: 4 decanted: (Y/N) N Date Extracted: 05/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/10/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	10000	U
72-54-8	4,4'-DDD	5800	
72-55-9	4,4'-DDE	11000	
50-29-3	4,4'-DDT	30000	
60-57-1	Dieldrin	10000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL-9

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.09

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1326.D

Level: (low/med) MED Date Received: 05/07/93

% Moisture: 3 decanted: (Y/N) N Date Extracted:05/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/10/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	10000	U
72-54-8	4,4'-DDD	1700	
72-55-9	4,4'-DDE	10000	U
50-29-3	4,4'-DDT	1400	
60-57-1	Dieldrin	10000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL-10

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631.10

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1327.D

Level: (low/med) MED - Date Received: 05/07/93

% Moisture: 3 decanted: (Y/N) N Date Extracted:05/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/10/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	10000	U
72-54-8	4,4'-DDD	10000	U
72-55-9	4,4'-DDE	10000	U
50-29-3	4,4'-DDT	10000	U
60-57-1	Dieldrin	10000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: BL050712S

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1332.D

Level: (low/med) MED Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:05/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/10/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	10000	U
72-54-8	4,4'-DDD	10000	U
72-55-9	4,4'-DDE	10000	U
50-29-3	4,4'-DDT	10000	U
60-57-1	Dieldrin	10000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: LCSD13631

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1317.D

Level: (low/med) MED Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:05/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/10/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	76000	
72-54-8	4,4'-DDD	10000	U
72-55-9	4,4'-DDE	10000	U
50-29-3	4,4'-DDT	75000	
60-57-1	Dieldrin	10000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: LCS:13631

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1316.D

Level: (low/med) MED Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:05/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/10/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	78000	
72-54-8	4,4'-DDD	10000	U
72-55-9	4,4'-DDE	10000	U
50-29-3	4,4'-DDT	73000	
60-57-1	Dieldrin	10000	U

SOUTHWEST LABORATORY
OF OKLAHOMA, INC.

June 4, 1993

Mr. Dave Eagleton
Burlington Environmental
210 West Sand Bank Road
Columbia, Illinois 62236

Re: Woods Industries, SWLO Episode 13631

Dear Mr. Eagleton:

Enclosed please find the Organic CLP package (full and accounting) for your samples received in our laboratory on May 7, 1993. These samples where originally reported to you May 20, 1993. The Dieldrin failed to meet the Detection Limit requirements and had to be reanalyzed by EPA CLP protocol.

A copy of the Accounting Package has been sent to Doug Mather.

Should you have any further questions or require additional information, please call.

Sincerely,

Chuck Hoover

Chuck Hoover
Southwest Laboratory of Oklahoma

CH/ld

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 6415

PROJECT NAME: Woods Industries
PROJECT NUMBER: 128830868 MAJOR TASK: 2856
SAMPLERS: [signature]
LAB DESTINATION: Southwest Lab - Oklahoma

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pest List	VOA's					PRESERVATIVES: ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
VSL-1	5-6-93	see	data	sheets		1	X						X		3 DAY Turnaround
VSL-2	↓	↓			↓	1	X						X		
VSL-3						1	X						X		
VSL-4						1	X						X		
VSL-5						1	X						X		
VSL-6						1	X						X		
VSL-7						1	X						X		
VSL-8						1	X						X		
VSL-9						3	X	2					X		
VSL-10						1	X						X		
VNS-10	↓	↓			↓	3	X	2					X		

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
[signature]	5/6/93	1417	K. Follis	5/7/93	0845

SHIPPING NOTES: 3 DAY Turnaround per contract

LAB NOTES:

2F

SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13631

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): DB-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKSU	90	116	86	94			0
02	LCS13631	100	114	85	92			0
03	VSL-1	94	106	79	87			0
04	VSL-10	92	105	72	90			0
05	VSL-9	92	104	76	86			0

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

\# Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3LCC

SOIL PESTICIDE LAB CONTROL SAMPLE RECOVERY

EPA SAMPLE NO. :

LCS13631

Name:SWL-TULSA Contract: BURLING

Lab Code:SWOK Case No.: BURL1 SAS No.: SDG No.:13631

Lab Sample ID: LCS13631
LCS Aliquot: 1.0 (g)
Concentrated Extract Volume: 10000 (uL)
Injection Volume:2.00(uL)
Sulfur Cleanup: (Y/N) N

LCS Lot No.:11-15-5
Date Extracted:05/15/93
Date Analyzed:05/17/93
Dilution Factor:1.0
pH:N/A

Instrument ID(1) : HP-08A GC Column(1) : DB-608 ID:W608-31

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	% REC	#	QC LIMITS
gamma-BHC (Lindane)	500.0	501.00	100		56-123
Heptachlor	500.0	497.00	99		40-131
Aldrin	500.0	502.00	100		40-120
Dieldrin	1000.0	929.00	93		52-126
Endrin	1000.0	932.00	93		56-121
4,4'-DDT	1000.0	843.00	84		38-127

Instrument ID(2) : HP-08B GC Column(2) : DB-1701 ID:W1701-28

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	% REC	#	QC LIMITS
gamma-BHC (Lindane)	500.0	650.00	130	*	56-123
Heptachlor	500.0	646.00	129		40-131
Aldrin	500.0	501.00	100		40-120
Dieldrin	1000.0	1127.00	113		52-126
Endrin	1000.0	1124.00	112		56-121
4,4'-DDT	1000.0	1142.00	114		38-127

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

LCS Recovery:1 outside limits out of 14 total.

COMMENTS: _____

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKSU

Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13631

Lab Sample ID: PBLKSU Lab File ID: _____

Matrix:(soil/water) SOIL Extraction:(SepF/Cont/Sonc) SONC

Sulfur Cleanup: (Y/N) N Date Extracted: 05/15/93

Date Analyzed (1): 05/17/93 Date Analyzed (2): 05/17/93

Time Analyzed (1): 2101 Time Analyzed (2): 2014

Instrument ID (1): HP-08A Instrument ID (2): HP-08B

GC Column (1): DB-608 ID: 0.53 (mm) GC Column (2): DB-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	LCS13631	LCS13631	05/17/93	05/17/93
02	VSL-1	13631-01	05/18/93	05/17/93
03	VSL-10	13631-10	05/18/93	05/18/93
04	VSL-9	13631-09	05/18/93	05/18/93

COMMENTS:

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL-1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631-01

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

% Moisture: 15 decanted: (Y/N) N Date Received: 05/07/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/15/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/18/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	60	U
319-85-7	beta-BHC	60	U
319-86-8	delta-BHC	60	U
58-89-9	gamma-BHC (Lindane)	60	U
76-44-8	Heptachlor	60	U
309-00-2	Aldrin	60	U
1024-57-3	Heptachlor epoxide	60	U
959-98-8	Endosulfan I	60	U
60-57-1	Dieldrin	17	J
72-55-9	4,4'-DDE	120	U
72-20-8	Endrin	120	U
33213-65-9	Endosulfan II	120	U
72-54-8	4,4'-DDD	120	U
1031-07-8	Endosulfan sulfate	120	U
50-29-3	4,4'-DDT	120	U
72-43-5	Methoxychlor	600	U
53494-70-5	Endrin ketone	120	U
7421-93-4	Endrin aldehyde	120	U
5103-71-9	alpha-Chlordane	60	U
5103-74-2	gamma-Chlordane	60	U
8001-35-2	Toxaphene	6000	U
12674-11-2	Aroclor-1016	1200	U
11104-28-2	Aroclor-1221	2400	U
11141-16-5	Aroclor-1232	1200	U
53469-21-9	Aroclor-1242	1200	U
12672-29-6	Aroclor-1248	1200	U
11097-69-1	Aroclor-1254	1200	U
11096-82-5	Aroclor-1260	1200	U

6/13/93

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL-9

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631-09

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

% Moisture: 3 decanted: (Y/N) N Date Received: 05/07/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/15/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/18/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	53	U
319-85-7	beta-BHC	53	U
319-86-8	delta-BHC	53	U
58-89-9	gamma-BHC (Lindane)	53	U
76-44-8	Heptachlor	53	U
309-00-2	Aldrin	53	U
1024-57-3	Heptachlor epoxide	53	U
959-98-8	Endosulfan I	53	U
60-57-1	Dieldrin	150	
72-55-9	4,4'-DDE	100	U
72-20-8	Endrin	100	U
33213-65-9	Endosulfan II	100	U
72-54-8	4,4'-DDD	100	U
1031-07-8	Endosulfan sulfate	100	U
50-29-3	4,4'-DDT	100	U
72-43-5	Methoxychlor	530	U
53494-70-5	Endrin ketone	100	U
7421-93-4	Endrin aldehyde	100	U
5103-71-9	alpha-Chlordane	53	U
5103-74-2	gamma-Chlordane	53	U
8001-35-2	Toxaphene	5300	U
12674-11-2	Aroclor-1016	1000	U
11104-28-2	Aroclor-1221	2100	U
11141-16-5	Aroclor-1232	1000	U
53469-21-9	Aroclor-1242	1000	U
12672-29-6	Aroclor-1248	1000	U
11097-69-1	Aroclor-1254	1000	U
11096-82-5	Aroclor-1260	1000	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL-10

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: 13631-10

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

% Moisture: 3 decanted: (Y/N) N Date Received: 05/07/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/15/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/18/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	53	U
319-85-7	beta-BHC	53	U
319-86-8	delta-BHC	53	U
58-89-9	gamma-BHC (Lindane)	53	U
76-44-8	Heptachlor	53	U
309-00-2	Aldrin	53	U
1024-57-3	Heptachlor epoxide	53	U
959-98-8	Endosulfan I	53	U
60-57-1	Dieldrin	66	JP
72-55-9	4,4'-DDE	100	U
72-20-8	Endrin	100	U
33213-65-9	Endosulfan II	100	U
72-54-8	4,4'-DDD	100	U
1031-07-8	Endosulfan sulfate	100	U
50-29-3	4,4'-DDT	100	U
72-43-5	Methoxychlor	530	U
53494-70-5	Endrin ketone	100	U
7421-93-4	Endrin aldehyde	100	U
5103-71-9	alpha-Chlordane	53	U
5103-74-2	gamma-Chlordane	53	U
8001-35-2	Toxaphene	5300	U
12674-11-2	Aroclor-1016	1000	U
11104-28-2	Aroclor-1221	2100	U
11141-16-5	Aroclor-1232	1000	U
53469-21-9	Aroclor-1242	1000	U
12672-29-6	Aroclor-1248	1000	U
11097-69-1	Aroclor-1254	1000	U
11096-82-5	Aroclor-1260	1000	U

6/21/93

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS13631

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: SDG No.: 13631

Matrix: (soil/water) SOIL Lab Sample ID: LCS13631

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

% Moisture: 0 decanted: (Y/N) N Date Received: 05/07/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/15/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/17/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	51	U
319-85-7	beta-BHC	51	U
319-86-8	delta-BHC	51	U
58-89-9	gamma-BHC (Lindane)	500	P
76-44-8	Heptachlor	500	P
309-00-2	Aldrin	500	
1024-57-3	Heptachlor epoxide	51	U
959-98-8	Endosulfan I	51	U
60-57-1	Dieldrin	930	
72-55-9	4,4'-DDE	99	U
72-20-8	Endrin	930	
33213-65-9	Endosulfan II	99	U
72-54-8	4,4'-DDD	99	U
1031-07-8	Endosulfan sulfate	99	U
50-29-3	4,4'-DDT	840	P
72-43-5	Methoxychlor	510	U
53494-70-5	Endrin ketone	99	U
7421-93-4	Endrin aldehyde	99	U
5103-71-9	alpha-Chlordane	51	U
5103-74-2	gamma-Chlordane	51	U
8001-35-2	Toxaphene	5100	U
12674-11-2	Aroclor-1016	990	U
11104-28-2	Aroclor-1221	2000	U
11141-16-5	Aroclor-1232	990	U
53469-21-9	Aroclor-1242	990	U
12672-29-6	Aroclor-1248	990	U
11097-69-1	Aroclor-1254	990	U
11096-82-5	Aroclor-1260	990	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKSU

Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13631

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

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/15/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/17/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	51	U
319-85-7	beta-BHC	51	U
319-86-8	delta-BHC	51	U
58-89-9	gamma-BHC (Lindane)	51	U
76-44-8	Heptachlor	51	U
309-00-2	Aldrin	51	U
1024-57-3	Heptachlor epoxide	51	U
959-98-8	Endosulfan I	51	U
60-57-1	Dieldrin	99	U
72-55-9	4,4'-DDE	99	U
72-20-8	Endrin	99	U
33213-65-9	Endosulfan II	99	U
72-54-8	4,4'-DDD	99	U
1031-07-8	Endosulfan sulfate	99	U
50-29-3	4,4'-DDT	99	U
72-43-5	Methoxychlor	510	U
53494-70-5	Endrin ketone	99	U
7421-93-4	Endrin aldehyde	99	U
5103-71-9	alpha-Chlordane	51	U
5103-74-2	gamma-Chlordane	51	U
8001-35-2	Toxaphene	5100	U
12674-11-2	Aroclor-1016	990	U
11104-28-2	Aroclor-1221	2000	U
11141-16-5	Aroclor-1232	990	U
53469-21-9	Aroclor-1242	990	U
12672-29-6	Aroclor-1248	990	U
11097-69-1	Aroclor-1254	990	U
11096-82-5	Aroclor-1260	990	U

APPENDIX H-3

Samples Collected on May 10, 1993

PROJECT MEMORANDUM

DATE: October 11, 1993

TO: David Eagleton

FROM: Kathy Blaine

PROJECT: 12883088
Woods Industries, Inc.

SUBJECT: ANALYTICAL DATA QA REVIEW

I have completed a review of the analytical data for the four samples collected on May 10, 1993 and listed on COC# 6419. The Southwest Laboratories episode number was 13676. The samples included in this group are as follows:

VE3-1
VE3-2
VE4-1
VE4-2

A full CLP-type package was submitted by the laboratory and the review was conducted in accordance with the most recent USEPA Data Validation Functional Guidelines. Based on this information, the data appeared to be valid with no deviations from the project scope or QA requirements.

If you have any questions or need additional information, please feel free to contact me.

kab/kab/DAT13676.MEM

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 2856-2
Page 1 of —

PROJECT NAME Woods Industries/Yakima Washington
PROJECT NO. 128830B8
TASK DESCRIPTION Verification Soil Samples
PHASE 2856 TASK 22
SAMPLE TYPE(S) Soil

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
PSLWBTM20		0006	N/A	4-7-93		Southwest	4-8-93	4-8-93
PNLSW2-55		0006	N/A.	4-7-93		Southwest	4-8-93	4-8-93
VSL-1	13631.01	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-2	13631.02	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-3	13631.03	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-4	13631.04	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-5	13631.05	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-6	13631.06	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-7	13631.07	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-8	13631.08	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-9	13631.09	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-10	13631.10	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-11	13631.11	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
* VE3-1	13676.01	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
* VE3-2	13676.02	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
* VE4-1	13676.04	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
* VE4-2	13676.03	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
AVE60-01	13942.01	6429	N/A	5-24-93		Southwest	5-25 93	5-28-93
VE-1		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
VE-2		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
CLP-SP1		5561	N/A	6-10-93		Southwest	6-16-93	6-14-93
VSL-11-01	14739.01	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-12-02	14739.02	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-13-02	14739.03	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-14-03	14739.04	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 7856-3
Page 2 of 2

PROJECT NAME Woods Industries / Yakima Washington
TASK DESCRIPTION Verification Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 12883088
PHASE 7856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
VSL-15-04	14739.05	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-16-03	14739.06	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-17-02	14739.07	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-18-03	14739.08	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-19-05	14739.09	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-20-02	14739.10	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VNE01-00	14944.01	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE02-02	14944.02	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE03-03	14944.03	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE04-02	14944.04	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE05-02	14944.05	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE06-00	14944.06	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE07-06	14944.07	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE08-03	14944.08	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE09-03	14944.09	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE10-03	14944.10	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE11-03	14944.11	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE12	15107.01	5601	N/A	8-24-93		Southwest	8-17-93	8-19-93
VNE13	15107.02	5601	N/A	8-24-93		Southwest	8-25-93	8-27-93
						Southwest	8-25-93	8-27-93

SOUTHWEST LABORATORY
OF OKLAHOMA, INC.

June 4, 1993

Mr. Dave Eagleton
Burlington Environmental
210 West Sand Bank Road
Columbia, Illinois 62236

Re: Woods Industries, SWLO Episode 13676

Dear Mr. Eagleton:

Enclosed please find the Organic CLP package (full and accounting) for your samples received in our laboratory on May 11, 1993. These samples where originally reported to you May 20, 1993. The Dieldrin failed to meet the Detection Limit requirements and had to be reanalyzed by EPA CLP protocol.

A copy of the Accounting Package has been sent to Doug Mather.

Should you have any further questions or require additional information, please call.

Sincerely,

Chuck Hoover

Chuck Hoover
Southwest Laboratory of Oklahoma

CH/ld

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 6419

PROJECT NAME Woods Industries
PROJECT NUMBER 13883088 MAJOR TASK 2856
SAMPLERS John W. Dolan
LAB DESTINATION South West Labs.

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Verification parameters							PRESERVATIVES: ICED	PRESERVATIVES: CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
VE3-1	5-10-93	See			data sheets.	1	✓									
VE3-2	↓				↓	1	✓									
VEV-1						1	✓									
VEV-2	↓					1	✓									
						4	4									

4 | 4

RELINQUISHED BY

SIGNATURE	DATE	TIME
John W. Dolan	5-10-93	1315

RECEIVED BY

SIGNATURE	DATE	TIME
M Hamby	5/11/93	0905

SHIPPING NOTES
May contain hazardous materials.

LAB NOTES

BE-34 (1/92)

2F

SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: _____ SDG No.: 13676

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): DB-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC	#	TCX 2 %REC	#	DCB 1 %REC	#	DCB 2 %REC	#	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKSW	95		110		75		94				0
02	VE3-1	72		88		69		79				0
03	VE3-2	93		101		72		88				0
04	VE4-1	76		95		70		94				0
05	VE4-2	56*		94		80		96				1

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

\# Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKSW

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: _____ SDG No.: 13676

Lab Sample ID: PBLKSW Lab File ID: _____

Matrix:(soil/water) SOIL Extraction:(SepF/Cont/Sonc) SONC

Sulfur Cleanup: (Y/N) N Date Extracted: 05/15/93

Date Analyzed (1): 05/18/93 Date Analyzed (2): 05/18/93

Time Analyzed (1): 0624 Time Analyzed (2): 0537

Instrument ID (1): HP-08A Instrument ID (2): HP-08B

GC Column (1): DB-608 ID: 0.53 (mm) GC Column (2): DB-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	VE3-1	13676-01	05/18/93	05/18/93
02	VE3-2	13676-02	05/18/93	05/18/93
03	VE4-1	13676-03	05/18/93	05/18/93
04	VE4-2	13676-04	05/18/93	05/18/93

COMMENTS:

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VE3-1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: _____ SDG No.: 13676

Matrix: (soil/water) SOIL Lab Sample ID: 13676-01

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

% Moisture: 11 decanted: (Y/N) N Date Received: 05/11/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/15/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/18/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 9.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	57	U
319-85-7	beta-BHC	57	U
319-86-8	delta-BHC	57	U
58-89-9	gamma-BHC (Lindane)	57	U
76-44-8	Heptachlor	57	U
309-00-2	Aldrin	57	U
1024-57-3	Heptachlor epoxide	57	U
959-98-8	Endosulfan I	57	U
60-57-1	Dieldrin	110	U
72-55-9	4,4'-DDE	110	U
72-20-8	Endrin	110	U
33213-65-9	Endosulfan II	110	U
72-54-8	4,4'-DDD	110	U
1031-07-8	Endosulfan sulfate	110	U
50-29-3	4,4'-DDT	110	U
72-43-5	Methoxychlor	570	U
53494-70-5	Endrin ketone	110	U
7421-93-4	Endrin aldehyde	110	U
5103-71-9	alpha-Chlordane	57	U
5103-74-2	gamma-Chlordane	57	U
8001-35-2	Toxaphene	5700	U
12674-11-2	Aroclor-1016	1100	U
11104-28-2	Aroclor-1221	2300	U
11141-16-5	Aroclor-1232	1100	U
53469-21-9	Aroclor-1242	1100	U
12672-29-6	Aroclor-1248	1100	U
11097-69-1	Aroclor-1254	1100	U
11096-82-5	Aroclor-1260	1100	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VE3-2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: SDG No.: 13676

Matrix: (soil/water) SOIL Lab Sample ID: 13676-02

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

% Moisture: 13 decanted: (Y/N) N Date Received: 05/11/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/15/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/18/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 8.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	59	U
319-85-7	beta-BHC	59	U
319-86-8	delta-BHC	59	U
58-89-9	gamma-BHC (Lindane)	59	U
76-44-8	Heptachlor	59	U
309-00-2	Aldrin	59	U
1024-57-3	Heptachlor epoxide	59	U
959-98-8	Endosulfan I	59	U
60-57-1	Dieldrin	110	U
72-55-9	4,4'-DDE	110	U
72-20-8	Endrin	110	U
33213-65-9	Endosulfan II	110	U
72-54-8	4,4'-DDD	110	U
1031-07-8	Endosulfan sulfate	110	U
50-29-3	4,4'-DDT	110	U
72-43-5	Methoxychlor	590	U
53494-70-5	Endrin ketone	110	U
7421-93-4	Endrin aldehyde	110	U
5103-71-9	alpha-Chlordane	59	U
5103-74-2	gamma-Chlordane	59	U
8001-35-2	Toxaphene	5900	U
12674-11-2	Aroclor-1016	1100	U
11104-28-2	Aroclor-1221	2300	U
11141-16-5	Aroclor-1232	1100	U
53469-21-9	Aroclor-1242	1100	U
12672-29-6	Aroclor-1248	1100	U
11097-69-1	Aroclor-1254	1100	U
11096-82-5	Aroclor-1260	1100	U

6/3/93

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VE4-1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: SDG No.: 13676

Matrix: (soil/water) SOIL Lab Sample ID: 13676-03

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

% Moisture: 15 decanted: (Y/N) N Date Received: 05/11/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/15/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/18/93

Injection Volume: 2.00 (uL) Dilution Factor: 5.00

GPC Cleanup: (Y/N) N pH: 7.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	300	U
319-85-7	beta-BHC	300	U
319-86-8	delta-BHC	300	U
58-89-9	gamma-BHC (Lindane)	300	U
76-44-8	Heptachlor	300	U
309-00-2	Aldrin	300	U
1024-57-3	Heptachlor epoxide	300	U
959-98-8	Endosulfan I	300	U
60-57-1	Dieldrin	2700	
72-55-9	4,4'-DDE	580	U
72-20-8	Endrin	580	U
33213-65-9	Endosulfan II	580	U
72-54-8	4,4'-DDD	580	U
1031-07-8	Endosulfan sulfate	580	U
50-29-3	4,4'-DDT	580	U
72-43-5	Methoxychlor	3000	U
53494-70-5	Endrin ketone	580	U
7421-93-4	Endrin aldehyde	580	U
5103-71-9	alpha-Chlordane	300	U
5103-74-2	gamma-Chlordane	300	U
8001-35-2	Toxaphene	30000	U
12674-11-2	Aroclor-1016	5800	U
11104-28-2	Aroclor-1221	12000	U
11141-16-5	Aroclor-1232	5800	U
53469-21-9	Aroclor-1242	5800	U
12672-29-6	Aroclor-1248	5800	U
11097-69-1	Aroclor-1254	5800	U
11096-82-5	Aroclor-1260	5800	U

6/3/93

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VE4-2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: SDG No.: 13676

Matrix: (soil/water) SOIL Lab Sample ID: 13676-04

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

% Moisture: 16 decanted: (Y/N) N Date Received: 05/11/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/15/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/18/93

Injection Volume: 2.00 (uL) Dilution Factor: 5.00

GPC Cleanup: (Y/N) N pH: 8.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	300	U
319-85-7	beta-BHC	300	U
319-86-8	delta-BHC	300	U
58-89-9	gamma-BHC (Lindane)	300	U
76-44-8	Heptachlor	300	U
309-00-2	Aldrin	300	U
1024-57-3	Heptachlor epoxide	300	U
959-98-8	Endosulfan I	300	U
60-57-1	Dieldrin	100	J
72-55-9	4,4'-DDE	590	U
72-20-8	Endrin	590	U
33213-65-9	Endosulfan II	590	U
72-54-8	4,4'-DDD	590	U
1031-07-8	Endosulfan sulfate	590	U
50-29-3	4,4'-DDT	590	U
72-43-5	Methoxychlor	3000	U
53494-70-5	Endrin ketone	590	U
7421-93-4	Endrin aldehyde	590	U
5103-71-9	alpha-Chlordane	300	U
5103-74-2	gamma-Chlordane	300	U
8001-35-2	Toxaphene	30000	U
12674-11-2	Aroclor-1016	5900	U
11104-28-2	Aroclor-1221	12000	U
11141-16-5	Aroclor-1232	5900	U
53469-21-9	Aroclor-1242	5900	U
12672-29-6	Aroclor-1248	5900	U
11097-69-1	Aroclor-1254	5900	U
11096-82-5	Aroclor-1260	5900	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKSW

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: _____ SDG No.: 13676

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

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 05/15/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/18/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	51	U
319-85-7	beta-BHC	51	U
319-86-8	delta-BHC	51	U
58-89-9	gamma-BHC (Lindane)	51	U
76-44-8	Heptachlor	51	U
309-00-2	Aldrin	51	U
1024-57-3	Heptachlor epoxide	51	U
959-98-8	Endosulfan I	51	U
60-57-1	Dieldrin	99	U
72-55-9	4,4'-DDE	99	U
72-20-8	Endrin	99	U
33213-65-9	Endosulfan II	99	U
72-54-8	4,4'-DDD	99	U
1031-07-8	Endosulfan sulfate	99	U
50-29-3	4,4'-DDT	99	U
72-43-5	Methoxychlor	510	U
53494-70-5	Endrin ketone	99	U
7421-93-4	Endrin aldehyde	99	U
5103-71-9	alpha-Chlordane	51	U
5103-74-2	gamma-Chlordane	51	U
8001-35-2	Toxaphene	5100	U
12674-11-2	Aroclor-1016	990	U
11104-28-2	Aroclor-1221	2000	U
11141-16-5	Aroclor-1232	990	U
53469-21-9	Aroclor-1242	990	U
12672-29-6	Aroclor-1248	990	U
11097-69-1	Aroclor-1254	990	U
11096-82-5	Aroclor-1260	990	U

PENNINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. 80 2856-
PAGE __ OF __

PROJECT NAME WORKS ENTERPRISES ____ SAMPLE LOCATION NO. SL
PROJECT NO. [illegible] ____ MAJOR TASK 7854 SUBTASK 71
DATE 5-10-93 ____ SAMPLERS [illegible]

SAMPLING METHOD [illegible] TYPE AER KEITS
TYPE OF SAMPLE: DUPLICATE __ GRAB __ BACKGROUND __ COMPOSITE __
REASON FOR COLLECTION: LAB ANALYSIS __ HEADSPACE __ PHYSICAL TESTING __

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
VE3-1	N/A	1240	1A [illegible]	[illegible]
VE3-2	↓	1243	↓	↓
		~~1245~~		
VE4-1		1245		
VE4-2		1246		

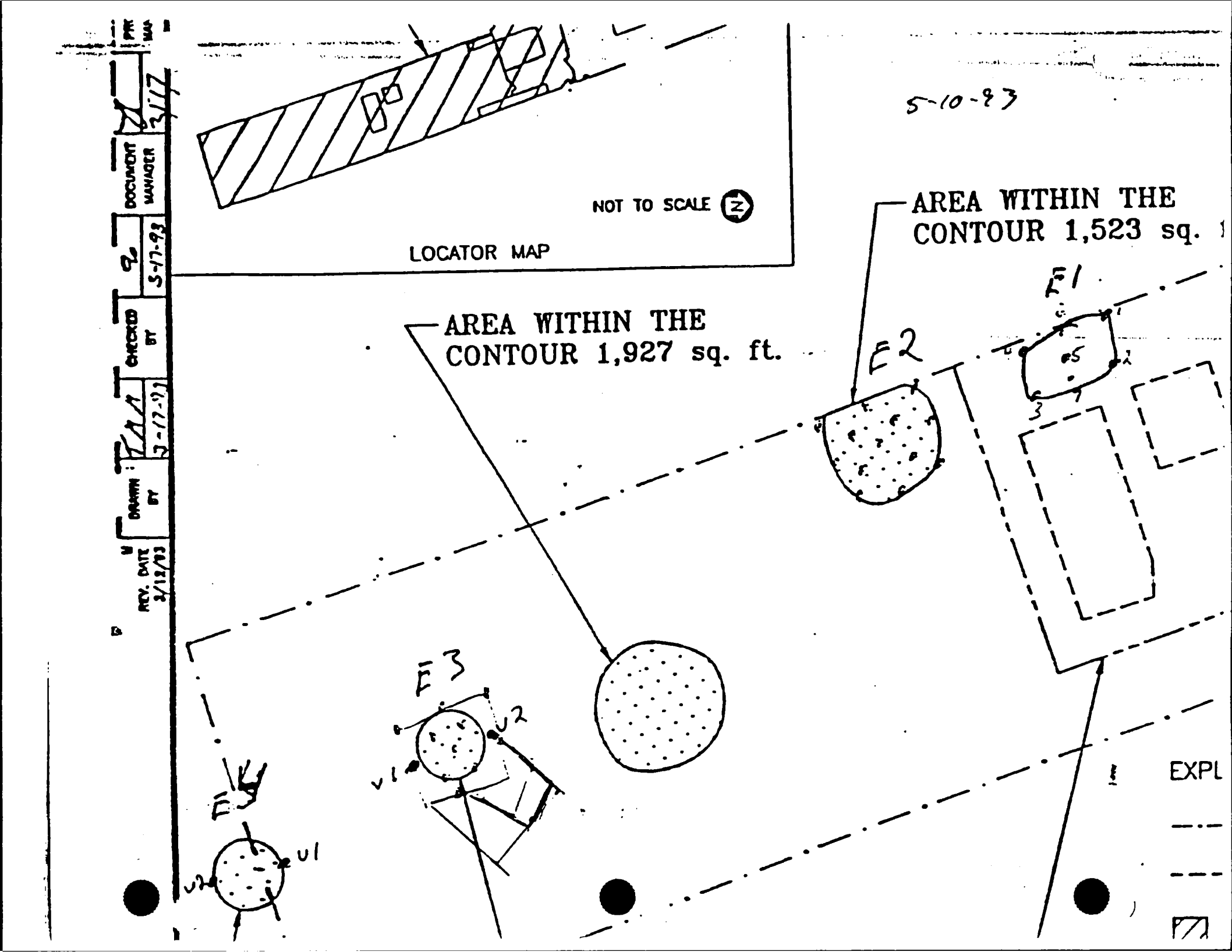
INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED(YES/NO) 1255 TIME [signature] SEALER
COC COMPLETED(YES/NO) 1305 TIME 6417 COC NO. [signature] COMPLETED

KG = [illegible]


LOCATOR MAP
NOT TO SCALE
5-10-93
AREA WITHIN THE CONTOUR 1,523 sq.
AREA WITHIN THE CONTOUR 1,927 sq. ft.
E1
E2
E3
E4
E5
V1
V2
EXPL
DOCUMENT MANAGER
CHECKED BY
DRAWN BY
REV. DATE 2/12/93
3-17-93

SOUTHWEST LABORATORY
OF OKLAHOMA, INC.

May 20, 1993

Dave Eagleton
BURLINGTON ENVIRONMENTAL
210 West Sand Bank Road
Columbia, IL 67236

Project: Woods Industries
SWLO #: 13676.01-04

Dear Mr. Eagleton:

Enclosed we are submitting the Organic accounting and CLP package for your samples received in our laboratory on May 11, 1993 for the above-captioned project.

The rush results were faxed to Mike Martin on May 14th per your instructions.

A copy of the packages have been sent to Doug Mather in Seattle as per instructions.

If in your review you have questions, or require further information, please call.

Sincerely,

Chuck Hoover
Project Officer

CH/lk

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13676

Level:(low/med) MED

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TBP)#	S4 (TPH)#	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	SBLK1	68	81	57	70					0
02	LCS	72	74	53	67					0
03	LCSD	66	78	54	63					0
04	VE3-1	53	73	52	59					0
05	VE3-2	54	72	49	58					0
06	VE4-1	58	74	50	61					0
07	VE4-2	51	74	49	66					0
08										
09										
10										
11										
12										
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25										
26										
27										
28										
29										
30										

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(23-120)
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)
S3 (TBP)	= 2,4,6-Tribromophenol	(19-122)
S4 (TPH)	= Terphenyl-d14	(18-137)
S5	= N/A	
S6	= N/A	
S7	= N/A	
S8	= N/A	

\# Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13676

Matrix Spike - EPA Sample No.: LCS Level(low/med) MED

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Hexachlorobenzene	100000	0	73000	73	25-150
4,4'-DDT	100000	0	76000	76	25-150

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	100000	72000	72	1	40	25-150
4,4'-DDT	100000	75000	75	1	40	25-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

COMMENTS: _____

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13676

Lab File ID: A1417.D Lab Sample ID: BL051108S

Instrument ID: A Date Extracted: 05/11/93

Matrix: (soil/water) SOIL Date Analyzed: 05/13/93

Level:(low/med) MED Time Analyzed: 1526

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS	LCS:13676	A1418.D	05/13/93
02	LCSD	LCSD:13676	A1419.D	05/13/93
03	VE3-1	13676.01	A1420.D	05/13/93
04	VE3-2	13676.02	A1421.D	05/13/93
05	VE4-1	13676.03	A1422.D	05/13/93
06	VE4-2	13676.04	A1423.D	05/13/93
07				
08				
09				
10				
11				
12				
13				
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26				
27				
28				
29				
30				

COMMENTS:

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13676

Lab File ID (Standard): A1413.D Date Analyzed: 05/13/93

Instrument ID: A Time Analyzed: 1427

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	1848221	3.02	854871	4.94	1132704	6.51
	UPPER LIMIT	3696442	3.52	1709742	5.44	2265408	7.01
	LOWER LIMIT	924110	2.52	427436	4.44	566352	6.01
	EPA SAMPLE No.						
01	SBLK1	1939079	3.01	881888	4.94	1242160	6.51
02	LCS	1916690	2.99	915020	4.94	1268332	6.51
03	LCSD	1925551	2.99	886469	4.94	1247282	6.51
04	VE3-1	2005189	3.01	915196	4.94	1240166	6.51
05	VE3-2	1981334	3.01	913755	4.94	1246534	6.51
06	VE4-1	1997909	3.01	920913	4.94	1267866	6.51
07	VE4-2	2084957	3.00	954612	4.95	1298606	6.50
08							
09							
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18							
19							
20							
21							
22							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13676

Lab File ID (Standard): A1413.D Date Analyzed: 05/13/93

Instrument ID: A Time Analyzed: 1427

		IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	762657	9.32	888998	10.72	0	0.00
	UPPER LIMIT	1525314	9.82	1777996	11.22	0	0.50
	LOWER LIMIT	381328	8.82	444499	10.22	0	-0.50
	EPA SAMPLE No.						
01	SBLK1	991783	9.31	1067153	10.72		
02	LCS	1084628	9.32	1052262	10.72		
03	LCSD	1029560	9.31	1030698	10.72		
04	VE3-1	1191329	9.32	1219216	10.72		
05	VE3-2	1145473	9.32	1071648	10.72		
06	VE4-1	1102457	9.31	1175373	10.72		
07	VE4-2	1143788	9.32	1282679	10.73		
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Chrysene-d12
IS5 = Perylene-d12
IS6 = N/A

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VE3-1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13676

Matrix: (soil/water) SOIL Lab Sample ID: 13676.01

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1420.D

Level: (low/med) MED Date Received: 05/11/93

% Moisture: 12 decanted: (Y/N) N Date Extracted:05/11/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/13/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 9.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	11000	U
72-54-8	4,4'-DDD	11000	U
72-55-9	4,4'-DDE	11000	U
50-29-3	4,4'-DDT	11000	U
60-57-1	Dieldrin	11000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VE3-2

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13676

Matrix: (soil/water) SOIL Lab Sample ID: 13676.02

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1421.D

Level: (low/med) MED Date Received: 05/11/93

% Moisture: 13 decanted: (Y/N) N Date Extracted:05/11/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/13/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	12000	U
72-54-8	4,4'-DDD	12000	U
72-55-9	4,4'-DDE	12000	U
50-29-3	4,4'-DDT	12000	U
60-57-1	Dieldrin	12000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VE4-1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13676

Matrix: (soil/water) SOIL Lab Sample ID: 13676.03

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1422.D

Level: (low/med) MED Date Received: 05/11/93

% Moisture: 15 decanted: (Y/N) N Date Extracted: 05/11/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/13/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	12000	U
72-54-8	4,4'-DDD	1400	J
72-55-9	4,4'-DDE	9200	J
50-29-3	4,4'-DDT	11000	J
60-57-1	Dieldrin	12000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VE4-2

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13676

Matrix: (soil/water) SOIL Lab Sample ID: 13676.04

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1423.D

Level: (low/med) MED Date Received: 05/11/93

% Moisture: 16 decanted: (Y/N) N Date Extracted:05/11/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/13/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	12000	U
72-54-8	4,4'-DDD	1800	J
72-55-9	4,4'-DDE	12000	U
50-29-3	4,4'-DDT	12000	
60-57-1	Dieldrin	12000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13676

Matrix: (soil/water) SOIL Lab Sample ID: BL051108S

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1417.D

Level: (low/med) MED Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:05/11/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/13/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	10000	U
72-54-8	4,4'-DDD	10000	U
72-55-9	4,4'-DDE	10000	U
50-29-3	4,4'-DDT	10000	U
60-57-1	Dieldrin	10000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13676

Matrix: (soil/water) SOIL Lab Sample ID: LCS:13676

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1418.D

Level: (low/med) MED Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:05/11/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/13/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	73000	
72-54-8	4,4'-DDD	10000	U
72-55-9	4,4'-DDE	10000	U
50-29-3	4,4'-DDT	76000	
60-57-1	Dieldrin	10000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13676

Matrix: (soil/water) SOIL Lab Sample ID: LCSD:13676

Sample wt/vol: 1.0 (g/mL) G Lab File ID: A1419.D

Level: (low/med) MED Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:05/11/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 05/13/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	72000	
72-54-8	4,4'-DDD	10000	U
72-55-9	4,4'-DDE	10000	U
50-29-3	4,4'-DDT	75000	
60-57-1	Dieldrin	10000	U

APPENDIX H-4

Samples Collected on May 24, 1993

PROJECT MEMORANDUM

DATE: October 11, 1993

TO: David Eagleton

FROM: Kathy Blaine

PROJECT: 12883088
Woods Industries, Inc.

SUBJECT: ANALYTICAL DATA QA REVIEW

I have completed a review of the analytical data for the one sample collected on May 24, 1993 and listed on COC# 6429. The sample was identified as PNE60-01. The Southwest Laboratories episode number was 13942.

A full CLP-type package was submitted by the laboratory and the review was conducted in accordance with the most recent USEPA Data Validation Functional Guidelines. Based on this information, the data appeared to be valid with no deviations from the project scope or QA requirements.

If you have any questions or need additional information, please feel free to contact me.

kab/kab/DAT13942.MEM

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 2856-2
Page 1 of —

PROJECT NAME Woods Industries/Yakima Washington
TASK DESCRIPTION Verification Soil Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 12883088
PHASE 2856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
PSLWBTM20		0006	N/A	4-7-93		SouthWest	4-8-93	4-8-93
PWLSW2-55		0006	N/A.	4-7-93		Southwest	4-8-93	4-8-93
VSL-1	13631.01	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-2	13631.02	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-3	13631.03	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-4	13631.04	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-5	13631.05	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-6	13631.06	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-7	13631.07	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-8	13631.08	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-9	13631.09	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-10	13631.10	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-11	13631.11	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VE3-1	13676.01	6419	N/A	5-10-93		Southwest	5-7-93	5-10-93
VE3-2	13676.02	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE4-1	13676.04	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE4-2	13676.03	6419	N/A.	5-10-93		Southwest	5-11-93	5-14-93
* AVE60-01	13942.01	6429	N/A.	5-24-93		Southwest	5-11-93	5-14-93
VE-1		5552	N/A.	6-4-93		Southwest	5-25 93	5-28-93
VE-2		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
ECP-SP1		5561	N/A	6-10-93		South West	6-5-93	6-8-93
VSL-11-01	14739.01	5848	N/A	7-28-93		South West	6-11-93	6-14-93
VSL-12-02	14739.02	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-13-02	14739.03	5848	N/A	7-28-93		South West	7-29-93	8-2-93
VSL-14-03	14739.04	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
						Southwest	7-29-93	8-2-93

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 7856-3
Page 2 of 2

PROJECT NAME Woods Industries / Yakima Washington
TASK DESCRIPTION Verification Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 12883088
PHASE 7856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
VSL-15-04	14739.05	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-16-03	14739.06	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-17-02	14739.07	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-18-03	14739.08	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-19-05	14739.09	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-20-02	14739.10	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VNE01-00	14944.01	5863	N/A	8-12-93		Southwest	7-29-93	8-2-93
VNE02-02	14944.02	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE03-03	14944.03	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE04-02	14944.04	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE05-02	14944.05	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE06-00	14944.06	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE07-06	14944.07	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE08-03	14944.08	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE09-03	14944.09	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE10-03	14944.10	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE11-03	14944.11	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE12	15107.01	5601	N/A	8-24-93		Southwest	8-17-93	8-19-93
VNE13	15107.02	5601	N/A	8-24-93		Southwest	8-25-93	8-27-93
						Southwest	8-25-93	8-27-93

SOUTHWEST LABORATORY
OF OKLAHOMA, INC.

June 4, 1993

Dave Eagleton
BURLINGTON ENVIRONMENTAL
210 West Sand Bank Road
Columbia, IL 62236

SWLO ID: 13942.01

Project: Woods Industries

Dear Mr. Eagleton:

Enclosed please find the Organic CLP package (full and accounting) for your samples received in our laboratory on May 28, 1993 for the above captioned project.

A copy of the Accounting Pkg has been sent to Doug Mather.

If, in your review, you should have any questions or require additional information, please call.

Sincerely,

Chuck Hoover

Chuck Hoover
Project Officer

CH/jt

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 0429

PROJECT NAME Woods Industries

PROJECT NUMBER 12688.3088 MAJOR TASK 2855

SAMPLERS John W. Dolan

LAB DESTINATION Southwest

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: PEST List Organics	PRESERVATIVES: ICED	PRESERVATIVES: CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
PW-L001	5-24-93	5--			[illegible]	1	✓			

RELINQUISHED BY

SIGNATURE	DATE	TIME
John W. Dolan	5-27-93	8:32 am

RECEIVED BY

SIGNATURE	DATE	TIME
K Gallis	5/28/93	0900

SHIPPING NOTES: May contain hazardous materials.

LAB NOTES:

BE-34 (1/92)

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13942

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (FBP)#	S2 (TBP)#	S3 (TPH)#	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	SBLK1	79	81	84						0
02	PNE60-01	67	81	79						0
03										
04										
05										
06										
07										
08										
09										
10										
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27										
28										
29										
30										

		QC LIMITS
S1 (FBP)	= 2-Fluorobiphenyl	(30-115)
S2 (TBP)	= 2,4,6-Tribromophenol	(19-122)
S3 (TPH)	= Terphenyl-d14	(18-137)
S4	= N/A	
S5	= N/A	
S6	= N/A	
S7	= N/A	
S8	= N/A	

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13942

Lab File ID: S1811.D Lab Sample ID: BL052803S

Instrument ID: S Date Extracted: 05/28/93

Matrix: (soil/water) SOIL Date Analyzed: 06/01/93

Level:(low/med) LOW Time Analyzed: 2049

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	PNE60-01	13942.01	S1812.D	06/01/93
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
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25				
26				
27				
28				
29				
30				

COMMENTS:

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13942

Lab File ID (Standard): S1797.D Date Analyzed: 06/01/93

Instrument ID: S Time Analyzed: 1524

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	120297	2.21	66765	3.99	99083	5.51
	UPPER LIMIT	240594	2.71	133530	4.49	198166	6.01
	LOWER LIMIT	60148	1.71	33382	3.49	49542	5.01
	EPA SAMPLE No.						
01	SBLK1	61619	2.20	40125	3.99	77632	5.51
02	PNE60-01	66041	2.21	40966	3.99	73570	5.51
03							
04							
05							
06							
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16							
17							
18							
19							
20							
21							
22							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13942

Lab File ID (Standard): S1797.D Date Analyzed: 06/01/93

Instrument ID: S Time Analyzed: 1524

		IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	102788	8.25	135463	9.63	0	0.00
	UPPER LIMIT	205576	8.75	270926	10.13	0	0.50
	LOWER LIMIT	51394	7.75	67732	9.13	0	-0.50
	EPA SAMPLE No.						
01	SBLK1	93454	8.26	112831	9.63		
02	PNE60-01	86680	8.26	118772	9.64		
03							
04							
05							
06							
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18							
19							
20							
21							
22							

IS4 = Chrysene-d12
IS5 = Perylene-d12
IS6 = N/A

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PNE60-01

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13942

Matrix: (soil/water) SOIL Lab Sample ID: 13942.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1812.D

Level: (low/med) LOW Date Received: 05/28/93

% Moisture: 16 decanted: (Y/N) N Date Extracted: 05/28/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 06/01/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	390	U
72-54-8	4,4'-DDD	390	U
72-55-9	4,4'-DDE	390	U
50-29-3	4,4'-DDT	390	U
60-57-1	Dieldrin	390	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13942

Matrix: (soil/water) SOIL Lab Sample ID: BL052803S

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1811.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 05/28/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 06/01/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	330	U
72-54-8	4,4'-DDD	330	U
72-55-9	4,4'-DDE	330	U
50-29-3	4,4'-DDT	330	U
60-57-1	Dieldrin	330	U

APPENDIX H-5

Samples Collected on June 4, 1993

PROJECT MEMORANDUM

DATE: October 11, 1993

TO: David Eagleton

FROM: Kathy Blaine

PROJECT: 12883088
Woods Industries, Inc.

SUBJECT: ANALYTICAL DATA QA REVIEW

I have completed a review of the analytical data for the two samples collected on June 04, 1993 and listed on COC# 5552. The samples were identified as VF-1 and VF-2. The Southwest Laboratories episode number was 14037.

A full CLP-type package was submitted by the laboratory and the review was conducted in accordance with the most recent USEPA Data Validation Functional Guidelines. Based on this information, the data appeared to be valid with the following comments. Due to relatively high levels of pesticides in sample VF-2, the sample required dilution before analysis, thus raising the reportable detection limits. In addition, surrogate recoveries for VF-2 were unreportable as the surrogate levels were diluted out. When working with the data, the hexachlorobenzene result from the initial, undiluted analysis of VF-2 should be used and all remaining concentration should be gotten from the diluted analysis.

If you have any questions or need additional information, please feel free to contact me.

kab/kab/DAT14037.MEM

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 2856-2
Page 1 of —

PROJECT NAME Woods Industries/Yakima Washington
TASK DESCRIPTION Verification Soil Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 128830B8
PHASE 2856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
PSLWBTM20		0006	N/A	4-7-93		SouthWest	4-8-93	4-8-93
PSLSW2-55		0006	N/A.	4-7-93		Southwest	4-8-93	4-8-93
VSL-1	13631.01	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-2	13631.02	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-3	13631.03	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-4	13631.04	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-5	13631.05	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-6	13631.06	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-7	13631.07	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-8	13631.08	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-9	13631.09	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-10	13631.10	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-11	13631.11	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
* VE3-1	13676.01	6419	N/A	5-10-93		Southwest	5-7-93	5-10-93
* VE3-2	13676.02	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE4-1	13676.04	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE4-2	13676.03	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
AVE60-01	13942.01	6429	N/A.	5-24-93		Southwest	5-11-93	5-14-93
VF-1		5552	N/A.	6-4-93		Southwest	5-25-93	5-28-93
VF-2		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
CLP-SP1		5561	N/A	6-10-93		Southwest	6-5-93	6-8-93
VSL-11-01	14739.01	5848	N/A	7-28-93		Southwest	6-16-93	6-14-93
VSL-12-02	14739.02	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-13-02	14739.03	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-14-03	14739.04	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
						Southwest	7-29-93	8-2-93

BURLINGTON ENVIRONMENTAL

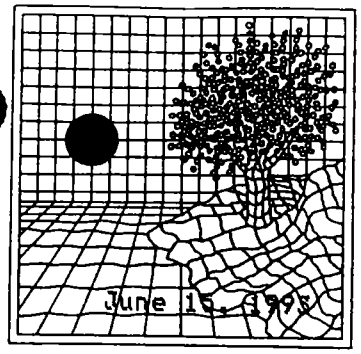
SAMPLE CONTROL LOG

Serial No. SCL 7856-3
Page 2 of 2

PROJECT NAME Woods Industries / Yakima, Washington
TASK DESCRIPTION Verification Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 12883088
PHASE 7856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
VSL-15-04	14739.05	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-16-03	14739.06	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-17-02	14739.07	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-18-03	14739.08	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-19-05	14739.09	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-20-02	14739.10	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VNE01-00	14944.01	5863	N/A	8-12-93		Southwest	7-29-93	8-2-93
VNE02-02	14944.02	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE03-03	14944.03	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE04-02	14944.04	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE05-02	14944.05	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE06-00	14944.06	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE07-06	14944.07	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE08-03	14944.08	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE09-03	14944.09	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE10-03	14944.10	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE11-03	14944.11	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE12	15107.01	5601	N/A	8-24-93		Southwest	8-17-93	8-19-93
VNE13	15107.02	5601	N/A	8-24-93		Southwest	8-25-93	8-27-93
						Southwest	8-25-93	8-27-93



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

Doug Mather
BURLINGTON ENVIRONMENTAL
2203 Airport Way South, Suite 400
Seattle, WA. 98134

SWLO ID: 14037.01 - 14037.02

Project: Woods Industries

Dear Mr. Mather:

Enclosed please find the Organic CLP package (full and accounting) for your samples received in our laboratory on June 7, 1993 for the above captioned project.

The CLP Pkg(full and accounting) has been sent to Dave Eagleton.

If, in your review, you should have any questions or require additional information, please call.

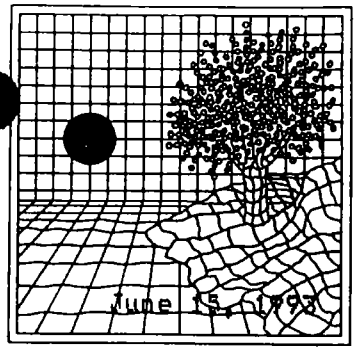
Sincerely,

Chuck Hoover
Project Officer

CH/jt

Enclosures

1700 WEST ALBANY • BROKEN ARROW, OK 74012
(918) 251-2858 • FAX (918) 251-2599



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

Dave Eagleton
BURLINGTON ENVIRONMENTAL
210 West Sand Bank Road
Columbia, IL 62236

SWLO ID: 14037.01 - 14037.02

Project: Woods Industries

Dear Mr. Eagleton:

Enclosed please find the Organic CLP package (full and accounting) for your samples received in our laboratory on June 7, 1993 for the above captioned project.

A copy of the Full CLP & Accounting Pkg has been sent to Doug Mather.

These results were faxed to you on June 10, 1993.

If, in your review, you should have any questions or require additional information, please call.

Sincerely,

Chuck Hoover
Project Officer

CH/jt

Enclosures

1700 WEST ALBANY • BROKEN ARROW, OK 74012
(918) 251-2858 • FAX (918) 251-2599

BURLINGTON ENVIRONMENTAL
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5552

PROJECT NAME Woods Industries
PROJECT NUMBER 0883089? MAJOR TASK 7456
SAMPLERS John W. Dolan
LAB DESTINATION South West Laboratories

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pest List							PRESERVATIVES: ICED	PRESERVATIVES: CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
WF-1	6-4-93	See data sheets				1	1									3 Day Turnaround
WF-2	6-4-93	✓			✓	1	1									
						2	2									

RELINQUISHED BY

SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
John W. Dolan	6-4-93	9:50 am	Hollis	6/7/93	0845

SHIPPING NOTES
TO: SW. Labs. Oklahoma.
3 Day Turnaround
Per contract

LAB NOTES

BE-34 (1/92)

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. _____
PROJECT NO. 128830.56 MAJOR TASK 7856 SUBTASK 22
DATE 6-4-93 SAMPLERS [signature]

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
VF-1	N/A	10:20	1 Pint	Preliminary
VF-2		10:23		

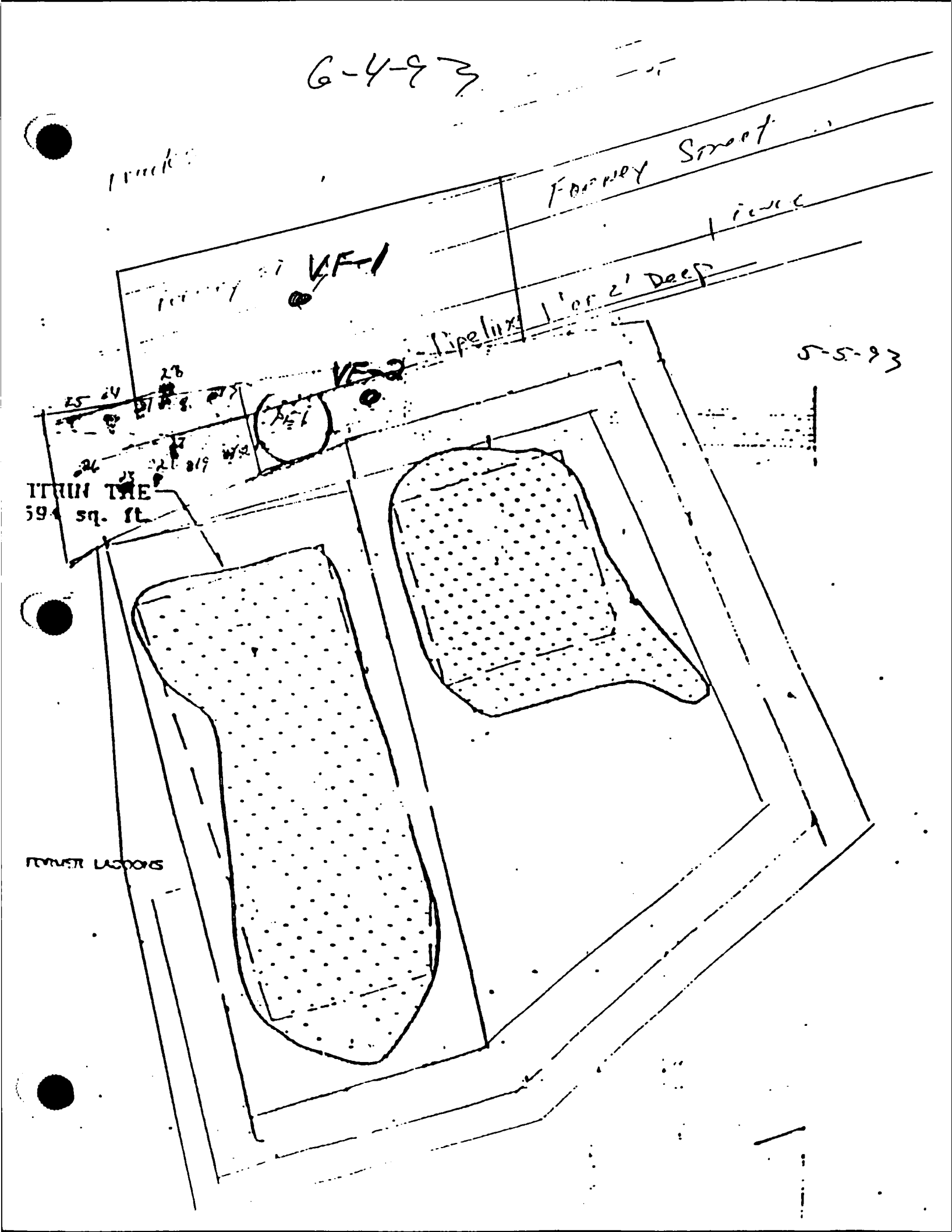
INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED YES/NO 10:50 TIME [signature] SEALER
COC COMPLETED YES/NO 10:55 TIME 6460 COC NO. [signature] COMPLETED BY
LAB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAB NO. _____ COMPLETED BY

VF = Verification Formey Street.


6-4-93
Forney Street
VF-1
VF-2
Pipeline 1 or 2' Deep
5-5-93
WITHIN THE
594 sq. ft.

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL-TULSA Wells Project BURLINGTON

Lab Code: SWOK Case 2 copies SDG No.: 14037

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (FBP)#	S2 (TBP)#	S3 (TPH)#	#	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	SBLK1	35	43	45						0
02	VF-1	25*	60	45						1
03	VF-2	29*	80	36						1
04	LCS	28*	76	47						1
05	LCSD	27*	72	48						1
06	VF-2DL	31D	71D	58D						0
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

		QC LIMITS
S1 (FBP)	= 2-Fluorobiphenyl	(30-115)
S2 (TBP)	= 2,4,6-Tribromophenol	(19-122)
S3 (TPH)	= Terphenyl-d14	(18-137)
S4	= N/A	
S5	= N/A	
S6	= N/A	
S7	= N/A	
S8	= N/A	

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14037

Matrix Spike - EPA Sample No.: LCS Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Hexachlorobenzene	3300	0	2400	73	25-150
4,4'-DDT	3300	0	2600	79	25-150

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	3300	2300	70	4	40	25-150
4,4'-DDT	3300	2500	76	4	40	25-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

COMMENTS: _____

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14037

Lab File ID: S1895.D Lab Sample ID: BL060707S

Instrument ID: S Date Extracted: 06/07/93

Matrix: (soil/water) SOIL Date Analyzed: 06/08/93

Level:(low/med) LOW Time Analyzed: 1433

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	VF-1	14037.01	S1897.D	06/08/93
02	VF-2	14037.02	S1898.D	06/08/93
03	LCS	LCS:14037	S1899.D	06/08/93
04	LCSD	LCSD:14037	S1900.D	06/08/93
05	VF-2DL	14037.02DL	S1901.D	06/08/93
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14037

Lab File ID (Standard): S1891.D Date Analyzed: 06/08/93

Instrument ID: S Time Analyzed: 1320

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	239371	2.06	160732	3.83	413976	5.34
	UPPER LIMIT	478742	2.56	321464	4.33	827952	5.84
	LOWER LIMIT	119686	1.56	80366	3.33	206988	4.84
	EPA SAMPLE No.						
01	SBLK1	249009	2.05	187841	3.83	503273	5.35
02	VF-1	204187	2.05	208652	3.83	512221	5.33
03	VF-2	227410	2.06	237363	3.85	513005	5.36
04	LCS	203594	2.05	211429	3.83	542208	5.35
05	LCSD	217037	2.05	221840	3.83	557748	5.35
06	VF-2DL	217554	2.07	217696	3.84	489953	5.35
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14037

Lab File ID (Standard): S1891.D Date Analyzed: 06/08/93

Instrument ID: S Time Analyzed: 1320

		IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	376528	8.07	330148	9.45	0	0.00
	UPPER LIMIT	753056	8.57	660296	9.95	0	0.50
	LOWER LIMIT	188264	7.57	165074	8.95	0	-0.50
	EPA SAMPLE No.						
01	SBLK1	438811	8.07	499231	9.45		
02	VF-1	453474	8.08	456192	9.45		
03	VF-2	402798	8.14	380055	9.47		
04	LCS	471006	8.08	484717	9.45		
05	LCSD	480984	8.08	517145	9.45		
06	VF-2DL	430632	8.09	429678	9.46		
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Chrysene-d12
IS5 = Perylene-d12
IS6 = N/A

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VF-1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14037

Matrix: (soil/water) SOIL Lab Sample ID: 14037.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1897.D

Level: (low/med) LOW Date Received: 06/07/93

% Moisture: 3 decanted: (Y/N) N Date Extracted:06/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 06/08/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	340	U
72-54-8	4,4'-DDD	850	
72-55-9	4,4'-DDE	770	
50-29-3	4,4'-DDT	940	
60-57-1	Dieldrin	340	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VF-2

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14037

Matrix: (soil/water) SOIL Lab Sample ID: 14037.02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1898.D

Level: (low/med) LOW Date Received: 06/07/93

% Moisture: 3 decanted: (Y/N) N Date Extracted: 06/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 06/08/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	2200	
72-54-8	4,4'-DDD	22000	
72-55-9	4,4'-DDE	8400	
50-29-3	4,4'-DDT	22000	
60-57-1	Dieldrin	5200	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VF-2DL

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14037

Matrix: (soil/water) SOIL Lab Sample ID: 14037.02DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1901.D

Level: (low/med) LOW Date Received: 06/07/93

% Moisture: 3 decanted: (Y/N) N Date Extracted: 06/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 06/08/93

Injection Volume: 1.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 7.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	2400	D
72-54-8	4,4'-DDD	120000	D
72-55-9	4,4'-DDE	21000	D
50-29-3	4,4'-DDT	91000	D
60-57-1	Dieldrin	11000	D

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14037

Matrix: (soil/water) SOIL Lab Sample ID: BL060707S

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1895.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:06/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 06/08/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	330	U
72-54-8	4,4'-DDD	330	U
72-55-9	4,4'-DDE	330	U
50-29-3	4,4'-DDT	330	U
60-57-1	Dieldrin	330	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14037

Matrix: (soil/water) SOIL Lab Sample ID: LCS:14037

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1899.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:06/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 06/08/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	2400	
72-54-8	4,4'-DDD	330	U
72-55-9	4,4'-DDE	330	U
50-29-3	4,4'-DDT	2600	
60-57-1	Dieldrin	330	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14037

Matrix: (soil/water) SOIL Lab Sample ID: LCSD:14037

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S1900.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:06/07/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 06/08/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	2300	
72-54-8	4,4'-DDD	330	U
72-55-9	4,4'-DDE	330	U
50-29-3	4,4'-DDT	2500	
60-57-1	Dieldrin	330	U

APPENDIX H-6

Samples Collected on June 10, 1993

PROJECT MEMORANDUM

DATE: October 11, 1993

TO: David Eagleton

FROM: Kathy Blaine

PROJECT: 12883088
Woods Industries, Inc.

SUBJECT: ANALYTICAL DATA QA REVIEW

I have completed a review of the analytical data for the one sample collected on June 10, 1993 and listed on COC# 5561. The sample was identified as CLP-SP1. The Southwest Laboratories episode number was 14092.

A full CLP-type package was submitted by the laboratory and the review was conducted in accordance with the most recent USEPA Data Validation Functional Guidelines. Based on this information, the data appeared to be valid with the following comments. Due to excessively high levels of 4,4-DDD, the sample required 10,000 fold dilution before analysis, thus raising the reportable detection limits. In addition, surrogate recoveries were unreportable as the surrogate levels were diluted out. The sample was initially analyzed at a 10X dilution, but as evident in the chromatogram, the DDD concentration saturated the GC which resulted in no available information.

The reported concentrations are valid and useable with no qualifications.

If you have any questions or need additional information, please feel free to contact me.

kab/kab/DAT14092.MEM

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 2856-2
Page 1 of ___

PROJECT NAME Woods Industries/Yakima Washington
TASK DESCRIPTION Verification Soil Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 12883088
PHASE 2856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
PSLWBTM20		0006	N/A	4-7-93		Southwest	4-8-93	4-8-93
PNLSW2-55		0006	N/A.	4-7-93		Southwest	4-8-93	4-8-93
VSL-1	13631.01	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-2	13631.02	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-3	13631.03	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-4	13631.04	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-5	13631.05	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL6	13631.06	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-7	13631.07	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-8	13631.08	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-9	13631.09	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-10	13631.10	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-11	13631.11	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VE3-1	13676.01	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE3-2	13676.02	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE4-1	13676.04	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE4-2	13676.03	6419	N/A.	5-10-93		Southwest	5-11-93	5-14-93
AVE60-01	13942.01	6429	N/A.	5-24-93		Southwest	5-25 93	5-28-93
VF-1		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
VF2		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
* ECP-SP1	14092.01	5561	N/A	6-10-93		Southwest	6-16-93	6-14-93
VSL-11-01	14739.01	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-12-02	14739.02	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-13-02	14739.03	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-14-03	14739.04	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 2856-3
Page 2 of 2

PROJECT NAME Woods Industries / Yakima, Washington
TASK DESCRIPTION Verification Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 12883088
PHASE 2856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
VSL-15-04	14739.05	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-16-03	14739.06	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-17-02	14739.07	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-18-03	14739.08	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-19-05	14739.09	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-20-02	14739.10	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VNE01-00	14944.01	5863	N/A	8-12-93		Southwest	7-29-93	8-2-93
VNE02-02	14944.02	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE03-03	14944.03	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE04-02	14944.04	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE05-02	14944.05	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE06-00	14944.06	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE07-06	14944.07	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE08-03	14944.08	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE09-03	14944.09	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE10-03	14944.10	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE11-03	14944.11	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE12	15107.01	5601	N/A	8-24-93		Southwest	8-17-93	8-19-93
VNE13	15107.02	5601	N/A	8-24-93		Southwest	8-25-93	8-27-93
						Southwest	8-25-93	8-27-93

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

June 18, 1993

Dave Eagleton
BURLINGTON ENVIRONMENTAL
210 West Sand Bank Road
Columbia, IL 62236

SWLO ID: 14092.01

Project: Woods Industries

Dear Mr. Eagleton:

Enclosed please find the Organic CLP package (full and accounting) for your sample received in our laboratory on June 11, 1993 for the above captioned project.

A copy of the Full CLP & Accounting Pkg has been sent to Doug Mather.

These results were faxed to you on June 14, 1993.

If, in your review, you should have any questions or require additional information, please call.

Sincerely,

Chuck Hoover
Project Officer

CH/jt

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5561

PROJECT NAME Work's Institutes
PROJECT NUMBER 10870.89 MAJOR TASK 2850
SAMPLERS John W. Dolan
LAB DESTINATION South Water Lab

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Diesel	PRESERVATIVES: ICED	PRESERVATIVES: CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
CCD-SP1	6-10-93	Start			data sheet	1				

RELINQUISHED BY / RECEIVED BY

SIGNATURE	DATE	TIME	SIGNATURE	DATE	TIME
John W. Dolan	6-10-93	16:20	K Kallis	6/11/93	0845

SHIPPING NOTES: may contain hazardous materials.

LAB NOTES:

BE-34 (1/92)

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14092

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (FBP)#	S2 (TBP)#	S3 (TPH)#	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	SBLK1	39	39	40						0
02	LCS	83	82	86						0
03	LCSD	82	81	90						0
04	CLP-SP1	0D	0D	0D						0
05	CLP-SP1DL	0D	0D	0D						0
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
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22										
23										
24										
25										
26										
27										
28										
29										
30										

		QC LIMITS
S1 (FBP)	= 2-Fluorobiphenyl	(30-115)
S2 (TBP)	= 2,4,6-Tribromophenol	(19-122)
S3 (TPH)	= Terphenyl-d14	(18-137)
S4	= N/A	
S5	= N/A	
S6	= N/A	
S7	= N/A	
S8	= N/A	

\# Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14092

Matrix Spike - EPA Sample No.: LCS Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Hexachlorobenzene	3300	0	2600	79	25-150
4,4'-DDT	3300	0	2300	70	25-150

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	3300	2700	82	4	40	25-150
4,4'-DDT	3300	2300	70	0	40	25-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

COMMENTS: _____

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14092

Lab File ID: T129.D Lab Sample ID: BL061101S

Instrument ID: T Date Extracted: 06/11/93

Matrix: (soil/water) SOIL Date Analyzed: 06/11/93

Level:(low/med) LOW Time Analyzed: 1359

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS	LCS:14092	T130.D	06/11/93
02	LCSD	LCSD:14092	T131.D	06/11/93
03	CLP-SP1	14092.01	T132.D	06/11/93
04	CLP-SP1DL	14092.01DL	133.D	06/11/93
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14092

Lab File ID (Standard): 128.D Date Analyzed: 06/11/93

Instrument ID: T Time Analyzed: 0915

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	188821	6.07	82500	8.62	112852	11.24
	UPPER LIMIT	377642	6.57	165000	9.12	225704	11.74
	LOWER LIMIT	94410	5.57	41250	8.12	56426	10.74
	EPA SAMPLE No.						
01	SBLK1	240874	6.07	105992	8.61	155793	11.24
02	LCS	185750	6.07	85930	8.61	129522	11.23
03	LCSD	192086	6.07	83682	8.61	121098	11.23
04	CLP-SP1	301749	6.09	58444	8.68	30133*	11.69
05	CLP-SP1DL	161547	6.07	84627	8.62	131092	11.25
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14092

Lab File ID (Standard): 128.D Date Analyzed: 06/11/93

Instrument ID: T Time Analyzed: 0915

		IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	89388	16.39	93121	19.02	0	0.00
	UPPER LIMIT	178776	16.89	186242	19.52	0	0.50
	LOWER LIMIT	44694	15.89	46560	18.52	0	-0.50
	EPA SAMPLE No.						
01	SBLK1	116065	16.39	120453	19.03		
02	LCS	99874	16.38	101501	19.02		
03	LCSD	87752	16.38	91149	19.01		
04	CLP-SP1	70221	16.93*	66067	19.24		
05	CLP-SP1DL	113092	16.41	110562	19.06		
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Chrysene-d12
IS5 = Perylene-d12
IS6 = N/A

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CLP-SP1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14092

Matrix: (soil/water) SOIL Lab Sample ID: 14092.01

Sample wt/vol: 20.0 (g/mL) G Lab File ID: T132.D

Level: (low/med) LOW Date Received: 06/11/93

% Moisture: 24 decanted: (Y/N) N Date Extracted:06/11/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 06/11/93

Injection Volume: 1.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 5.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	730000	
72-54-8	4,4'-DDD	11000000	
72-55-9	4,4'-DDE	6500	U
50-29-3	4,4'-DDT	4600000	
60-57-1	Dieldrin	6500	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CLP-SP1DL

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14092

Matrix: (soil/water) SOIL Lab Sample ID: 14092.01DL

Sample wt/vol: 20.0 (g/mL) G Lab File ID: 133.D

Level: (low/med) LOW Date Received: 06/11/93

% Moisture: 24 decanted: (Y/N) N Date Extracted:06/11/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 06/11/93

Injection Volume: 1.0(uL) Dilution Factor: 10000.0

GPC Cleanup: (Y/N) N pH: 5.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	9700000	D
72-54-8	4,4'-DDD	110000000	D
72-55-9	4,4'-DDE	1600000	D
50-29-3	4,4'-DDT	27000000	D
60-57-1	Dieldrin	6500000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14092

Matrix: (soil/water) SOIL Lab Sample ID: BL061101S

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T129.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:06/11/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 06/11/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	330	U
72-54-8	4,4'-DDD	330	U
72-55-9	4,4'-DDE	330	U
50-29-3	4,4'-DDT	330	U
60-57-1	Dieldrin	330	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14092

Matrix: (soil/water) SOIL Lab Sample ID: LCS:14092

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T130.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:06/11/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 06/11/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	2600	
72-54-8	4,4'-DDD	330	U
72-55-9	4,4'-DDE	330	U
50-29-3	4,4'-DDT	2300	
60-57-1	Dieldrin	330	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14092

Matrix: (soil/water) SOIL Lab Sample ID: LCSD:14092

Sample wt/vol: 30.0 (g/mL) G Lab File ID: T131.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:06/11/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 06/11/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	2700	
72-54-8	4,4'-DDD	330	U
72-55-9	4,4'-DDE	330	U
50-29-3	4,4'-DDT	2300	
60-57-1	Dieldrin	330	U

APPENDIX H-7

Samples Collected on July 28, 1993

MEMORANDUM

DATE: August 4, 1993

TO: David Eagleton
CC: Tom Hippe

FROM: Kathy Blaine

SUBJECT: ANALYTICAL DATA QA REVIEW - LAGOON VERIFICATION SAMPLES
WOODS INDUSTRIES

I have completed a review of the analytical data for the Lagoon Verification samples collected at the Woods Industries site which was faxed to you on August 2, 1993. The lagoon verification samples collected on July 28, 1993 and included in this review are as follows:

VSL 11-01	VSL 12-02
VSL 13-02	VSL 14-03
VSL 15-03	VSL 16-03
VSL 17-02	VSL 18-03
VSL 19-05	VSL 20-02

Based on the information supplied by the laboratory the data appears to be valid.

The review was based on the Data Validation Functional Guidelines and CLP protocol QC criteria. The items that were evaluated were holding time, spike recoveries, MS/MSD relative percent differences, surrogate recoveries, method blank results and sample extraction procedure. Although the information provided at this time is not a full deliverables package, the information provided and Burlington's working knowledge of Southwest Laboratories of Oklahoma, leads me to assess that the information provided is valid and usable.

Due to a high 4,4-DDD concentration in the original analysis which exceeded the instrument calibration range, sample VSL 19-05 required a dilution run. When using the data, 4,4-DDD should be assessed from the dilution analysis. All other compounds reported for this sample should be evaluated from the original, undiluted analysis.

If you have any questions, or need additional information, please feel free to contact me.

MEMORANDUM

DATE: August 6, 1993

TO: David Eagleton, Columbia Office

cc: Tom Hippe, Houston Office

FROM: Jeff Christman, Pittsburgh Office

SUBJECT: RESULTS OF STATISTICAL ANALYSIS OF LAGOON AREA VERIFICATION SAMPLES AT THE WOODS INDUSTRIES SITE, PROJECT NUMBER 12883088

This memorandum discusses the results of the statistical analysis of the 10 verification samples collected from the Lagoon area of the Woods Industries site. The results of this analysis indicate the Lagoon area is clean.

As described in the Soil Removal Work Plan (Burlington, 1993), this analysis consisted of statistically comparing the concentrations of indicator chemicals p,p'-DDT, hexachlorobenzene, DDD, DDE, and dieldrin to their cleanup levels of 30, 40, 30, 10, and 0.63 milligrams per kilogram (mg/kg), respectively. Three statistical criteria were used to compare the Lagoon area verification samples to their respective cleanup levels. These three criteria include:

1. The upper confidence limit of a 95-percent one-sided confidence interval for the mean soil concentration shall be less than the cleanup level.

2. No single sample concentration shall be greater than two times the soil cleanup level.

3. Less than 10 percent of the sample concentrations shall exceed the soil cleanup level.

The maximum concentration of each indicator chemical was less than its respective cleanup level, therefore, criteria 2 and 3 were satisfied. Criterion 1 was satisfied because the upper confidence limit of a 95-percent one-sided confidence interval for the mean soil concentration was less than the cleanup level for each indicator chemical. Prior to calculating the confidence intervals, the Shapiro-Wilk Test was performed on the verification concentrations of each indicator chemical to evaluate if the verification concentrations deviated significantly from the normal or lognormal distribution. The Shapiro-Wilk test concluded that either the normal or lognormal distribution was appropriate for each indicator chemical; therefore, the confidence intervals were calculated based on the normal or lognormal distribution.

Please call me if you have any questions regarding this analysis.

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 2856-2
Page 1 of —

PROJECT NAME Woods Industries/Yakima Washington
TASK DESCRIPTION Verification Soil Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 128830B8
PHASE 2856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
PSLWBTM20		0006	N/A	4-7-93		Southwest	4-8-93	4-8-93
PNLSW2-55		0006	N/A.	4-7-93		Southwest	4-8-93	4-8-93
VSL-1	13631.01	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-2	13631.02	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-3	13631.03	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-4	13631.04	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-5	13631.05	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-6	13631.06	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-7	13631.07	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-8	13631.08	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-9	13631.09	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-10	13631.10	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-11	13631.11	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VE3-1	13676.01	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE3-2	13676.02	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VEV-1	13676.04	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VEV-2	13676.03	6419	N/A.	5-10-93		Southwest	5-11-93	5-14-93
AVE60-01	13942.01	6429	N/A.	5-24-93		Southwest	5-25 93	5-28-93
VF-1		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
VF-2		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
CLP-SP1		5561	N/A	6-10-93		Southwest	6-16-93	6-14-93
* VSL-11-01	14739.01	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
* VSL-12-02	14739.02	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
* VSL-13-02	14739.03	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
* VSL-14-03	14739.04	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 7856-3
Page 2 of 2

PROJECT NAME Woods Industries / Yakima, Washington
TASK DESCRIPTION Verification Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 12883088
PHASE 7856 TASK 22

	BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
*	VSL-15-04	14739.05	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
*	VSL-16-03	14739.06	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
*	VSL-17-02	14739.07	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
*	VSL-18-03	14739.08	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
*	VSL-19-05	14739.09	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
*	VSL-20-02	14739.10	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
	VNE01-00	14944.01	5863	N/A	8-12-93		Southwest	7-29-93	8-2-93
	VNE02-02	14944.02	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
	VNE03-03	14944.03	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
	VNE04-02	14944.04	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
	VNE05-02	14944.05	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
	VNE06-00	14944.06	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
	VNE07-06	14944.07	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
	VNE08-03	14944.08	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
	VNE09-03	14944.09	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
	VNE10-03	14944.10	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
	VNE11-03	14944.11	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
	VNE12	15102.01	5601	N/A	8-24-93		Southwest	8-17-93	8-19-93
	VNE13	15102.02	5601	N/A	8-24-93		Southwest	8-25-93	8-27-93
							Southwest	8-25-93	8-27-93

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5848

PROJECT NAME Woods Industries site
PROJECT NUMBER 12.S&3088 MAJOR TASK 7856
SAMPLERS JMD GK
LAB DESTINATION So. West Labs Oklahoma

	SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pest List	ICED	CHEMICALS ADDED	PRESERVATIVES	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
SL	11-01		See	Data	sheet		1	X				Verification Samples
SL	12-02						1	X				Note:
SL	13-02						1	X				Pestuide List:
SL	14-03						1	X				Hexachlorobenzene
SL	15-04						1	X				p,p' DDT
SL	16-03						1	X				p,p' DDD
SL	17-02						1	X				p,p' DD
SL	18-03						1	X				Dieldrin
SL	19-05						1	X				
SL	20-02						1	X				Expected concentrations may range from 0 - 100 ppm. => Dieldrin's dile
								10				

RELINQUISHED BY

SIGNATURE	DATE	TIME
James M Lee	7-28-93	10:22

RECEIVED BY

SIGNATURE	DATE	TIME
K Williams	7/29/93	0820

SHIPPING NOTES
ution: May Contain Hazardous Waste

LAB NOTES
(Agreed to a 72 hour turnaround.)

BE-34 (1/92)

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO 7856-
PAGE ___ OF ___

PROJECT NAME Woods Industries SAMPLE LOCATION NO. SL.
PROJECT NO. 12883088 MAJOR TASK 7856 SUBTASK 77
DATE ~~[illegible]~~ 07-~~[illegible]~~ 28 -93 SAMPLERS ~~[illegible] / JWD~~ Jim Dobn / Greg Koester
SAMPLING METHOD surficial soil per [illegible]
TYPE OF SAMPLE: DUPLICATE ___ GRAB ✓ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
VSL-11 -01	N/A	9:40	1 Pint	Verification / Samples
VSL-12 -02	↓	9:43	↓	↓
VSL-13 -02	↓	9:43	↓	↓
VSL-14 -03	↓	9:45	↓	↓
VSL-15 -04	↓	9:47	↓	↓
VSL-16 -03	↓	9:48	↓	↓
VSL-17 -02	↓	9:55	↓	↓
VSL-18 -03	↓	9:55	↓	↓
VSL-19 -05	↓	9:57	↓	↓
VSL-20 -02	↓	9:58	↓	↓

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES)/NO 10:10 am TIME GAK SEALER
COC COMPLETED (YES)/NO 10:10 am TIME 5848 COC NO. GAK COMPLETED BY

SOUTHWEST LABORATORY
OF OKLAHOMA, INC.

August 10, 1993

Mr. Dave Eagleton
BURLINGTON ENVIRONMENTAL
210 West Sand Bank Road
Columbia, IL 62236

SWLO ID: 14739.01 - 14739.10
Project: Woods Industries

Dear Mr. Eagleton:

Enclosed please find the Semivolatile CLP packages, full and accounting, for your samples received in our laboratory on July 29, 1993 for the above captioned project.

If, in your review, you should have any questions or require additional information, please call.

Sincerely,

Chuck Hoover
Project Officer

CFH/rb

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL11-01

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: 14739.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2544.D

Level: (low/med) LOW Date Received: 07/29/93

% Moisture: 7 decanted: (Y/N) N Date Extracted: 07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 07/30/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	17	
72-54-8	4,4'-DDD	350	
72-55-9	4,4'-DDE	420	
50-29-3	4,4'-DDT	1300	
60-57-1	Dieldrin	360	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL12-02

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: 14739.02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2545.D

Level: (low/med) LOW Date Received: 07/29/93

% Moisture: 8 decanted: (Y/N) N Date Extracted:07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 07/30/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	360	U
72-54-8	4,4'-DDD	8	
72-55-9	4,4'-DDE	40	
50-29-3	4,4'-DDT	12	
60-57-1	Dieldrin	35	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL13-02

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: 14739.03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2536.D

Level: (low/med) LOW Date Received: 07/29/93

% Moisture: 11 decanted: (Y/N) N Date Extracted: 07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 07/30/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	67	
72-54-8	4,4'-DDD	1300	
72-55-9	4,4'-DDE	1000	
50-29-3	4,4'-DDT	2400	
60-57-1	Dieldrin	370	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL13-02RE

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: 14739.03RA

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2546.D

Level: (low/med) LOW Date Received: 07/29/93

% Moisture: 11 decanted: (Y/N) N Date Extracted:07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 07/30/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	65	
72-54-8	4,4'-DDD	2000	
72-55-9	4,4'-DDE	1200	
50-29-3	4,4'-DDT	3400	
60-57-1	Dieldrin	370	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL14-03

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: 14739.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2547.D

Level: (low/med) LOW Date Received: 07/29/93

% Moisture: 1 decanted: (Y/N) N Date Extracted: 07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 07/30/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	16	
72-54-8	4,4'-DDD	230	
72-55-9	4,4'-DDE	140	
50-29-3	4,4'-DDT	300	
60-57-1	Dieldrin	77	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL15-03

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: 14739.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2548.D

Level: (low/med) LOW Date Received: 07/29/93

% Moisture: 2 decanted: (Y/N) N Date Extracted: 07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 07/30/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	43	
72-54-8	4,4'-DDD	1200	
72-55-9	4,4'-DDE	930	
50-29-3	4,4'-DDT	2700	
60-57-1	Dieldrin	340	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL16-03

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: 14739.06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2549.D

Level: (low/med) LOW Date Received: 07/29/93

% Moisture: 11 decanted: (Y/N) N Date Extracted:07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 07/30/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	10	
72-54-8	4,4'-DDD	220	
72-55-9	4,4'-DDE	270	
50-29-3	4,4'-DDT	530	
60-57-1	Dieldrin	370	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL17-02

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: 14739.07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2562.D

Level: (low/med) LOW Date Received: 07/29/93

% Moisture: 2 decanted: (Y/N) N Date Extracted: 07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 08/02/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	95	
72-54-8	4,4'-DDD	2800	
72-55-9	4,4'-DDE	1100	
50-29-3	4,4'-DDT	2600	
60-57-1	Dieldrin	110	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL18-03

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: 14739.08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2541.D

Level: (low/med) LOW Date Received: 07/29/93

% Moisture: 8 decanted: (Y/N) N Date Extracted: 07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 07/30/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	39	
72-54-8	4,4'-DDD	600	
72-55-9	4,4'-DDE	410	
50-29-3	4,4'-DDT	1600	
60-57-1	Dieldrin	360	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL19-05

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: 14739.09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2563.D

Level: (low/med) LOW Date Received: 07/29/93

% Moisture: 3 decanted: (Y/N) N Date Extracted: 07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 08/02/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	130	
72-54-8	4,4'-DDD	2800	
72-55-9	4,4'-DDE	1600	
50-29-3	4,4'-DDT	2200	
60-57-1	Dieldrin	350	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL19-05DL

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: 14739.09DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2561.D

Level: (low/med) LOW Date Received: 07/29/93

% Moisture: 3 decanted: (Y/N) N Date Extracted:07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 08/02/93

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: 7.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	86	D
72-54-8	4,4'-DDD	3500	D
72-55-9	4,4'-DDE	1400	D
50-29-3	4,4'-DDT	4900	D
60-57-1	Dieldrin	320	D

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL20-02

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: 14739.10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2552.D

Level: (low/med) LOW Date Received: 07/29/93

% Moisture: 3 decanted: (Y/N) N Date Extracted: 07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 07/30/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	19	
72-54-8	4,4'-DDD	830	
72-55-9	4,4'-DDE	880	
50-29-3	4,4'-DDT	920	
60-57-1	Dieldrin	340	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VSL20-02RE

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: 14739.10RA

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2553.D

Level: (low/med) LOW Date Received: 07/29/93

% Moisture: 3 decanted: (Y/N) N Date Extracted: 07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 07/30/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	19	
72-54-8	4,4'-DDD	430	
72-55-9	4,4'-DDE	880	
50-29-3	4,4'-DDT	540	
60-57-1	Dieldrin	160	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: BL072908S

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2531.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 07/30/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	330	U
72-54-8	4,4'-DDD	330	U
72-55-9	4,4'-DDE	330	U
50-29-3	4,4'-DDT	330	U
60-57-1	Dieldrin	330	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: LCS:14739

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2532.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 07/30/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	1700	
72-54-8	4,4'-DDD	98	
72-55-9	4,4'-DDE	330	U
50-29-3	4,4'-DDT	510	
60-57-1	Dieldrin	330	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix: (soil/water) SOIL Lab Sample ID: LCSD:14739

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2533.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:07/29/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 07/30/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	1600	
72-54-8	4,4'-DDD	90	
72-55-9	4,4'-DDE	330	U
50-29-3	4,4'-DDT	540	
60-57-1	Dieldrin	330	U

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (FBP)#	S2 (TBP)#	S3 (TPH)#	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	SBLK1	78	46	78						0
02	LCS	66	49	81						0
03	LCSD	69	47	79						0
04	VSL13-02	74	42	91						0
05	VSL18-03	72	42	72						0
06	VSL11-01	69	85	80						0
07	VSL12-02	68	82	81						0
08	VSL13-02RE	75	87	79						0
09	VSL14-03	67	74	87						0
10	VSL15-03	69	86	73						0
11	VSL16-03	70	76	82						0
12	VSL20-02	68	75	105						0
13	VSL20-02RE	75	82	107						0
14	VSL19-05DL	94D	84D	88D						0
15	VSL17-02	73	69	84						0
16	VSL19-05	70	76	99						0
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

		QC LIMITS
S1 (FBP)	= 2-Fluorobiphenyl	(30-115)
S2 (TBP)	= 2,4,6-Tribromophenol	(19-122)
S3 (TPH)	= Terphenyl-d14	(18-137)
S4	= N/A	
S5	= N/A	
S6	= N/A	
S7	= N/A	
S8	= N/A	

\# Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Matrix Spike - EPA Sample No.: LCS Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Hexachlorobenzene	3300	0	1700	52	25-150
4,4'-DDT	3300	0	510	15*	25-150

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	3300	1600	48	8	40	25-150
4,4'-DDT	3300	540	16*	6	40	25-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 2 out of 4 outside limits

COMMENTS: _____

_____

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Lab File ID: S2531.D Lab Sample ID: BL072908S

Instrument ID: S Date Extracted: 07/29/93

Matrix: (soil/water) SOIL Date Analyzed: 07/30/93

Level:(low/med) LOW Time Analyzed: 0957

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS	LCS:14739	S2532.D	07/30/93
02	LCSD	LCSD:14739	S2533.D	07/30/93
03	VSL13-02	14739.03	S2536.D	07/30/93
04	VSL18-03	14739.08	S2541.D	07/30/93
05	VSL11-01	14739.01	S2544.D	07/30/93
06	VSL12-02	14739.02	S2545.D	07/30/93
07	VSL13-02RE	14739.03RA	S2546.D	07/30/93
08	VSL14-03	14739.04	S2547.D	07/30/93
09	VSL15-03	14739.05	S2548.D	07/30/93
10	VSL16-03	14739.06	S2549.D	07/30/93
11	VSL20-02	14739.10	S2552.D	07/30/93
12	VSL20-02RE	14739.10RA	S2553.D	07/30/93
13	VSL19-05DL	14739.09DL	S2561.D	08/02/93
14	VSL17-02	14739.07	S2562.D	08/02/93
15	VSL19-05	14739.09	S2563.D	08/02/93
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Lab File ID (Standard): S2530.D Date Analyzed: 07/30/93

Instrument ID: S Time Analyzed: 0900

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	976166	2.93	459047	4.78	760995	6.34
	UPPER LIMIT	1952332	3.43	918094	5.28	1521990	6.84
	LOWER LIMIT	488083	2.43	229524	4.28	380498	5.84
	EPA SAMPLE No.						
01	SBLK1	497491	2.92	252805	4.78	434642	6.34
02	LCS	610072	2.91	316490	4.77	561836	6.33
03	LCSD	579623	2.91	301281	4.77	522622	6.33
04	VSL13-02	449178*	2.91	225095*	4.76	394377	6.33
05	VSL18-03	536015	2.91	274183	4.77	470331	6.33
06	VSL11-01	527783	2.92	282805	4.78	515144	6.34
07	VSL12-02	539367	2.91	283480	4.77	501005	6.33
08	VSL13-02RE	471145*	2.91	234570	4.77	405531	6.33
09	VSL14-03	545399	2.91	287182	4.77	476179	6.33
10	VSL15-03	594004	2.91	314723	4.77	552225	6.33
11	VSL16-03	540759	2.91	272482	4.77	469007	6.33
12	VSL20-02	691864	2.91	388260	4.76	665464	6.34
13	VSL20-02RE	574210	2.91	310263	4.78	527278	6.34
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Lab File ID (Standard): S2530.D Date Analyzed: 07/30/93

Instrument ID: S Time Analyzed: 0900

		IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	463926		9.15		431662		10.55		0		0.00	
	UPPER LIMIT	927852		9.65		863324		11.05		0		0.50	
	LOWER LIMIT	231963		8.65		215831		10.05		0		-0.50	
	EPA SAMPLE No.												
01	SBLK1	276062		9.15		295971		10.56					
02	LCS	335543		9.15		303620		10.55					
03	LCSD	319553		9.13		295176		10.55					
04	VSL13-02	169176	*	9.13		153887	*	10.55					
05	VSL18-03	285284		9.14		300404		10.55					
06	VSL11-01	360938		9.15		369844		10.56					
07	VSL12-02	312789		9.14		338126		10.56					
08	VSL13-02RE	276340		9.14		313291		10.55					
09	VSL14-03	258960		9.14		267345		10.55					
10	VSL15-03	363440		9.15		345751		10.55					
11	VSL16-03	270570		9.14		267427		10.55					
12	VSL20-02	309762		9.15		208865	*	10.57					
13	VSL20-02RE	245759		9.16		157612	*	10.57					
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS4 = Chrysene-d12
IS5 = Perylene-d12
IS6 = N/A

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Lab File ID (Standard): S2555.D Date Analyzed: 08/02/93

Instrument ID: S Time Analyzed: 1048

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	687826	2.85	328681	4.70	469890	6.25
	UPPER LIMIT	1375652	3.35	657362	5.20	939780	6.75
	LOWER LIMIT	343913	2.35	164340	4.20	234945	5.75
	EPA SAMPLE No.						
01	VSL19-05DL	490774	2.85	232136	4.70	408287	6.25
02	VSL17-02	464093	2.84	239170	4.69	421194	6.25
03	VSL19-05	525743	2.84	273628	4.69	474999	6.26
04							
05							
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11							
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17							
18							
19							
20							
21							
22							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14739

Lab File ID (Standard): S2555.D Date Analyzed: 08/02/93

Instrument ID: S Time Analyzed: 1048

		IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	341032	9.05	356937	10.46	0	0.00
	UPPER LIMIT	682064	9.55	713874	10.96	0	0.50
	LOWER LIMIT	170516	8.55	178468	9.96	0	-0.50
	EPA SAMPLE No.						
01	VSL19-05DL	320470	9.06	319541	10.46		
02	VSL17-02	246247	9.06	267318	10.48		
03	VSL19-05	197535	9.08	116839*	10.50		
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
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15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Chrysene-d12
IS5 = Perylene-d12
IS6 = N/A

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

APPENDIX H-8

Samples Collected on August 12-24, 1993

PROJECT MEMORANDUM

DATE: October 11, 1993

TO: David Eagleton

FROM: Kathy Blaine

PROJECT: 12883088
Woods Industries, Inc.

SUBJECT: ANALYTICAL DATA QA REVIEW

I have completed a review of the analytical data for the four samples collected on August 12, 1993 and listed on COC# 5863. The samples were relogged under Southwest Laboratory episode number 15064. The samples were identified as the following:

VNE02-02
VNE03-03
VNE07-06
VNE09-03

A full CLP-type package was submitted by the laboratory and the review was conducted in accordance with the most recent USEPA Data Validation Functional Guidelines. Based on this information, the data appeared to be valid with the following comments. The surrogates for sample VNE07-06 are reported to be below acceptable contract limits, however, upon reviewing the raw data, these values appear to be reported in error. The correct surrogate recoveries for this sample are well within contract required limits. This change will have no impact, however, on the reported sample results.

If you have any questions or need additional information, please feel free to contact me.

kab/kab/DAT15064.MEM

PROJECT MEMORANDUM

DATE: August 27, 1993

TO: Dave Eagleton
cc: Tom Hippe

FROM: Pat McAllister

PROJECT: 12883088
Woods Industries

SUBJECT: ANALYTICAL DATA REVIEW

I have completed a review of the analytical data for the sample results faxed to you on August 27, 1993 from Southwest Labs of Oklahoma. The samples reviewed are as follows:

VNE01-00	VNE02-02
VNE03-03	VNE04-02
VNE05-02	VNE06-00
VNE06-00DL	VNE07-06
VNE08-03	VNE09-03
VNE-12	VNE-13

Although the information provided was not CLP deliverable packages, my experience with Southwest's reputation leads me to assess the data as valid and usable.

Sample VNE06-00 required a dilution due to high concentrations of 4,4'-DDE, 4,4'-DDD, and 4,4'-DDT. When using the data for 4,4'-DDE, 4,4'-DDD, and 4,4'-DDT, the dilution analysis should be used. All other compounds reported for this sample should be evaluated from the original, undiluted analysis.

If you have any questions please feel free to contact me.

PDM/pdm/QA082793.MEM

MEMORANDUM

DATE: September 17, 1993

TO: Greg Koester, Columbia Office

cc: David Eagleton, Columbia Office
Tom Hippe, Houston Office

FROM: Jeff Christman, Pittsburgh Office

SUBJECT: RESULTS OF STATISTICAL ANALYSIS OF NORTHERN EXCAVATION VERIFICATION SAMPLES AT THE WOODS INDUSTRIES SITE, PROJECT NUMBER 12883088

This memorandum discusses the results of the statistical analysis of the 10 verification samples collected from the Northern Excavation area of the Woods Industries site. The results of this analysis indicate the Northern Excavation area is clean.

As described in the Soil Removal Work Plan (Burlington, 1993), this analysis consisted of statistically comparing the concentrations of indicator chemicals 4,4'-DDT, hexachlorobenzene, 4,4'-DDD, 4,4'-DDE, and dieldrin to their cleanup levels of 30, 40, 30, 10, and 0.63 milligrams per kilogram (mg/kg), respectively. The concentrations of lead and arsenic were also statistically compared to cleanup levels of 1,000 and 200 mg/kg, respectively. Three statistical criteria were used to compare the Northern Excavation area verification samples to their respective cleanup levels. These three criteria include:

1. The upper confidence limit of a 95-percent one-sided confidence interval for the mean soil concentration shall be less than the cleanup level.

2. No single sample concentration shall be greater than two times the soil cleanup level.

3. At most 10 percent of the sample concentrations shall exceed the soil cleanup level.

One concentration of 4,4'-DDE and 4,4'-DDT was greater than its cleanup level; however, these concentrations were less than two times the cleanup level. The maximum concentration of each remaining indicator chemical was less than its respective cleanup level, therefore, criteria 2 and 3 were satisfied. Criterion 1 was satisfied because the upper confidence limit of a 95-percent one-sided confidence interval for the mean soil concentration was less than the cleanup level for each indicator chemical. Prior to calculating the confidence intervals, the Shapiro-Wilk Test was performed on the verification concentrations of each indicator chemical to evaluate if the verification concentrations deviated significantly from the normal or

lognormal distribution. The Shapiro-Wilk test concluded that either the normal or lognormal distribution was appropriate for each indicator chemical; therefore, the confidence intervals were calculated based on the normal or lognormal distribution.

Please call me if you have any questions regarding this analysis.

SOUTHWEST LABORATORY
OF OKLAHOMA, INC.

August 31, 1993

Mr. Dave Eagleton
BURLINGTON ENVIRONMENTAL
210 West Sand Bank Road
Columbia, IL 62236

SWLO ID: 15064.01 - 15064.05
Project ID: Woods Industries, Yakima, WA

Dear Mr. Eagleton:

Enclosed please find the organic CLP data package for pesticides/PCB's for your samples relogged in our laboratory on August 20, 1993. The semivolatile analysis for your sample VNE11-03 (SWLO No. 15064.01 and originally logged as 14944.11) is included in the organic CLP data package for the original episode SWLO No. 14944.

The rush results requested for these relogged samples were faxed to you on August 24, 1993. Today's submittal completes this episode.

If, in your review, you should have any questions or require additional information, please call.

Sincerely,

Chuck Hoover
Project Officer

CFH/rb

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 2856-2
Page 1 of ___

PROJECT NAME Woods Industries/Yakima Washington
TASK DESCRIPTION Ver. Excavation Soil Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 12883088
PHASE 2856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
PSLWBTM20		0006	N/A	4-7-93		SouthWest	4-8-93	4-8-93
PNLSW2-55		0006	N/A.	4-7-93		Southwest	4-8-93	4-8-93
VSL-1	13631.01	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-2	13631.02	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-3	13631.03	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-4	13631.04	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-5	13631.05	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-6	13631.06	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-7	13631.07	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-8	13631.08	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-9	13631.09	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-10	13631.10	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-11	13631.11	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VE3-1	13676.01	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE3-2	13676.02	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE4-1	13676.04	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE4-2	13676.03	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
AVE60-01	13942.01	6429	N/A.	5-24-93		Southwest	5-25 93	5-28-93
VF-1		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
VF-2		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
ECP-SP1		5561	N/A	6-10-93		Southwest	6-11-93	6-14-93
VSL-11-01	14739.01	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-12-02	14739.02	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-13-02	14739.03	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-14-03	14739.04	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 7856-3
Page 2 of 2

PROJECT NAME Woods Industries / Yakima, Washington
TASK DESCRIPTION Verification Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 12883088
PHASE 7856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
VSL-15-04	14739.05	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-16-03	14739.06	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-17-02	14739.07	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-18-03	14739.08	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-19-05	14739.09	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-20-02	14739.10	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
* VNE01-00	14944.01	5863	N/A	8-12-93		Southwest	7-29-93	8-2-93
* VNE02-02	14944.02	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
* VNE03-03	14944.03	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
* VNE04-02	14944.04	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
* VNE05-02	14944.05	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
* VNE06-00	14944.06	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
* VNE07-06	14944.07	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE08-03	14944.08	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE09-03	14944.09	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE10-03	14944.10	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE11-03	14944.11	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE12	15107.01	5601	N/A	8-24-93		Southwest	8-17-93	8-19-93
VNE13	15107.02	5601	N/A	8-24-93		Southwest	8-25-93	8-27-93
						Southwest	8-25-93	8-27-93

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 2856-2
Page 1 of ___

PROJECT NAME Woods Industries/Yakima Washington
TASK DESCRIPTION Verification Soil Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 12883088
PHASE 2856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
PSLWBTM20		0006	N/A	4-7-93		SouthWest	4-8-93	4-8-93
PSLSW2-55		0006	N/A.	4-7-93		Southwest	4-8-93	4-8-93
VSL-1	13631.01	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-2	13631.02	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-3	13631.03	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-4	13631.04	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-5	13631.05	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL6	13631.06	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-7	13631.07	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-8	13631.08	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-9	13631.09	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-10	13631.10	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VSL-11	13631.11	6415	N/A	5-6-93		Southwest	5-7-93	5-10-93
VE3-1	13676.01	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE3-2	13676.02	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE4-1	13676.04	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
VE4-2	13676.03	6419	N/A	5-10-93		Southwest	5-11-93	5-14-93
AVE60-01	13942.01	6429	N/A.	5-24-93		Southwest	5-25 93	5-28-93
VF-1		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
VF-2		5552	N/A.	6-4-93		Southwest	6-5-93	6-8-93
CCP-SP1		5561	N/A	6-10-93		Southwest	6-11-93	6-14-93
VSL-11-01	14739.01	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-12-02	14739.02	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-13-02	14739.03	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-14-03	14739.04	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93

BURLINGTON ENVIRONMENTAL

SAMPLE CONTROL LOG

Serial No. SCL 7856-3
Page 2 of 2

PROJECT NAME Woods Industries / Yakima, Washington
TASK DESCRIPTION Verification Samples
SAMPLE TYPE(S) Soil

PROJECT NO. 12683088
PHASE 7856 TASK 22

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
VSL-15-04	14739.05	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-16-03	14739.06	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-17-02	14739.07	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-18-03	14739.08	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-19-05	14739.09	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
VSL-20-02	14739.10	5848	N/A	7-28-93		Southwest	7-29-93	8-2-93
* VNE01-00	14944.01	5863	N/A	8-12-93		Southwest	7-29-93	8-2-93
* VNE02-02	14944.02	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
* VNE03-03	14944.03	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE04-02	14944.04	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE05-02	14944.05	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE06-00	14944.06	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
* VNE07-06	14944.07	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE08-03	14944.08	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
* VNE09-03	14944.09	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE10-03	14944.10	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE11-03	14944.11	5863	N/A	8-12-93		Southwest	8-17-93	8-19-93
VNE12	15107.01	5601	N/A	8-24-93		Southwest	8-25-93	8-27-93
VNE13	15107.02	5601	N/A	8-24-93		Southwest	8-25-93	8-27-93

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

August 19, 1993

Dave Eagleton
BURLINGTON ENVIRONMENTAL
210 West Sand Bank Road
Columbia, IL 62236

SWLO ID: 14944.01 - 14944.11

Project: Woods Industries

Dear Mr. Eagleton:

Enclosed please find the metal analysis results for your samples received in our laboratory on August 13, 1993 for the above captioned project.

A copy of this report has been faxed to Doug Broten.

The semivolatile Form 1 results were faxed to you and Mr. Broten on August 18, 1993. The Organic Full CLP package and Accounting package will follow upon completion.

If, in your review, you should have any questions or require additional information, please call.

Sincerely,

Chuck Hoover
Project Officer

CH/lk

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5863

PROJECT NAME Woods Industries
PROJECT NUMBER 17883088 MAJOR TASK 7856
SAMPLERS Braten
LAB DESTINATION Southwest Lab. OKLAHOMA

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pesticide List	Lead 3050/6010	Arsenic 3050/7060						PRESERVATIVES: ICED	CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
VNE 01-00	8-12-93				See data Sheets	1	X	X	X								Verification Samples
VNE 02-02						1	X	X	X								Note: Pesticide List:
VNE 03-03						1	X	X	X								Hexachlorobenzene
VNE 04-02						1	X	X	X								p,p' DDT
VNE 05-02						1	X	X	X								p,p' DDD
VNE 06-00						1	X	X	X								p,p' DDE
VNE 07-06						1	X	X	X								Dieldrin
VNE 08-03						1	X	X	X								
VNE 09-03						1	X	X	X								Expected concentrations may
VNE 10-03						1	X	X	X								range from 0-100 ppm.
VNE 11-03						1	X	X	X								→ Dieldrin delete
																	Pb + Arsenic
																	Request method detection
																	Limits

RELINQUISHED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
David Braten	8-12-93	1615			

SHIPPING NOTES Caution: May Contain Hazardous material

LAB NOTES Agree upon 72 hour turnaround

BE-34 (1/92)

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 5601

PROJECT NAME Woods Industries
PROJECT NUMBER 12883088 MAJOR TASK 7856
SAMPLERS John W. Dalton
LAB DESTINATION South West Labs Oklahoma

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: Pest List	Dieldrin	Lead	Arsenic				ICED	PRESERVATIVES: CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
VNE-12	8-24-93	3:10 pm			Woods yard NW	1	✓	✓	✓	✓						Pesticide List
VNE-13	8-24-93	3:10pm			Woods yard NW	1	✓	✓	✓	✓						Hexachlorobenzene,
						2	2	2	2	2						DDT, DDD, DDE, Dieldrin
																Must have a 72 hour
																Turn over.

RELINQUISHED BY

SIGNATURE	DATE	TIME
John W. Dalton	8-24-93	3:30pm

RECEIVED BY

SIGNATURE	DATE	TIME

SHIPPING NOTES May Contain Hazardous Materials.

LAB NOTES

BE-34 (1/92)

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SO _____
PAGE ___ OF ___

PROJECT NAME Woods Industries Site SAMPLE LOCATION NO. _____
PROJECT NO. 12883088 MAJOR TASK 7856 SUBTASK 77
DATE 9-12-93 SAMPLERS ~~JWD~~ / ~~GAK~~ Broten, Boespflug

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ✓ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
VNE 01-00	N/A	@1500	1 Pint	Verification
NE 02-07		1503		
NE 03-03		1506		
NE 04-02		1509		
NE 05-02		1512		
NE 06-00		1515		
N 07-06		1518		
08-03	↓	1521	↓	↓

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES)/NO 1615 TIME DB SEALER
COMPLETED (YES)/NO 1615 TIME 5863 COC NO. DB COMPLETED BY
LAB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD _____
PAGE ___ OF ___

PROJECT NAME Woods Industries Site SAMPLE LOCATION NO. _____
PROJECT NO. 12883088 MAJOR TASK 7856 SUBTASK 77
DATE ~~NA~~ 8-12-93 SAMPLERS ~~JWD~~/GAR

SAMPLING METHOD _____
TYPE OF SAMPLE: DUPLICATE ___ GRAB ✓ BACKGROUND ___ COMPOSITE ___
REASON FOR COLLECTION: LAB ANALYSIS ___ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
VNE 09-03	N/A	1524	1 Pint	Verification
VNE 10-03	↓	1537	↓	↓
VNE 11-03	↓	1527	↓	
VNE 11 IS a duplicate OF VNE 10				

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING

DOCUMENTATION

SAMPLE SEALED (YES)/NO 1615 TIME DB SEALER
COC COMPLETED (YES)/NO 1615 TIME 5863 COC NO. DB COMPLETED BY
AB ANALYSIS REQUEST COMPLETED _____ TIME _____ LAR NO. _____ COMPLETED BY

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: BURLINGTON ENVIRONMENTAL
210 W. SAND BANK ROAD
P.O. BOX 330
COLUMBIA, IL 62236-0330

Client ID: VNE01-00 Project ID: WOODS INDUSTRIES

SWLO ID: 14944.01 Report: 14944.01

Collected: 08/12/1993 Report Date: 08/19/1993 Page: 1
Received: 08/13/1993 Last Modified: Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
*** METALS ***						
ARSENIC		2.0	mg/kg	12.9	08/17/93	SW 7060
LEAD		6.0	mg/kg	70.4	08/17/93	SW 6010

ND = [redacted] DETECTED ABOVE QUANTITATION LIMIT
B = [redacted]YTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE
Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: BURLINGTON ENVIRONMENTAL
210 W. SAND BANK ROAD
P.O. BOX 330
COLUMBIA, IL 62236-0330

Client ID: VNE02-02 Project ID: WOODS INDUSTRIES

SWLO ID: 14944.02 Report: 14944.02

Collected: 08/12/1993 Report Date: 08/19/1993 Page: 1
Received: 08/13/1993 Last Modified: Matrix: Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
*** METALS ***						
ARSENIC		2.0	mg/kg	6.1	08/17/93	SW 7060
LEAD		6.0	mg/kg	7.0	08/17/93	SW 6010

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE
Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: BURLINGTON ENVIRONMENTAL
210 W. SAND BANK ROAD
P.O. BOX 330
COLUMBIA, IL 62236-0330

Client ID: VNE03-03 **Project ID:** WOODS INDUSTRIES

SWLO ID: 14944.03 **Report:** 14944.03

Collected: 08/12/1993 **Report Date:** 08/19/1993 **Page:** 1
Received: 08/13/1993 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
*** METALS ***						
ARSENIC		2.0	mg/kg	2.6	08/17/93	SW 7060
LEAD		6.0	mg/kg	12.1	08/17/93	SW 6010

ND = [redacted]DETECTED ABOVE QUANTITATION LIMIT
B = [redacted]YTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE
Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: BURLINGTON ENVIRONMENTAL
210 W. SAND BANK ROAD
P.O. BOX 330
COLUMBIA, IL 62236-0330

Client ID: VNE04-02 **Project ID:** WOODS INDUSTRIES

SWLO ID: 14944.04 **Report:** 14944.04

Collected: 08/12/1993 **Report Date:** 08/19/1993 **Page:** 1
Received: 08/13/1993 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
*** METALS ***						
ARSENIC		2.0	mg/kg	2.3	08/17/93	SW 7060
LEAD		6.0	mg/kg	ND	08/17/93	SW 6010

ID = [redacted]DETECTED ABOVE QUANTITATION LIMIT
B = [redacted]YTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE
Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: BURLINGTON ENVIRONMENTAL
210 W. SAND BANK ROAD
P.O. BOX 330
COLUMBIA, IL 62236-0330

Client ID: VNE05-02 **Project ID:** WOODS INDUSTRIES

SWLO ID: 14944.05 **Report:** 14944.05

Collected: 08/12/1993 **Report Date:** 08/19/1993 **Page:** 1
Received: 08/13/1993 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
*** METALS ***						
ARSENIC		2.0	mg/kg	6.3	08/17/93	SW 7060
LEAD		6.0	mg/kg	21.6	08/17/93	SW 6010

ND = [redacted] DETECTED ABOVE QUANTITATION LIMIT
B = [redacted]YTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE
Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: BURLINGTON ENVIRONMENTAL
210 W. SAND BANK ROAD
P.O. BOX 330
COLUMBIA, IL 62236-0330

Client ID: VNE06-00 **Project ID:** WOODS INDUSTRIES

SWLO ID: 14944.06 **Report:** 14944.06

Collected: 08/12/1993 **Report Date:** 08/19/1993 **Page:** 1
Received: 08/13/1993 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
*** METALS ***						
ARSENIC		2.0	mg/kg	13.6	08/17/93	SW 7060
LEAD		6.0	mg/kg	81.0	08/17/93	SW 6010

ND = [redacted] DETECTED ABOVE QUANTITATION LIMIT
B = [redacted]YTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE
Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: BURLINGTON ENVIRONMENTAL
210 W. SAND BANK ROAD
P.O. BOX 330
COLUMBIA, IL 62236-0330

Client ID: VNE07-06 **Project ID:** WOODS INDUSTRIES

SWLO ID: 14944.07 **Report:** 14944.07

Collected: 08/12/1993 **Report Date:** 08/19/1993 **Page:** 1
Received: 08/13/1993 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
*** METALS ***						
ARSENIC		2.0	mg/kg	12.1	08/17/93	SW 7060
LEAD		6.0	mg/kg	23.0	08/17/93	SW 6010

ND = [redacted] DETECTED ABOVE QUANTITATION LIMIT
B = [redacted]YTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE
Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: BURLINGTON ENVIRONMENTAL
210 W. SAND BANK ROAD
P.O. BOX 330
COLUMBIA, IL 62236-0330

Client ID: VNE08-03 **Project ID:** WOODS INDUSTRIES

SWLO ID: 14944.08 **Report:** 14944.08

Collected: 08/12/1993 **Report Date:** 08/19/1993 **Page:** 1
Received: 08/13/1993 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
*** METALS ***						
ARSENIC		2.0	mg/kg	6.2	08/17/93	SW 7060
LEAD		6.0	mg/kg	14.7	08/17/93	SW 6010

ND = [redacted]DETECTED ABOVE QUANTITATION LIMIT
B = [redacted]LYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE
Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: BURLINGTON ENVIRONMENTAL
210 W. SAND BANK ROAD
P.O. BOX 330
COLUMBIA, IL 62236-0330

Client ID: VNE09-03 **Project ID:** WOODS INDUSTRIES

SWLO ID: 14944.09 **Report:** 14944.09

Collected: 08/12/1993 **Report Date:** 08/19/1993 **Page:** 1
Received: 08/13/1993 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
*** METALS ***						
ARSENIC		2.0	mg/kg	4.4	08/17/93	SW 7060
LEAD		6.0	mg/kg	14.5	08/17/93	SW 6010

ND = [redacted] DETECTED ABOVE QUANTITATION LIMIT
B = [redacted]LYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE
Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: BURLINGTON ENVIRONMENTAL
210 W. SAND BANK ROAD
P.O. BOX 330
COLUMBIA, IL 62236-0330

Client ID: VNE10-03 **Project ID:** WOODS INDUSTRIES

SWLO ID: 14944.10 **Report:** 14944.10

Collected: 08/12/1993 **Report Date:** 08/19/1993 **Page:** 1
Received: 08/13/1993 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
*** METALS ***						
ARSENIC		2.0	mg/kg	49.3	08/17/93	SW 7060
LEAD		6.0	mg/kg	209	08/17/93	SW 6010

ND = [redacted]DETECTED ABOVE QUANTITATION LIMIT
B = [redacted]YTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE
Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name: BURLINGTON ENVIRONMENTAL
210 W. SAND BANK ROAD
P.O. BOX 330
COLUMBIA, IL 62236-0330

Client ID: VNE11-03 **Project ID:** WOODS INDUSTRIES

SWLO ID: 14944.11 **Report:** 14944.11

Collected: 08/12/1993 **Report Date:** 08/19/1993 **Page:** 1
Received: 08/13/1993 **Last Modified:** **Matrix:** Soil

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
*** INORGANICS ***						
*** METALS ***						
ARSENIC		2.0	mg/kg	76.7	08/17/93	SW 7060
LEAD		6.0	mg/kg	275	08/17/93	SW 6010

ND = [redacted]DETECTED ABOVE QUANTITATION LIMIT
B = [redacted]YTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE
Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

CLIENT: BURLINGTON ENVIRONMENTAL

REPORT: 14944a
REPORT DATE: 08-18-93

MATRIX: **SOIL**
QA/QC : **METHOD BLANK**

PARAMETER	DATE ANALYZED	DET LIMIT	UNIT	RESULTS
ARSENIC	08/17/93	2.0	mg/Kg	< 2.0
LEAD	08/17/93	6.0	mg/Kg	< 6.0

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

CLIENT: BURLINGTON ENVIRONMENTAL

REPORT: 14944b
REPORT DATE: 08/17/93

MATRIX: **SOIL**
QA/QC : **LABORATORY CONTROL SPIKE**

LABORATORY CONTROL SPIKE RECOVERY

PARAMETER	DATE ANALYZED	AMOUNT SPIKED (mg/Kg)	SPIKED RESULTS (mg/Kg)	SPIKE PERCENT RECOVERY	SPIKE RECOVERY LIMITS
ARSENIC	08/17/93	4.0	4.2	105	80-120
LEAD	08/17/93	100	109	109	80-120

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

CLIENT: BURLINGTON ENVIRONMENTAL

REPORT: 14944c
REPORT DATE: 08-18-93

MATRIX: SOIL
SAMPLE ID: VNE01-00

MATRIX SPIKE

PARAMETER	DATE ANALYZED	SAMPLE CONC. (mg/Kg)	SPIKE CONC. (mg/Kg)	MS CONC. (mg/Kg)	MS % RECOVERY	CONTROL LIMITS
ARSENIC	08/17/93	12.9	4.0	16.7	95	75-125
LEAD	08/17/93	70.4	100	193	123	75-125

*OUTSIDE QC LIMITS

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

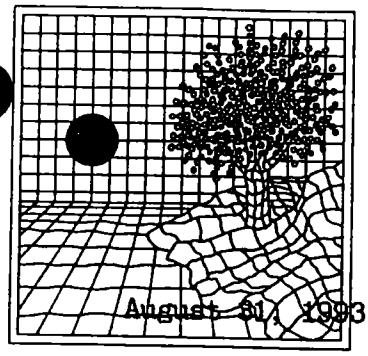
CLIENT: BURLINGTON ENVIRONMENTAL

REPORT: 14944d
REPORT DATE: 08/17/93

MATRIX: SOIL
SAMPLE ID: VNE01-00

MATRIX SPIKE DUPLICATE PRECISION DATA

PARAMETER	MS CONC. (mg/Kg)	MSD CONC. (mg/Kg)	RELATIVE PERCENT DIFFERENCE	CONTROL LIMIT MAX RPD
ARSENIC	16.7	16.9	1.19	20
LEAD	70.4	185	4.2	20



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

Dave Eagleton
BURLINGTON ENVIRONMENTAL
210 West Sand Bank Road
Columbia, IL 62236

SWLO ID: 14944.01 - 14944.11

Project: Woods Industries

Dear Mr. Eagleton:

Enclosed please find the Full CLP and Accounting Package for Organics for your samples received in our laboratory on August 13, 1993 for the above captioned project.

The semivolatile Form 1 and Metal results were faxed to you and Mr. Broten on August 18, 1993.

If, in your review, you should have any questions or require additional information, please call.

Sincerely,

Chuck Hoover

Chuck Hoover
Project Officer

CH/jt

Enclosures

1700 WEST ALBANY • BROKEN ARROW, OK 74012
(918) 251-2858 • FAX (918) 251-2599

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (FBP)#	S2 (TBP)#	S3 (TPH)#	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	VNE01-00	57	75	54						0
02	VNE04-02	56	73	52						0
03	VNE05-02	64	70	50						0
04	VNE06-00	60	69	46						0
05	VNE08-03	55	77	51						0
06	VNE10-03	74	57	44						0
07	VNE11-03	65	43	42						0
08	VNE05-02RE	63	64	63						0
09	SBLK2	54	82	61						0
10	LCS2	56	95	56						0
11	LCSD2	86	160*	101						1
12	VNE01-00DL	69D	96D	81D						0
13	VNE03-03	89D	91D	96D						0
14	VNE09-03	70D	66D	91D						0
15	VNE09-03RE	69D	73D	95D						0
16	VNE10-03DL	69D	48D	107D						0
17	VNE11-03DL	70D	65D	94D						0
18	VNE06-00DL	54D	47D	57D						0
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		QC LIMITS
S1 (FBP)	= 2-Fluorobiphenyl	(30-115)
S2 (TBP)	= 2,4,6-Tribromophenol	(19-122)
S3 (TPH)	= Terphenyl-d14	(18-137)
S4	= N/A	
S5	= N/A	
S6	= N/A	
S7	= N/A	
S8	= N/A	

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Level:(low/med) MED

	EPA SAMPLE NO.	S1 (FBP)#	S2 (TBP)#	S3 (TPH)#	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	SBLK1	53	59	50						0
02	VNE02-02	56	53	60						0
03	VNE07-06	57	48	64						0
04	LCS1	64	72	65						0
05	LCSD1	56	72	64						0
06	VNE11-03RE	65	68	75						0
07	VNE11-03REDL	62D	43D	70D						0
08	SBLK3	72	76	84						0
09										
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		QC LIMITS
S1 (FBP)	= 2-Fluorobiphenyl	(30-115)
S2 (TBP)	= 2,4,6-Tribromophenol	(19-122)
S3 (TPH)	= Terphenyl-d14	(18-137)
S4	= N/A	
S5	= N/A	
S6	= N/A	
S7	= N/A	
S8	= N/A	

\# Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix Spike - EPA Sample No.: LCS1 Level(low/med) MED

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Hexachlorobenzene	50000	0	46000	92	25-150
4,4'-DDT	50000	0	12000	24*	25-150

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	50000	43000	86	7	40	25-150
4,4'-DDT	50000	14000	28	15	40	25-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 1 out of 4 outside limits

COMMENTS: _____

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix Spike - EPA Sample No.: LCS2 Level(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Hexachlorobenzene	1700	0	1500	88	25-150
4,4'-DDT	1700	0	460	27	25-150

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	1700	1600	94	6	40	25-150
4,4'-DDT	1700	500	29	7	40	25-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

COMMENTS: _____

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Lab File ID: S2763.D Lab Sample ID: BL081312S

Instrument ID: S Date Extracted: 08/13/93

Matrix: (soil/water) SOIL Date Analyzed: 08/13/93

Level:(low/med) MED Time Analyzed: 2327

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	VNE02-02	14944.02	S2775.D	08/14/93
02	VNE07-06	14944.07	S2777.D	08/14/93
03	LCS1	LCS:14944	S2803.D	08/16/93
04	LCSD1	LCSD:14944	S2804.D	08/16/93
05				
06				
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COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK2

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Lab File ID: S2800.D Lab Sample ID: BL081311S

Instrument ID: S Date Extracted: 08/13/93

Matrix: (soil/water) SOIL Date Analyzed: 08/16/93

Level:(low/med) LOW Time Analyzed: 1508

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	VNE01-00	14944.01	S2768.D	08/14/93
02	VNE04-02	14944.04	S2769.D	08/14/93
03	VNE05-02	14944.05	S2770.D	08/14/93
04	VNE06-00	14944.06	S2771.D	08/14/93
05	VNE08-03	14944.08	S2772.D	08/14/93
06	VNE10-03	14944.10	S2773.D	08/14/93
07	VNE11-03	14944.11	S2774.D	08/14/93
08	VNE05-02RE	14944.05RA	S2781.D	08/14/93
09	LCS2	LCS:14944	S2801.D	08/16/93
10	LCSD2	LCSD:14944	S2802.D	08/16/93
11	VNE01-00DL	14944.01DL	S2805.D	08/16/93
12	VNE03-03	14944.03	S2806.D	08/16/93
13	VNE09-03	14944.09	S2816.D	08/16/93
14	VNE09-03RE	14944.09RA	S2817.D	08/16/93
15	VNE10-03DL	14944.10DL	S2818.D	08/16/93
16	VNE11-03DL	14944.11DL	S2820.D	08/16/93
17	VNE06-00DL	14944.06DL	S2824.D	08/17/93
18				
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COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK3

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Lab File ID: S2893.D Lab Sample ID: BL082017S

Instrument ID: S Date Extracted: 08/20/93

Matrix: (soil/water) SOIL Date Analyzed: 08/23/93

Level:(low/med) MED Time Analyzed: 1441

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	VNE11-03RE	15064.01RA	S2884.D	08/23/93
02	VNE11-03REDL	15064.01RADL	S2886.D	08/23/93
03				
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COMMENTS:

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Lab File ID (Standard): S2761.D Date Analyzed: 08/13/93

Instrument ID: S Time Analyzed: 2249

		IS1 AREA	#	RT	#	IS2 AREA	#	RT	#	IS3 AREA	#	RT	#
	12 HOUR STD	730288		3.65		373932		5.56		589016		7.18	
	UPPER LIMIT	1460576		4.15		747864		6.06		1178032		7.68	
	LOWER LIMIT	365144		3.15		186966		5.06		294508		6.68	
	EPA SAMPLE No.												
01	SBLK1	562269		3.64		291791		5.54		571793		7.16	
02	VNE01-00	530977		3.62		258745		5.54		458433		7.15	
03	VNE04-02	459773		3.62		230903		5.54		446354		7.17	
04	VNE05-02	483287		3.65		228253		5.58		259627	*	7.21	
05	VNE06-00	460590		3.65		224707		5.57		392230		7.18	
06	VNE08-03	541408		3.64		268992		5.57		448659		7.18	
07	VNE10-03	499660		3.65		211013		5.57		147508	*	7.21	
08	VNE11-03	593535		3.64		254856		5.57		120561	*	7.22	
09	VNE02-02	635194		3.64		324225		5.57		551209		7.18	
10	VNE07-06	654697		3.64		336003		5.56		460906		7.19	
11	VNE05-02RE	543593		3.64		256854		5.57		276451	*	7.20	
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Lab File ID (Standard): S2761.D Date Analyzed: 08/13/93

Instrument ID: S Time Analyzed: 2249

		IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	328856		10.12		142424		11.62		0		0.00	
	UPPER LIMIT	657712		10.62		284848		12.12		0		0.50	
	LOWER LIMIT	164428		9.62		71212		11.12		0		-0.50	
	EPA SAMPLE No.												
01	SBLK1	365766		10.10		282918		11.60					
02	VNE01-00	185105		10.11		179585		11.61					
03	VNE04-02	269911		10.11		229733		11.60					
04	VNE05-02	151122	*	10.13		155792		11.62					
05	VNE06-00	174936		10.14		140828		11.62					
06	VNE08-03	261690		10.12		188276		11.61					
07	VNE10-03	116838	*	10.15		95161		11.63					
08	VNE11-03	104026	*	10.16		87802		11.63					
09	VNE02-02	260368		10.11		186478		11.61					
10	VNE07-06	175507		10.12		119840		11.62					
11	VNE05-02RE	114942	*	10.14		87191		11.62					
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS4 = Chrysene-d12
IS5 = Perylene-d12
IS6 = N/A

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Lab File ID (Standard): S2798.D Date Analyzed: 08/16/93

Instrument ID: S Time Analyzed: 1425

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	885490	3.76	413328	5.67	618597	7.28
	UPPER LIMIT	1770980	4.26``	826656	6.17	1237194	7.78
	LOWER LIMIT	442745	3.26	206664	5.17	309298	6.78
	EPA SAMPLE No.						
01	SBLK2	522123	3.75	245022	5.66	468196	7.27
02	LCS2	598597	3.75	289679	5.66	551428	7.27
03	LCSD2	464152	3.75	235934	5.66	482996	7.28
04	LCS1	602033	3.75	278058	5.67	499342	7.28
05	LCSD1	705483	3.75	364520	5.67	716441	7.28
06	VNE01-00DL	528816	3.75	282283	5.66	577178	7.28
07	VNE03-03	532287	3.75	260513	5.66	423264	7.29
08	VNE09-03	334967*	3.75	167843*	5.66	330114	7.27
09	VNE09-03RE	515657	3.75	253190	5.66	472411	7.28
10	VNE10-03DL	677539	3.75	318903	5.67	595261	7.27
11	VNE11-03DL	501926	3.75	266341	5.67	504844	7.27
12							
13							
14							
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18							
19							
20							
21							
22							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Lab File ID (Standard): S2798.D Date Analyzed: 08/16/93

Instrument ID: S Time Analyzed: 1425

		IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	489763		10.15		479591		11.62		0		0.00	
	UPPER LIMIT	979526		10.65		959182		12.12		0		0.50	
	LOWER LIMIT	244882		9.65		239796		11.12		0		-0.50	
	EPA SAMPLE No.												
01	SBLK2	346306		10.15		395600		11.62					
02	LCS2	432068		10.15		470430		11.62					
03	LCSD2	349485		10.15		347944		11.61					
04	LCS1	354499		10.15		373813		11.61					
05	LCSD1	502338		10.15		503304		11.61					
06	VNE01-00DL	325133		10.17		284381		11.62					
07	VNE03-03	312384		10.16		289470		11.61					
08	VNE09-03	182137	*	10.15		139071	*	11.62					
09	VNE09-03RE	242795	*	10.15		189504	*	11.62					
10	VNE10-03DL	296477		10.16		207977	*	11.62					
11	VNE11-03DL	299757		10.15		235107	*	11.61					
12													
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22													

IS4 = Chrysene-d12
IS5 = Perylene-d12
IS6 = N/A

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Lab File ID (Standard): S2823.D Date Analyzed: 08/17/93

Instrument ID: S Time Analyzed: 1144

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	795526	3.75	380916	5.67	508341	7.28
	UPPER LIMIT	1591052	4.25	761832	6.17	1016682	7.78
	LOWER LIMIT	397763	3.25	190458	5.17	254170	6.78
	EPA SAMPLE No.						
01	VNE06-00DL	487771	3.75	260097	5.67	470894	7.27
02							
03							
04							
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22							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Lab File ID (Standard): S2823.D Date Analyzed: 08/17/93

Instrument ID: S Time Analyzed: 1144

		IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	335424	10.16	349019	11.63	0	0.00
	UPPER LIMIT	670848	10.66	698038	12.13	0	0.50
	LOWER LIMIT	167712	9.66	174510	11.13	0	-0.50
	EPA SAMPLE No.						
01	VNE06-00DL	276721	10.16	372875	11.62		
02							
03							
04							
05							
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IS4 = Chrysene-d12
IS5 = Perylene-d12
IS6 = N/A

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Lab File ID (Standard): S2881.D Date Analyzed: 08/23/93

Instrument ID: S Time Analyzed: 0906

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	799770	3.60	351443	5.51	483305	7.11
	UPPER LIMIT	1599540	4.10	702886	6.01	966610	7.61
	LOWER LIMIT	399885	3.10	175722	5.01	241652	6.61
	EPA SAMPLE No.						
01	VNE11-03RE	404316	3.59	201631	5.50	387235	7.10
02	VNE11-03REDL	356151*	3.59	169694*	5.50	312889	7.11
03	SBLK3	528250	3.59	255899	5.50	448668	7.11
04							
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IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Lab File ID (Standard): S2881.D Date Analyzed: 08/23/93

Instrument ID: S Time Analyzed: 0906

		IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	407936	9.98	376384	11.44	0	0.00
	UPPER LIMIT	815872	10.48	752768	11.94	0	0.50
	LOWER LIMIT	203968	9.48	188192	10.94	0	-0.50
	EPA SAMPLE No.						
01	VNE11-03RE	308473	9.98	295638	11.44		
02	VNE11-03REDL	206919	9.98	203914	11.43		
03	SBLK3	293932	9.98	269087	11.43		
04							
05							
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22							

IS4 = Chrysene-d12
IS5 = Perylene-d12
IS6 = N/A

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE01-00

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2768.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 2 decanted: (Y/N) N Date Extracted: 08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	630	
72-54-8	4,4'-DDD	1100	
72-55-9	4,4'-DDE	1300	
50-29-3	4,4'-DDT	2100	
60-57-1	Dieldrin	170	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE01-00DL

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.01DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2805.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 2 decanted: (Y/N) N Date Extracted: 08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/16/93

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	510	D
72-54-8	4,4'-DDD	1300	D
72-55-9	4,4'-DDE	2300	D
50-29-3	4,4'-DDT	3300	D
60-57-1	Dieldrin	340	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE02-02

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.02

Sample wt/vol: 1.0 (g/mL) G Lab File ID: S2775.D

Level: (low/med) MED Date Received: 08/13/93

% Moisture: 8 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	5500	U
72-54-8	4,4'-DDD	5500	U
72-55-9	4,4'-DDE	5500	U
50-29-3	4,4'-DDT	5500	U
60-57-1	Dieldrin	5500	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE03-03

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2806.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 1 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/16/93

Injection Volume: 2.0(uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	1700	U
72-54-8	4,4'-DDD	1700	U
72-55-9	4,4'-DDE	1700	U
50-29-3	4,4'-DDT	1700	U
60-57-1	Dieldrin	1700	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE04-02

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2769.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 1 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	170	U
72-54-8	4,4'-DDD	170	U
72-55-9	4,4'-DDE	170	U
50-29-3	4,4'-DDT	170	U
60-57-1	Dieldrin	170	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE05-02

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2770.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 4 decanted: (Y/N) N Date Extracted: 08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	1000	
72-54-8	4,4'-DDD	340	
72-55-9	4,4'-DDE	450	
50-29-3	4,4'-DDT	590	
60-57-1	Dieldrin	170	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE05-02RE

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.05RA

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2781.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 4 decanted: (Y/N) N Date Extracted: 08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	1000	
72-54-8	4,4'-DDD	370	
72-55-9	4,4'-DDE	340	
50-29-3	4,4'-DDT	170	U
60-57-1	Dieldrin	170	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE06-00

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2771.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 7 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	520	
72-54-8	4,4'-DDD	3500	
72-55-9	4,4'-DDE	3200	
50-29-3	4,4'-DDT	5500	
60-57-1	Dieldrin	180	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE06-00DL

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.06DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2824.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 7 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/17/93

Injection Volume: 2.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	300	D
72-54-8	4,4'-DDD	2200	D
72-55-9	4,4'-DDE	12000	D
50-29-3	4,4'-DDT	39000	D
60-57-1	Dieldrin	3500	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE07-06

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.07

Sample wt/vol: 1.0 (g/mL) G Lab File ID: S2777.D

Level: (low/med) MED Date Received: 08/13/93

% Moisture: 5 decanted: (Y/N) N Date Extracted: 08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	5300	U
72-54-8	4,4'-DDD	1400	
72-55-9	4,4'-DDE	5300	U
50-29-3	4,4'-DDT	5300	U
60-57-1	Dieldrin	5300	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE08-03

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2772.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 18 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	200	U
72-54-8	4,4'-DDD	200	U
72-55-9	4,4'-DDE	200	U
50-29-3	4,4'-DDT	200	U
60-57-1	Dieldrin	200	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE09-03

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2816.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 12 decanted: (Y/N) N Date Extracted: 08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/16/93

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	110	
72-54-8	4,4'-DDD	900	
72-55-9	4,4'-DDE	940	U
50-29-3	4,4'-DDT	460	
60-57-1	Dieldrin	940	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE09-03RE

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.09RA

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2817.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 12 decanted: (Y/N) N Date Extracted: 08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/16/93

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	110	
72-54-8	4,4'-DDD	870	
72-55-9	4,4'-DDE	370	
50-29-3	4,4'-DDT	370	
60-57-1	Dieldrin	940	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE10-03

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2773.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 4 decanted: (Y/N) N Date Extracted: 08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	780	
72-54-8	4,4'-DDD	7300	
72-55-9	4,4'-DDE	1000	
50-29-3	4,4'-DDT	11000	
60-57-1	Dieldrin	170	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE10-03DL

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.10DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2818.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 4 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/16/93

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) N pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	320	D
72-54-8	4,4'-DDD	31000	D
72-55-9	4,4'-DDE	5200	U
50-29-3	4,4'-DDT	24000	D
60-57-1	Dieldrin	340	D

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE11-03

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2774.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 3 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/14/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	920	
72-54-8	4,4'-DDD	10000	
72-55-9	4,4'-DDE	1800	
50-29-3	4,4'-DDT	14000	
60-57-1	Dieldrin	170	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE11-03DL

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 14944.11DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2820.D

Level: (low/med) LOW Date Received: 08/13/93

% Moisture: 3 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/16/93

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) N pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	520	D
72-54-8	4,4'-DDD	47000	D
72-55-9	4,4'-DDE	1400	D
50-29-3	4,4'-DDT	47000	D
60-57-1	Dieldrin	470	D

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE11-03RE

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 15064.01RA

Sample wt/vol: 1.0 (g/mL) G Lab File ID: S2884.D

Level: (low/med) MED Date Received: 08/20/93

% Moisture: 3 decanted: (Y/N) N Date Extracted: 08/20/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 08/23/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	800	
72-54-8	4,4'-DDD	43000	
72-55-9	4,4'-DDE	2100	
50-29-3	4,4'-DDT	150000	
60-57-1	Dieldrin	900	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VNE11-03REDL

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: 15064.01RADL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: S2886.D

Level: (low/med) MED Date Received: 08/20/93

% Moisture: 3 decanted: (Y/N) N Date Extracted:08/20/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 08/23/93

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	26000	U
72-54-8	4,4'-DDD	32000	D
72-55-9	4,4'-DDE	26000	U
50-29-3	4,4'-DDT	190000	D
60-57-1	Dieldrin	26000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: BL081312S

Sample wt/vol: 1.0 (g/mL) G Lab File ID: S2763.D

Level: (low/med) MED Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/13/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	5000	U
72-54-8	4,4'-DDD	5000	U
72-55-9	4,4'-DDE	5000	U
50-29-3	4,4'-DDT	5000	U
60-57-1	Dieldrin	5000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK2

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: BL081311S

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2800.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/16/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	160	U
72-54-8	4,4'-DDD	160	U
72-55-9	4,4'-DDE	160	U
50-29-3	4,4'-DDT	160	U
60-57-1	Dieldrin	160	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK3

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: BL082017S

Sample wt/vol: 1.0 (g/mL) G Lab File ID: S2893.D

Level: (low/med) MED Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:08/20/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 08/23/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	5000	U
72-54-8	4,4'-DDD	5000	U
72-55-9	4,4'-DDE	5000	U
50-29-3	4,4'-DDT	5000	U
60-57-1	Dieldrin	5000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: LCS:14944

Sample wt/vol: 1.0 (g/mL) G Lab File ID: S2803.D

Level: (low/med) MED Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/16/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	46000	
72-54-8	4,4'-DDD	780	
72-55-9	4,4'-DDE	5000	U
50-29-3	4,4'-DDT	12000	
60-57-1	Dieldrin	5000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS2

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: LCS:14944

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2801.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/16/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	1500	
72-54-8	4,4'-DDD	160	U
72-55-9	4,4'-DDE	160	U
50-29-3	4,4'-DDT	460	
60-57-1	Dieldrin	160	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: LCSD:14944

Sample wt/vol: 1.0 (g/mL) G Lab File ID: S2804.D

Level: (low/med) MED Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/16/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	43000	
72-54-8	4,4'-DDD	5000	U
72-55-9	4,4'-DDE	5000	U
50-29-3	4,4'-DDT	14000	
60-57-1	Dieldrin	5000	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD2

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 14944

Matrix: (soil/water) SOIL Lab Sample ID: LCSD:14944

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S2802.D

Level: (low/med) LOW Date Received: / /

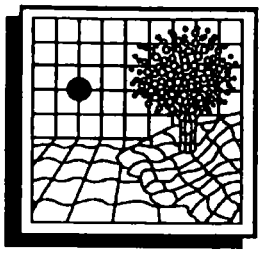
% Moisture: 0 decanted: (Y/N) N Date Extracted:08/13/93

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/16/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
118-74-1	Hexachlorobenzene	1600	
72-54-8	4,4'-DDD	160	U
72-55-9	4,4'-DDE	160	U
50-29-3	4,4'-DDT	500	
60-57-1	Dieldrin	160	U



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

August 30, 1993

Dave Eagleton
BURLINGTON ENVIRONMENTAL
210 West Sand Bank Road
Columbia, IL 62236

PROJECT: Woods Industries
SWLO ID: 15107.01 - 15107.02

Dear Mr. Eagleton:

Enclosed please find analytical results and the full Organic CLP data package for your samples received in our laboratory on August 25, 1993 for the above captioned project.

These results were faxed to you and to John Dolan on August 27, 1993.

If, in your review, you should have any questions or require additional information, please call.

Sincerely,

Chuck Hoover
Project Officer

CH/jc

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name:	**BURLINGTON ENVIRONMENTAL** **210 W. SAND BANK ROAD** **P.O. BOX 330** **COLUMBIA, IL 62236-0330**		
Client ID:	**VNE-12**	**Project ID:**	**WOODS INDUSTRIES**
SWLO ID:	**15107.01**	**Report:**	**15107.01 -P**
Collected:	**08/24/1993**	**Report Date:**	**08/30/1993**
Received:	**08/25/1993**	**Last Modified:**	
		Page:	**1**
		Matrix:	**Soil**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
		*** METALS ***				
ARSENIC		2.0	mg/kg	19.6	08/26/93	SW 7060
LEAD		0.6	mg/kg	91.4	08/26/93	SW 7421

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE
Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 W. ALBANY SUITE C BROKEN ARROW, OK 74012-1421 (918) 251-2858

Client Name:	**BURLINGTON ENVIRONMENTAL** **210 W. SAND BANK ROAD** **P.O. BOX 330** **COLUMBIA, IL 62236-0330**		
Client ID:	**VNE-13**	**Project ID:**	**WOODS INDUSTRIES**
SWLO ID:	**15107.02**	**Report:**	**15107.02 -P**
Collected:	**08/24/1993**	**Report Date:**	**08/30/1993**
Received:	**08/25/1993**	**Last Modified:**	
		Page:	**1**
		Matrix:	**Soil**

TEST	DATE EXTRACTED	DETECTION LIMIT	UNITS	RESULTS	DATE ANALYZED	METHOD REFERENCE
		*** METALS ***				
ARSENIC		2.0	mg/kg	26.6	08/26/93	SW 7060
LEAD		0.6	mg/kg	102	08/26/93	SW 7421

ND = NOT DETECTED ABOVE QUANTITATION LIMIT
B = ANALYTE DETECTED IN BLANK AS WELL AS SAMPLE
I = UNABLE TO QUANTITATE DUE TO MATRIX INTERFERENCE
NA = NOT APPLICABLE
Methodology: SM = STANDARD METHODS, 16th EDITION, 1985
EPA = #EPA600/4-79-020, MARCH 1985

* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
D = SURROGATES DILUTED OUT
J = ESTIMATED VALUE: CONCENTRATION BELOW LIMIT OF QUANTITATION

SW = EPA METHODOLOGY, "#SW846", THIRD EDITION, NOVEMBER 1986

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

CLIENT: BURLINGTON ENVIRONMENTAL

REPORT: 15107a
REPORT DATE: 08/30/93

MATRIX: **SOIL**
QA/QC : **METHOD BLANK**

PARAMETER	DATE ANALYZED	DET LIMIT	UNIT	RESULTS
ARSENIC	08/26/93	2.0	mg/Kg	< 2.0
LEAD	08/26/93	0.6	mg/Kg	<0.6

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

CLIENT: BURLINGTON ENVIRONMENTAL

REPORT: 15107b
REPORT DATE: 08/30/93

MATRIX: **SOIL**
QA/QC : **LABORATORY CONTROL SPIKE**

LABORATORY CONTROL SPIKE RECOVERY

PARAMETER	DATE ANALYZED	AMOUNT SPIKED (mg/Kg)	SPIKED RESULTS (mg/Kg)	SPIKE PERCENT RECOVERY	SPIKE RECOVERY LIMITS
ARSENIC	08/30/93	8.0	8.12	102	80-120
LEAD	08/26/93	4.0	4.0	100	80-120

APPENDIX I

Photographs

BURLINGTON ENVIRONMENTAL INC.
210 West Sand Bank Road
Post Office Box 330
Columbia, Illinois 62236
(618) 281-7173 FAX (618) 281-5120

Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 3-31-93
Time:
Direction: North west
Photographer: M. Martin
Description: Background - well development & sampling Bob Kevit looks at test pit for French drain

⇒

Date 3-30-93
Time:
Direction: North
Photographer: M. Martin
Description: Olympus Tech. - cleaning out decon pad sump.

⇒

BURLINGTON ENVIRONMENTAL INC.
210 West Sand Bank Road
Post Office Box 330
Columbia, Illinois 62236
(618) 281-7173 FAX (618) 281-5120

Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 4-1-93
Time:
Direction: East
Photographer:
Description:

Date 4-1-93
Time:
Direction:
Photographer:
Description:

BURLINGTON ENVIRONMENTAL INC.
210 West Sand Bank Road
Post Office Box 330
Columbia, Illinois 62236
(618) 281-7173 FAX (618) 281-5120

Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 4-1-93
Time:
Direction: South
Photographer: M. Martin
Description: Laying down the Liner for the Southern stockpile.

Date 4 1 9 3
Time:
Direction:
Photographer:
Description:

BURLINGTON ENVIRONMENTAL INC.
210 West Sand Bank Road
Post Office Box 330
Columbia, Illinois 62236
(618) 281-7173 FAX (618) 281-5120

Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 4-2-93
Time:
Direction: West
Photographer: M. Martin
Description: patching the hole in the base mat with concrete so it can be used for a stockpile

⇒

Date 4-2-93
Time:
Direction: South
Photographer: M. Martin
Description: Lifting equipment into the exclusion zone using sheet piling crane.

⇒

BURLINGTON ENVIRONMENTAL INC.
210 West Sand Bank Road
Post Office Box 330
Columbia, Illinois 62236
(618) 281-7173 FAX (618) 281-5120

Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 4-2-93
Time:
Direction: South
Photographer: M. Martin
Description: East Side of Basement of Building #2

Date 4-2-93
Time:
Direction: South East
Photographer: M. Martin
Description: Clean haul Road, marked with red steel Fence posts. On left, above-ground concrete settling vault.

BURLINGTON ENVIRONMENTAL INC.
210 West Sand Bank Road
Post Office Box 330
Columbia, Illinois 62236
(618) 281-7173 FAX (618) 281-5120

Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 4-6-93
Time:
Direction: SW
Photographer: John Dolan
Description: Mike Martin collecting preliminary soil samples from the southwest corner of the South Lagoon.

⇒

Date 4-6-93
Time:
Direction: South West
Photographer: M. Martin
Description: Sheet Pile wall Installation Begins.

⇒

BURLINGTON ENVIRONMENTAL INC.
210 West Sand Bank Road
Post Office Box 330
Columbia, Illinois 62236
(618) 281-7173 FAX (618) 281-5120

Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 4-7-93
Time:
Direction: South East
Photographer: J. Dolan
Description: preliminary Soil Samples from the South east side of the South Lagoon.

⇒

Date 4-7-93
Time:
Direction: South
Photographer: J. Dolan
Description: hot, Soil Being unloaded on the south stockpile.

⇒

BURLINGTON ENVIRONMENTAL INC.
210 West Sand Bank Road
Post Office Box 330
Columbia, Illinois 62236
(618) 281-7173 FAX (618) 281-5120

Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 4-14-93
Time:
Direction: NORTH
Photographer: J. Dolan
Description: Concrete piping Found By the French drain

Date 4-14-93
Time:
Direction: NORTHWEST
Photographer: J. Dolan
Description: Colored Soil In Front of Excavation #2

BURLINGTON ENVIRONMENTAL INC.
210 West Sand Bank Road
Post Office Box 330
Columbia, Illinois 62236
(618) 281-7173 FAX (618) 281-5120

Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 4-15-93
Time: _____
Direction: North West
Photographer: mike martin
Description: colored debris From Building #2 Foundation

Date 4-15-93
Time: _____
Direction: West
Photographer: M. Martin
Description: Debris Fill Dug up From the Sumpers of the French drains.

BURLINGTON ENVIRONMENTAL INC.
210 West Sand Bank Road
Post Office Box 330
Columbia, Illinois 62236
(618) 281-7173 FAX (618) 281-5120

Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 4-15-93
Time:
Direction: North
Photographer: J. Dolan
Description: Bob Kievit (EPA) looking at South Lagoon Excavation & sample locations.

⇒

Date 4-15-93
Time:
Direction: East
Photographer: J. Dolan
Description: South lagoon & sample locations. Note: Dark spots are ground water starting to rise.

⇒

FORM EE-701 *(Style 1)* (REV. 1/92)

BURLINGTON ENVIRONMENTAL INC.
210 West Sand Bank Road
Post Office Box 330
Columbia, Illinois 62236
(618) 281-7173 FAX (618) 281-5120

Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 4-19-93

Time:

Direction: north

Photographer: M. Martin

Description: Buried piping lay all over north side of site (some with product still in them)

⇒

Date 4-19-93

Time:

Direction: north

Photographer: J. Dolan

Description: Colored soil To Be Removed From Building #2 area.

⇒

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Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 4-19-93
Time:
Direction: North West
Photographer: M. Martin
Description: North Stock pile Built on Basement of Building.

⇒

Date 4-19-93
Time:
Direction: East
Photographer: M. Martin
Description: Debris Fill in front of northern stock pile

⇒

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Location Yakima, WA

location of underground settling tank - Block Structure

PHOTOGRAPHS

Date 4-19-93
Time:
Direction: north
Photographer: J. Dolan
Description: colored soil next to monitoring wells

⇒

Date 4-20-93
Time:
Direction: north
Photographer: J. Dolan
Description: Excavation of French drain area.

⇒

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Project Name Woods Industries
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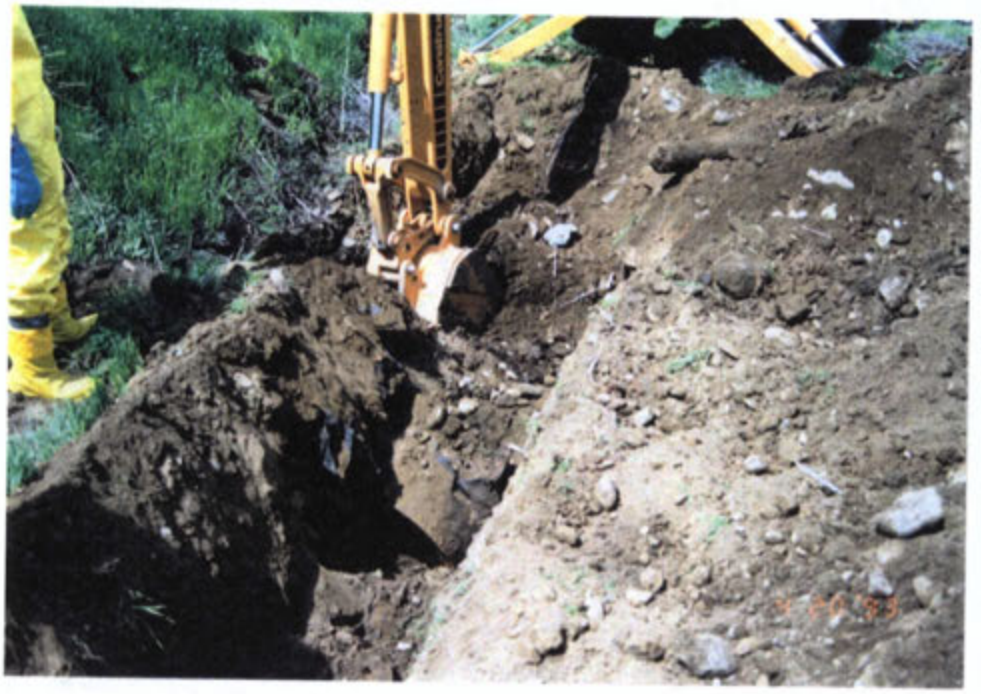
Location Yakima, WA

PHOTOGRAPHS

Date 4-20-93
Time:
Direction: NORTH
Photographer: M. MARTIN
Description: Excavate northern End of French drain



Date 4-20-93
Time:
Direction: NORTH
Photographer: M. MARTIN
Description: Excavate north end of French drain

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Project Name Woods Industries
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Location Yakima, WA

PHOTOGRAPHS

Date 4-20-93
Time:
Direction: North
Photographer: J. Dolan
Description: 4 perforated Drum From the north French drain

Date 4-20-93
Time:
Direction: North
Photographer: J. Dolan
Description: Loading concrete & debris into lined Dump Trucks to Be hauled offsite

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Location Yakima, WA

PHOTOGRAPHS

Date 4-20-93
Time:
Direction: NORTH
Photographer: J. DOLAN
Description: Loading trucks with concrete debris to be transported to Chem. Wst. Mgmt. IN Arlinglington, Oregon

⇒

Date 4-20-93
Time:
Direction: NORTHEAST
Photographer: J. DOLAN
Description: Loading trucks with concrete debris to be transported to Chem. Wst. Mgmt. IN Arlington, Oregon.

⇒

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Project Name Woods Industries
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Location Yakima, WA

PHOTOGRAPHS

Date 4-20-93
Time:
Direction: South
Photographer: M. Martin
Description: Excavation of the trench drain + along the sheetpile wall.

Date 4-20-93
Time:
Direction: North West
Photographer: M. Martin
Description: Collection of soil samples from the trench drain area.

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Location Yakima, WA

PHOTOGRAPHS

Date 4-20-93
Time:
Direction: South
Photographer: J. Dolan
Description: Excavation of the "French Drain"

⇒

Date 4-20-93
Time:
Direction: East
Photographer: M. Martin
Description: DeBasi Sample Locations in Front of Building #2 area.

⇒

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Location Yakima, WA

PHOTOGRAPHS

Date 4-29-93
Time:
Direction: South, West
Photographer: J. Dolan
Description: Hot, Wet Dregs Being Excavated and Loaded into Dump Trucks. Excavation of the Settling tank-Block Structure

⇒

Date 4-29-93
Time:
Direction: North
Photographer: J. Dolan
Description: Bucket Full of Hot material Excavated from the north side of site from the Settling tank / Block Structure

⇒

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Location Yakima, WA

PHOTOGRAPHS

Date 4-29-93
Time:
Direction: West
Photographer: J. Dolan
Description: Installation of sheet piling wall along the west boundary of the site.

⇒

Date 5-1-93
Time:
Direction:
Photographer: ↓ J. Dolan
Description: Deconning equipment on the equipment decon pad.

⇒

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Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 4-30-93
Time:
Direction: South
Photographer: D. Engleton
Description: Sheet Piling Installation

Date 4-30-93
Time:
Direction: East
Photographer: D. Engleton
Description: N. Stockpile Being "worked" with the Loader (making Room for more Soil) A pile of Drums removed from the french drain.

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Location Yakima, WA

PHOTOGRAPHS

Date 5-1-93
Time:
Direction: West
Photographer: J. Dolan
Description: Olympus views the Excavator to hold sheet piling steady while Beams driven into the ground.

Date 5-1-93
Time:
Direction: W
Photographer: J. Dolan
Description: Sheet piling Beams Driven into the west side of the site.

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Location Yakima, WA

PHOTOGRAPHS

Date 5-10-93
Time:
Direction: South
Photographer: J. Dolan
Description: South portion of site. Rolloff boxes shown in left side of picture.

⇒

Date 5-11-93
Time:
Direction:
Photographer: J. Dolan
Description: Excavated 55-gallon drums temporarily placed on Southern Temporary Soil Storage Area.

⇒

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Project Name Woods Industries
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Location Yakima, WA

PHOTOGRAPHS

Date 5-18-93
Time:
Direction: North East
Photographer: J. Dolan
Description: Excavation & removal of concrete vault.

Date 5-18-93
Time:
Direction: North East
Photographer: J. Dolan
Description: Excavation & removal of the concrete vault.

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Location Yakima, WA

PHOTOGRAPHS

Date 5-19-93
Time:
Direction: South
Photographer: M. Martin
Description: Building access Road For Back-Filling of the haul Road on the north End.

⇒

Date 5-19-93
Time:
Direction: North East
Photographer: J. Dolan
Description: Loading debris To Be haul-ed TO CWM in arlington, Oregon

⇒

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Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 5-20-93
Time:
Direction: South East
Photographer: J. Dolan
Description: Excavation of TPH area.

⇒

Date 5-20-93
Time:
Direction: South East
Photographer: J. Dolan
Description: Concrete Footing, one of Four Found while Excavating, North End of the Site

⇒

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Project Name Woods Industries
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Location Yakima, WA

PHOTOGRAPHS

Date 6-2-93
Time:
Direction: South
Photographer: J. Dolan
Description: Preliminary north Excavation soil sample Locations (wood stakes)

⇒

Date 6-7-93
Time:
Direction: South West
Photographer: J. Dolan
Description: North excavation (ground water) Ground haul Road, sample Locations along the haul Road. (wood stakes)

⇒

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Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 6-2-93
Time:
Direction: South
Photographer: A. Dolan
Description: Excavating west of the Aklund Building

Date 6-2-93
Time:
Direction: South East
Photographer: A. Dolan
Description: Sample locations in excavation west of the Aklund Building (wood stakes)

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Project Name Woods Industries
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Location Yakima, WA

PHOTOGRAPHS

Date 6-8-93
Time:
Direction: South
Photographer: J. Dolan
Description: Southern stockpile (Chaul Road Eastside)

Date 6-8-93
Time:
Direction: South
Photographer: J. Dolan
Description: Southern stockpile, hot soil Roll off Boxes

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Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 6-8-93
Time:
Direction: North
Photographer: J. Dolan
Description: Northern stockpile, 12" water main pipe, removed during excavation

Date 6-7-93
Time:
Direction: North
Photographer: J. Dolan
Description: Northern stockpile, sample collection of TPH area. (East side of Site) Blue stakes indicate location of H2O main.

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Project Name Woods Industries
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Location Yakima, WA

PHOTOGRAPHS

Date 6-8-93
Time:
Direction: South East
Photographer: G. Koester
Description: Excavation of Soil AROUND "Yako Ditch" pipe area

⇒

Date 6-8-93
Time:
Direction: South - East
Photographer: G. Koester
Description: Excavation Below former "Yako ditch" pipe area. Relocated pipe shown in bottom of photo.

⇒

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Location Yakima, WA

PHOTOGRAPHS

Date 6-8-93
Time:
Direction: South
Photographer: L. Dolan
Description: Directed down C.W.C "Yako ditch" (South lagoon)

Date 6-8-93
Time:
Direction: West
Photographer: L. Dolan
Description: Excavation around the "Yako ditch" pipe area.

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Location Yakima, WA

PHOTOGRAPHS

Date 6-15-93
Time:
Direction: North West
Photographer: J. Dolan
Description: Loading soil into Dump Truck from west of the Akland Building (to go to South stockpile)

Date 6-15-93
Time:
Direction: South
Photographer: J. Dolan
Description: Excavating "hot" soil from west of the Akland Building note) Ground water Exposed

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Location Yakima, WA

PHOTOGRAPHS

Date 6-15-93
Time:
Direction: South East
Photographer: J. Dolan
Description: TPH Excavation & sample locations, & Test Pit

Date 6-15-93
Time:
Direction: North
Photographer: J. Dolan
Description: "Hot" "Hot" Soils From the Drum Excavation inside Roll off Boxes.

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Location Yakima, WA

PHOTOGRAPHS

Date 6-18-93
Time:
Direction: North West
Photographer: J. Dolan
Description: Looking Toward Defining Border of New Exclusion Zone off Clean haul Road

⇒

Date 6-16-93
Time:
Direction: North
Photographer: J. Dolan
Description: Photo to Illustrate rise of ground water. Haul road constructed of clean fill from off-site is shown along sheet piling wall. ⇒

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Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 6-22-93
Time:
Direction: South West
Photographer: J. Dolan
Description: Relocated drainline - Yoko Ditch

Date 6-22-93
Time:
Direction: South
Photographer: J. Dolan
Description: Workers on S. stockpile, cutting & decoiling hot Burns.

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Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 6-22-93
Time:
Direction: North
Photographer: J. Dolan
Description: Olympus, cutting hot Drums into pieces so they can be decon'd.

Date 6-22-93
Time:
Direction: North
Photographer: J. Dolan
Description: Olympus crew cutting hot Drums so They can be decon'd.

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Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 6-22-93
Time:
Direction: north
Photographer: L. Dolan
Description: red stakes represent soil preliminary samples on the west side of the Akland Building

Date 6-22-93
Time:
Direction: South
Photographer: L. Dolan
Description: Preliminary Sample locations marked by wood stakes on the sw side of the AK Land Building.

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Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 6-22-93
Time: _____
Direction: North
Photographer: J. Dolan
Description: South Lagoon

⇒

Date 6-22-93
Time: _____
Direction: North
Photographer: J. Dolan
Description: North excavation

⇒

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Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 6-28-93
Time:
Direction: North West
Photographer: J. Dolan
Description:

Date 6-28-93
Time:
Direction: North west
Photographer: J. Dolan
Description: Photo 10 Identify ground water rising

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Project Name Woods Industries
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Location Yakima, WA

PHOTOGRAPHS

Date 6-28-93
Time:
Direction: West
Photographer: A. Dolan
Description: Cutting sheetpiling 10' Foot Below grade.

Date 6-28-93
Time:
Direction: West
Photographer: A. Dolan
Description: Photo shows Fire watch while sheet piling is cut.

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Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 6-28-93
Time:
Direction: North East
Photographer: A. Dolan
Description: Excavation of TPH Soils.

Date 6-28-93
Time:
Direction: North East
Photographer: A. Dolan
Description: Using water for dust control, while Excavating TPH Soils.

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Project Name Woods Industries
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Location Yakima, WA

PHOTOGRAPHS

Date 7-14-93
Time:
Direction: West
Photographer: J. Dolan
Description: Drilling Between 8" & 12" water mains For TPH Samples

Date 7-14-93
Time:
Direction: West
Photographer: J. Dolan
Description: Drilling Between 12" & 8" water mains For TPH Samples

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Project Name Woods Industries
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Location Yakima, WA

PHOTOGRAPHS

Date 7-20-93
Time:
Direction: East
Photographer: G. Koester
Description: Dust Control Practices during the excavation of lead- and arsenic-impacted soils.

⇒

Date 7-20-93
Time:
Direction: East
Photographer: G. Koester
Description: Excavation of lead- and arsenic-impacted soils.

⇒

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Project Name Woods Industries
Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 7-20-93
Time:
Direction: East
Photographer: G. Koester
Description: Sampling of the lead/arsenic Excavation.

Date 7-20-93
Time:
Direction: East
Photographer: G. Koester
Description: Sampling of the lead/arsenic Excavation

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Location Yakima, WA

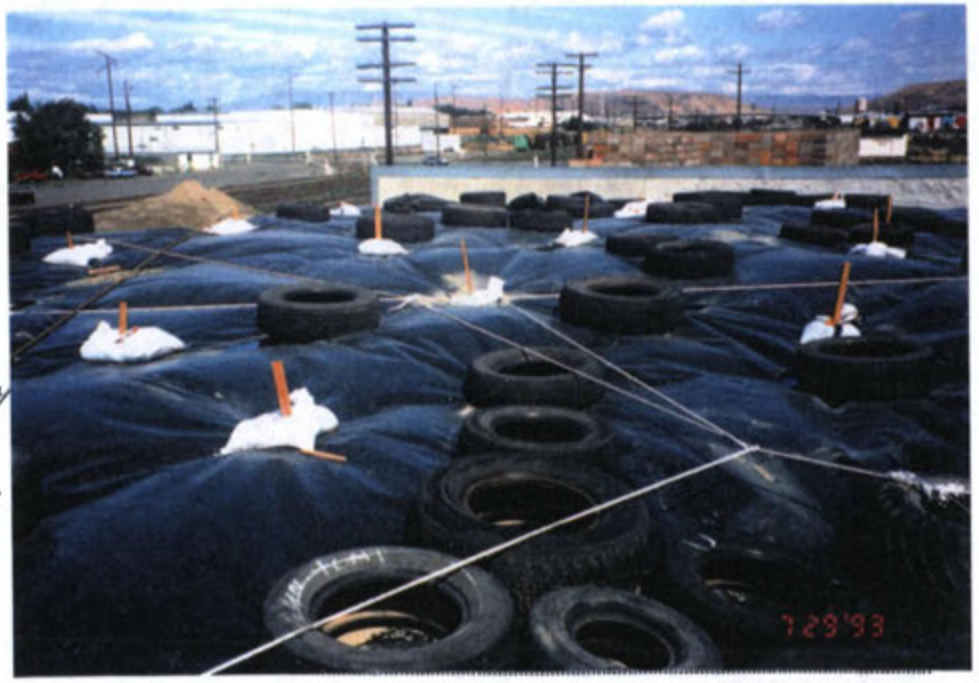
PHOTOGRAPHS

Date 7-21-93
Time:
Direction: West
Photographer: G. Koester
Description: Construction of haul road through North Excavation. Clean backfill being placed from off-site.

⇒

Date 7-29-93
Time:
Direction: Northwest
Photographer: J. Dolan
Description: The top of the Northern Temporary Soil Storage area after being secured via sandbags, ropes, and tires.

⇒



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Project No. 12883088 Phase 7856
Location Yakima, WA

PHOTOGRAPHS

Date 8-5-93
Time:
Direction: North East
Photographer: J. Dolan
Description: Backfilling of the South Lagoon

Date 8-6-93
Time:
Direction: South East
Photographer: J. Dolan
Description: Backfilling of the south Lagoon

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Project Name Woods Industries
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Location Yakima, WA

PHOTOGRAPHS

Date 8-6-93
Time:
Direction: North East
Photographer: D. Beaton
Description: Sample collection of the leachate.

Date 8-10-93
Time:
Direction: East
Photographer: D. Beaton
Description: Capped 12' City water main.

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Project Name Woods Industries
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Location Yakima, WA

PHOTOGRAPHS

Date 8-24-93
Time:
Direction: northwest
Photographer: J. Dolan
Description: Backfilling of the north excavation

Date 8-24-93
Time:
Direction: north East
Photographer: J. Dolan
Description: Backfilling of the north excavation

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Project Name Woods Industries
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Location Yakima, WA

PHOTOGRAPHS

Date 8-30-93
Time:
Direction: South west
Photographer: J. Dolan
Description: Backfilling of the west side of the ackland Building

⇒

Date 8-30-93
Time:
Direction: South west
Photographer: J. Dolan
Description: Backfilling of the west side of the ackland Building

⇒

J

APPENDIX J

Cross Sections

J-1 Northern Excavation
J-2 Lagoon Excavation

APPENDIX J-1

Northern Excavation

PROJECT MANAGER | DOCUMENT MANAGER | CHECKED BY | DRAWN BY EG 10/13/93

12830BAB-005
REV. DATE
10/13/93

SHEET PILING WALL

EXCAVATION AREA OF LEAD- AND ARSENIC-IMPACTED SOILS

3+90 3+60 3+30 3+00 2+70 2+40 2+10 1+80 1+50 1+20 0+90 0+60 0+30 0+00 00 25 50 75 100 125 150

NORTHERN TEMPORARY SOIL STORAGE AREA

40

W-6

W-3

PERSONNEL DECON

SECURITY FENCE

AKLAND BUILDING

EXCAVATION LIMITS

W-4D

W

W-4S

EQUIPMENT DECON

12" WATER MAIN

8" WATER MAIN (LIVE)

FH

W-7

GATE

ROLLOFF BOXES CONTAINING SOILS IMPACTED WITH LEAD AND ARSENIC

CONCRETE PADS

EXPLANATION

- CHAIN-LINK FENCE
- W-6 — SHALLOW GROUNDWATER MONITORING WELL AND NUMBER
- W-4D — DEEP GROUNDWATER MONITORING WELL AND NUMBER
- EXCAVATION AREA FOR PESTICIDE-IMPACTED SOILS
- TEMPORARY STORAGE AREA
- EXCAVATION AREA FOR TPH-IMPACTED SOILS
- FH — FIRE HYDRANT

0 40 80
SCALE IN FEET

N

Burlington Environmental Inc.

CROSS-SECTIONS
OF NORTHERN EXCAVATION AREA

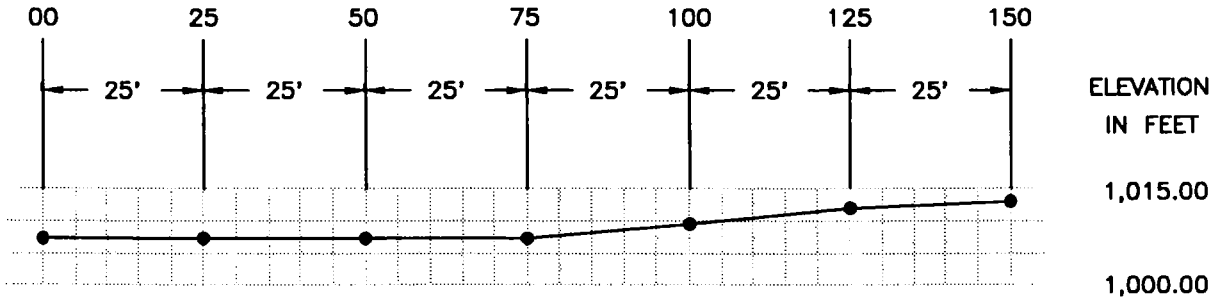
WOODS INDUSTRIES SITE
YAKIMA, WASHINGTON
12883088

CROSS SECTIONS OF NORTHERN EXCAVATION AREA

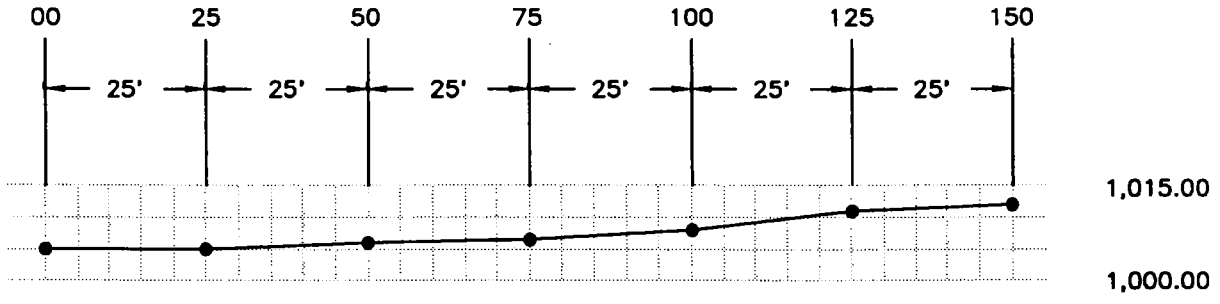
PROJECT MANAGER | DOCUMENT MANAGER | CHECKED BY | DRAWN BY

128308AB-006
REV. DATE
10/13/93

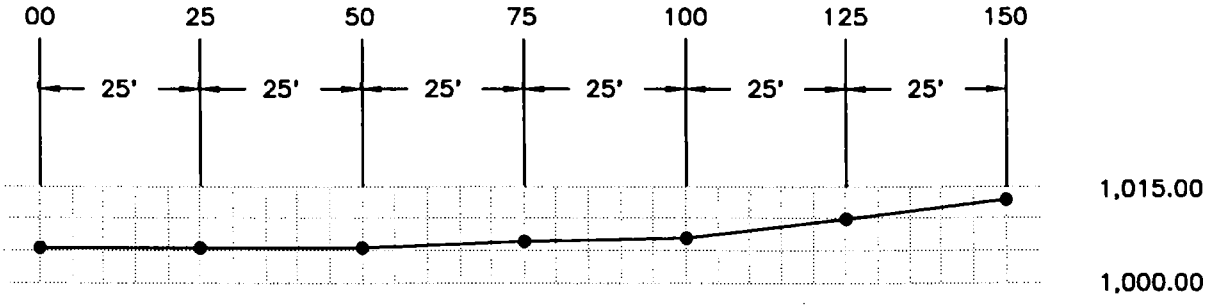
STATION 0+00



STATION 0+30



STATION 0+60



Burlington Environmental Inc.

CROSS SECTION OF
NORTHERN EXCAVATION

WOODS INDUSTRIES SITE
YAKIMA, WASHINGTON
12883088

CROSS SECTIONS OF NORTHERN EXCAVATION AREA

PROJECT MANAGER

DOCUMENT MANAGER

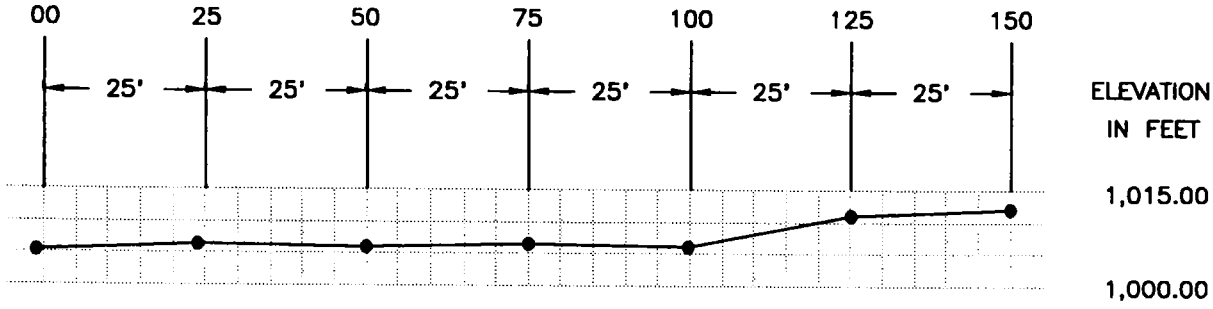
CHECKED BY

DRAWN BY

11/3/93

12830AB-008
REV. DATE
10/13/93

STATION 0+90



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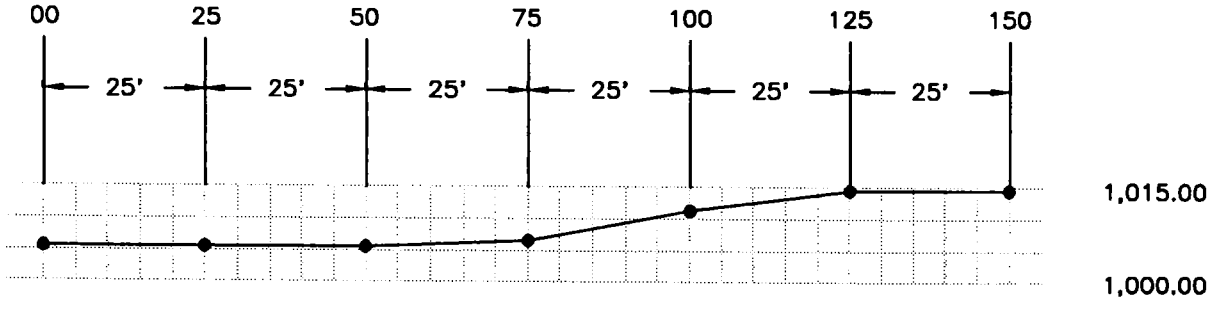

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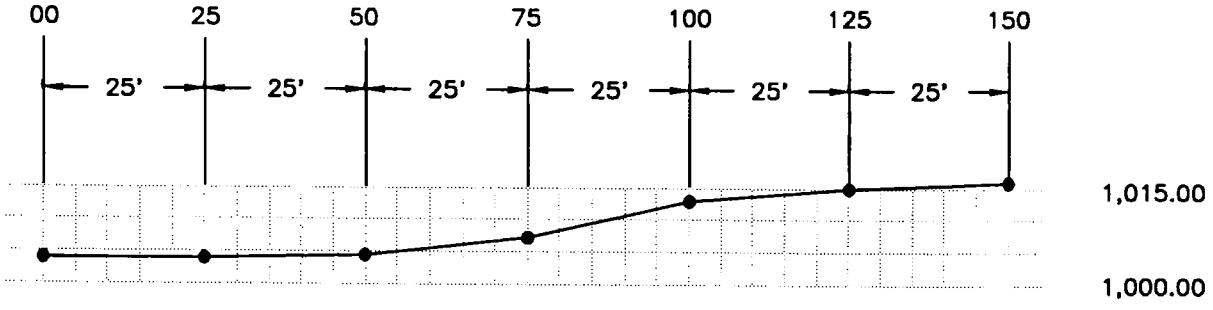

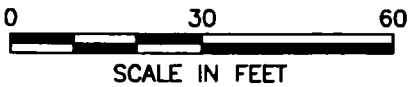

Burlington Environmental Inc.

CROSS SECTION OF
NORTHERN EXCAVATION

WOODS INDUSTRIES SITE
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CROSS SECTIONS OF NORTHERN EXCAVATION AREA

PROJECT MANAGER

DOCUMENT MANAGER

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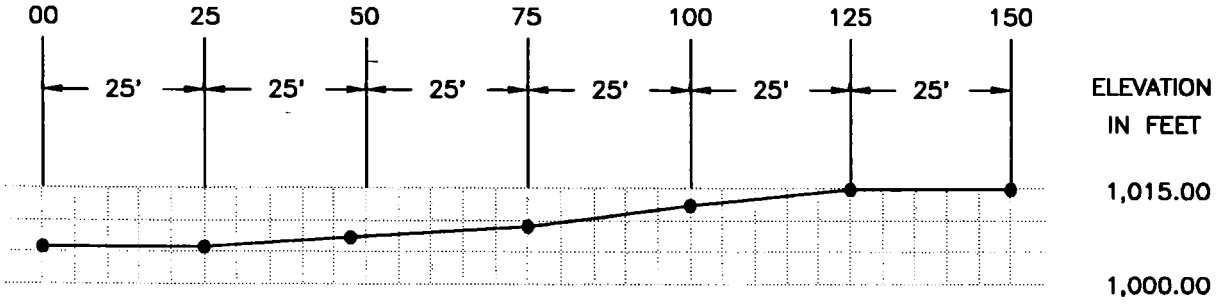
12830BAB-06F REV. DATE 10/13/93

STATION 1+80



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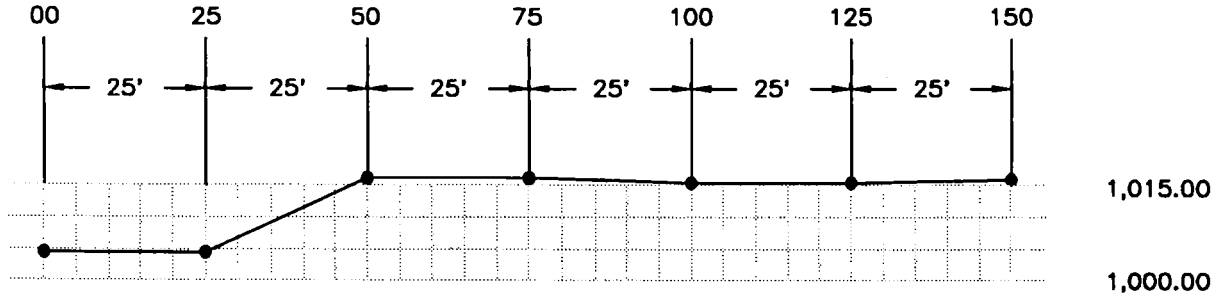

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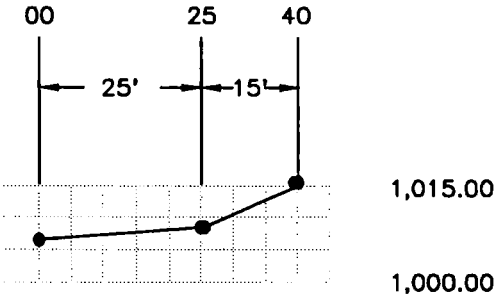


Burlington Environmental Inc.

CROSS SECTION OF NORTHERN EXCAVATION

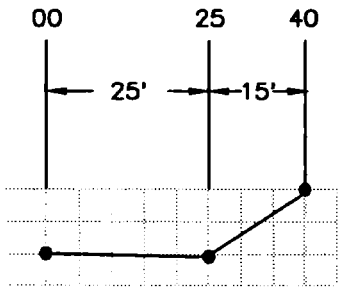
WOODS INDUSTRIES SITE
YAKIMA, WASHINGTON
12883088

CROSS SECTIONS OF NORTHERN EXCAVATION AREA

PROJECT MANAGER | DOCUMENT MANAGER | CHECKED BY | DRAWN BY

12830BAB-009
REV. DATE
10/13/93

STATION 2+70



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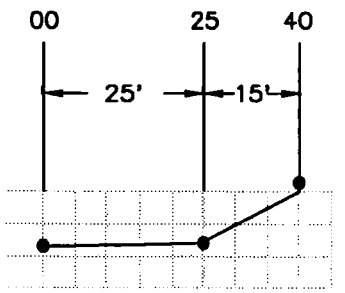

ELEVATION IN FEET

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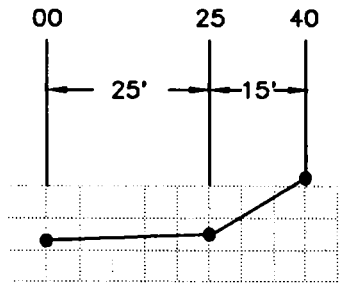
1,000.00

STATION 3+30



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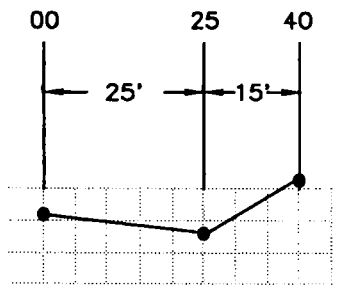
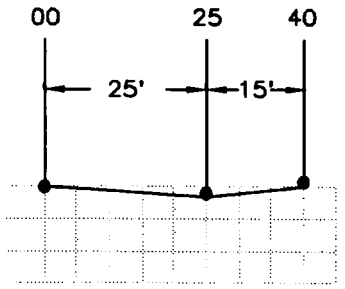


1,015.00

1,000.00

STATION 3+90



1,015.00

1,000.00

0 30 60

SCALE IN FEET

Burlington Environmental Inc.

CROSS SECTION OF NORTHERN EXCAVATION

WOODS INDUSTRIES SITE
YAKIMA, WASHINGTON
12883088

APPENDIX J-2

Lagoon Excavation

PROJECT MANAGER		
DOCUMENT MANAGER		
CHECKED BY	EG	10/13/93
DRAWN BY		

12830BAB-001
REV. DATE
9/28/93

SECURITY FENCE

0+00 0+25 0+50 0+75 1+00 1+25 1+50 1+75 2+00

WATER MAIN

W

120

YAKO DITCH

W-8

MANHOLE

100

80

60

40

20

00

VSL-9

W-10

W-11D

W-9

SOUTHERN TEMPORARY SOIL STORAGE AREA

CONTOUR OF EXCAVATION ON 7/28/93

EXPLANATION

CHAIN-LINK FENCE

TEMPORARY STORAGE AREA

0 30 60

SCALE IN FEET

N

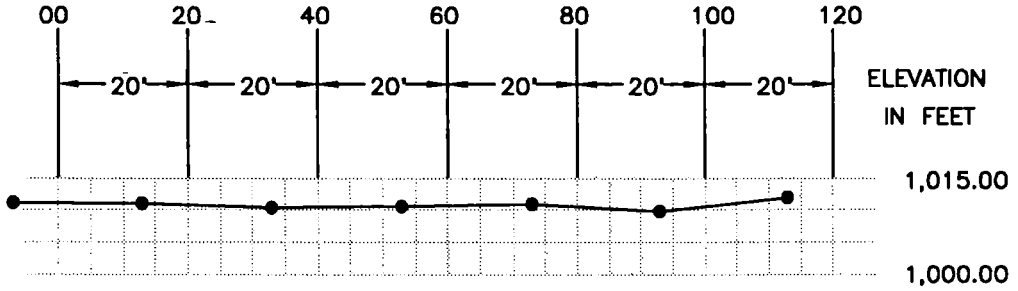
Burlington Environmental Inc.

CROSS-SECTIONS
OF LAGOON AREA

WOODS INDUSTRIES SITE
YAKIMA, WASHINGTON
12883088

CROSS SECTIONS OF LAGOON AREA

STATION 0+00



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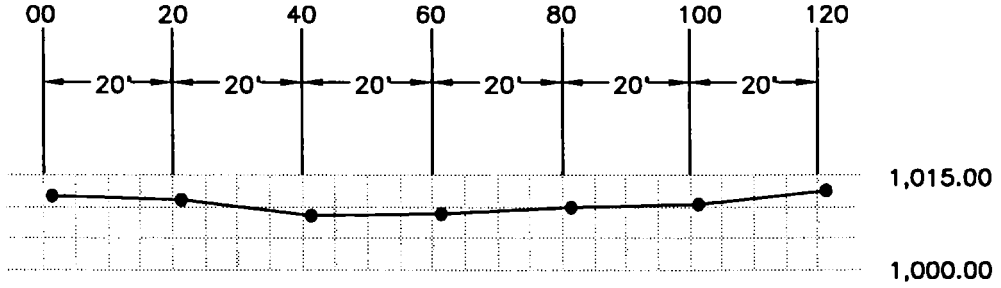

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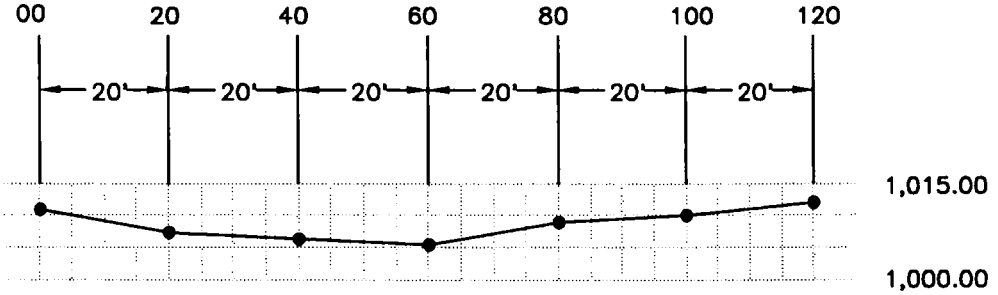


Burlington Environmental Inc.	
CROSS SECTION OF LAGOON EXCAVATION	
WOODS INDUSTRIES SITE YAKIMA, WASHINGTON 12883088	

PROJECT MANAGER

DOCUMENT MANAGER

CHECKED BY

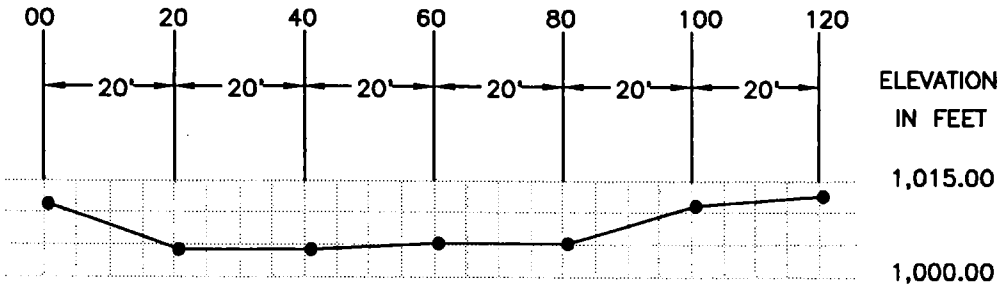
DRAWN BY

10/27/93

12830BAB-004
REV. DATE
10/13/93

CROSS SECTIONS OF LAGOON AREA

STATION 0+75



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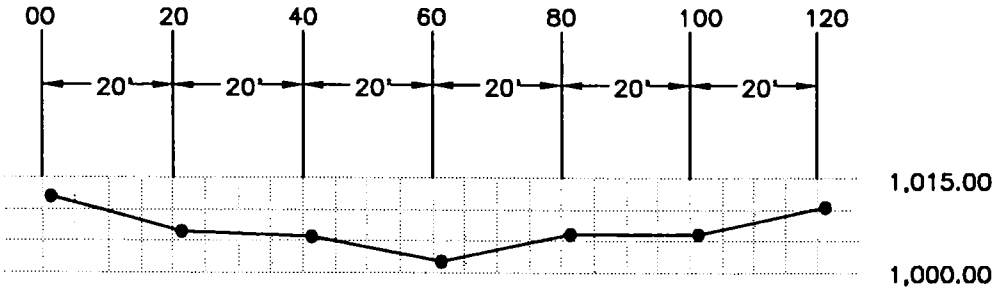

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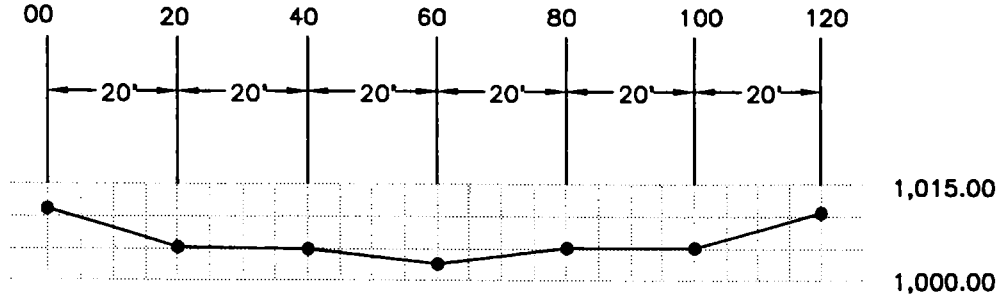

0 30 60

SCALE IN FEET

Burlington Environmental Inc.

CROSS SECTION OF LAGOON EXCAVATION

WOODS INDUSTRIES SITE
YAKIMA, WASHINGTON
12883088

PROJECT MANAGER

DOCUMENT MANAGER

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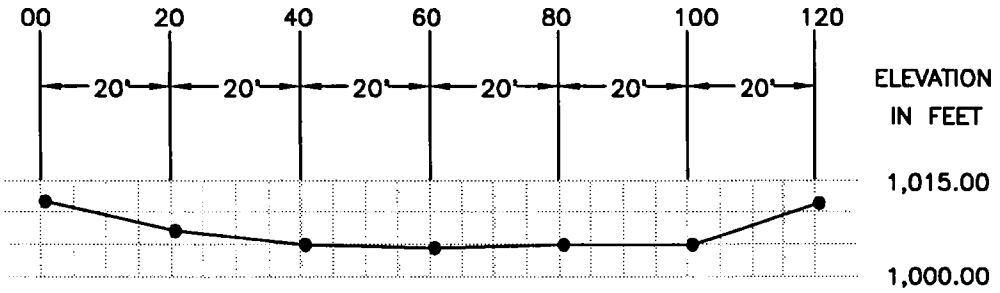
DRAWN BY C.J. 10/13/93

12830BAB-003
REV. DATE
10/13/93

CROSS SECTIONS OF LAGOON AREA

STATION 1+50



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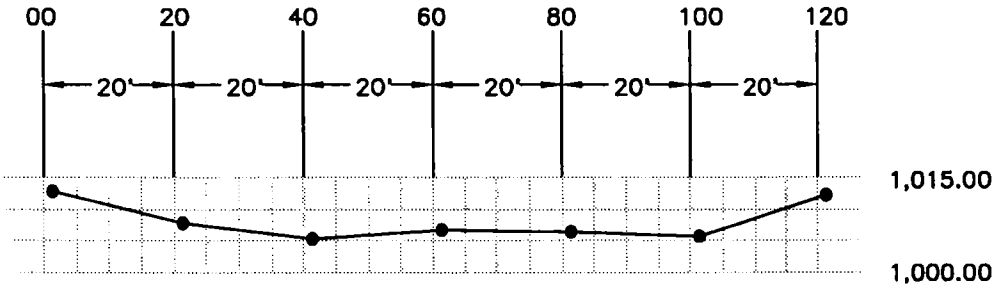

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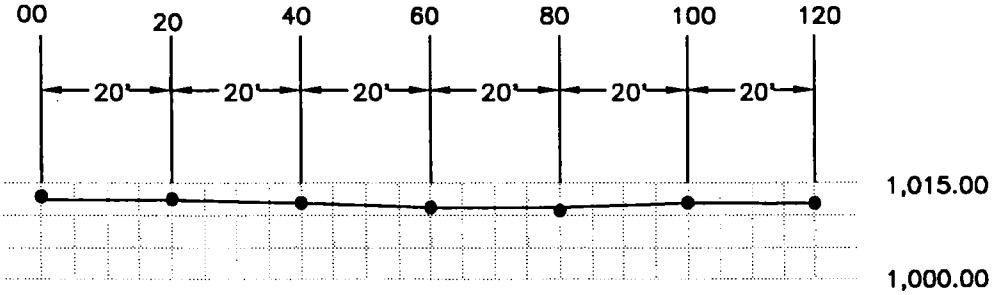

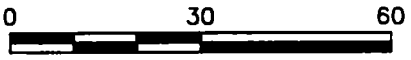

Burlington Environmental Inc.	
CROSS SECTION OF LAGOON EXCAVATION	
WOODS INDUSTRIES SITE YAKIMA, WASHINGTON 12883088	

PROJECT MANAGER

DOCUMENT MANAGER

CHECKED BY

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12B308AB-002
REV. DATE
10/13/93

K

APPENDIX K

Groundwater Analytical Data

PROJECT MEMORANDUM

DATE: October 11, 1993

TO: David Eagleton

FROM: Kathy Blaine

PROJECT: 12883088
Woods Industries, Inc.

SUBJECT: ANALYTICAL DATA QA REVIEW

I have completed a review of the analytical data for the eight samples collected on March 30 and 31, 1993 and listed on COC# 6206. The Southwest Laboratories episode number was 13091. The samples included in this group are as follows:

W13-4/93
W2S3-4/93
W33-4/93
W5S3-4/93
W5SD3-4/93
W63-3/4/93
PUR3-4/93
TB3-4/93

A full CLP-type package was submitted by the laboratory and the review was conducted in accordance with the most recent USEPA Data Validation Functional Guidelines. Based on this information, the data appeared to be valid with the following comments. The continuing instrument calibrations reported for April 6 and 7, 1993 are listed as being above acceptable limits for acetone. However, acetone was not detected in one of the samples and the other was a duplicate with confirmation on a separate day. Therefore, there is no impact on the reported sample concentrations.

Although appropriately qualified in the data package, it should be noted that numerous pesticide compounds in samples W2S3-4/93 and W63-3-4/93 had

significant reporting concentrations differences between the primary and secondary GC columns. What this translates into is, the reported concentrations are questionable and should be considered estimated. There are no corrective action items required to be performed. The compounds affected are as follows:

Sample W2S3-4/93
delta-BHC
heptachlor
dieldrin
methoxychlor
endrin ketone
endrin aldehyde
gamma-chlordane
DDD

Sample W63-3-4/93
delta-BHC
endrin
endrin ketone
alpha-chlordane

If you have any questions or need additional information, please feel free to contact me.

BURLINGTON ENVIRONMENTAL

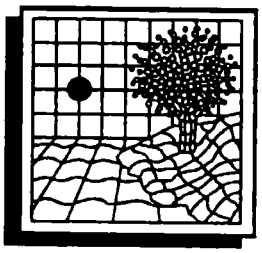
SAMPLE CONTROL LOG

Serial No. SCL 7856-
Page 1 of ___

PROJECT NAME Woods Industries / Yakima Washington
TASK DESCRIPTION Verification
SAMPLE TYPE(S) Soil

PROJECT NO. 12883088
PHASE 7856 TASK 77

BURLINGTON SAMPLE NUMBER	LABORATORY SAMPLE NUMBER	C.O.C. LOG NUMBER	BILL OF LADING NUMBER	DATE SHIPPED	CUSTODIAN'S NAME	LABORATORY NAME	DATE ANALYSIS PERFORMED	DATE RESULTS RECEIVED
W83-4/93	13136.01	6207	N/A	4-2-93		SOUTHWEST		
W93-4/93	1313602	6207	N/A	4-2-93		SOUTHWEST		
W103-4/93	13136.03	6207	N/A	4-2-93		SOUTHWEST		
W10D3-4/93	13136.04	6207	N/A	4-2-93		SOUTHWEST		
W11D3-4/93	13136.05	6207	N/A	4-2-93.		SOUTHWEST		
W13-4-93	13091.01	6206	N/A	3-31-93		SOUTHWEST		
W253-4-93	13091.02	6206	N/A	3-31-93		SOUTHWEST		
W33-4-93	13091.03	6206	N/A	3-31-93		SOUTHWEST		
W553-4-93	13091.04	6206	N/A	3-31-93		SOUTHWEST		
W553-4-93	13091.05	6206	N/A	3-31-93		SOUTHWEST		
W63-3-4-93	13091.06	6206	N/A	3-31-93		SOUTHWEST		
	13129.01							
	13129.02							
	1312903							
	13129.04							
	1312905							
	13129.06							
	13129.07							
	13129.08							
	13129.09							
	13129.10							



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

April 21, 1993

Kathy Blaine
BURLINGTON ENVIRONMENTAL
210 West Sandbank Road
Columbia, IL 62236

SWLO ID: 13091.01 - 13091.08

Project ID: Woods Industries

Dear Ms. Blaine:

Enclosed please find the Organic and Inorganic CLP packages for your samples received in our laboratory on April 1, 1993 for the above captioned project.

If, in your review, you should have any questions or require additional information, please call.

Sincerely,

Chuck Hoover
Project Officer

CH/lk

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLK1	102	101	97		0
02	LCS1	102	101	100		0
03	W13-4-93	105	106	102		0
04	W2S3-4-93	106	106	102		0
05	W33-4-93	98	102	97		0
06	W5SD3-4-93	103	107	102		0
07	VBLK2	98	100	92		0
08	LCS2	99	99	98		0
09	LCSD1	100	102	102		0
10	W5S3-4-93	102	108	99		0
11	VBLK3	99	104	91		0
12	LCS3	101	103	92		0
13	LCSD2	102	105	96		0
14	TB3-4-93	101	99	84		0
15	VBLK4	100	98	92		0
16	LCS4	101	100	98		0
17	LCSD3	102	104	104		0
18	W63-3-4-93	102	98	90		0
19	PUR3-4-93	101	104	94		0
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(88-110)
SMC2 (BFB)	= Bromofluorobenzene	(86-115)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

WATER VOLATILE LABORATORY
CONTROL SPIKE RECOVERY

VOLATILES GC/M
DEPARTMENT

LCS1

New Protocol

Inst. ID: R File ID: R1087

Lab Name: SWL-TULSA Client Code: BURLING Episode #: 13091

Matrix Spike–LCS No.: 04/05/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	56	112	65-131
Trichloroethene		54	108	80-120
Benzene		53	106	76-122
Toluene		53	106	77-118
Chlorobenzene	✓	53	106	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:	SURROGATE COMPOUND	% RECOVERED
	Toluene-d8	102
	Bromofluorobenzene	102
	1,2-Dichloroethane-d4	100

WATER VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC/M DEPARTMENT

LCS 2

New Protocol

Inst. ID: R File ID: R1089

Lab Name: SWL-TULSA Client Code: BURLING Episode #: 13091

Matrix Spike–LCS No.: 040693

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	53	106	65-131
Trichloroethene		50	100	80-120
Benzene		50	100	76-122
Toluene		5	102	77-118
Chlorobenzene	V	5	102	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:	SURROGATE COMPOUND	% RECOVERED
	Toluene-d8	100
	Bromofluorobenzene	98
	1,2-Dichloroethane-d4	98

WATER VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC/MS DEPARTMENT

LCS 3

New Protocol

Lab Name: SWL-TULSA Inst. ID: R File ID: R10903

Client Code: BURLING Episode #: 1309

Matrix Spike–LCS No.: 04/07/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	53	106	65-131
Trichloroethene		52	104	80-120
Benzene		48	96	76-122
Toluene		52	104	77-118
Chlorobenzene	✓	52	104	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:

SURROGATE COMPOUND	% RECOVERED
Toluene-d8	100
Bromofluorobenzene	104
1,2-Dichloroethane-d4	92

WATER VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC/MS DEPARTMENT

LCS 4

New Protocol

Lab Name: SWL- TULSA Inst. ID: R File ID: R10925

Client Code: BURLINGTON Episode #: 13091

Matrix Spike–LCS No.: 04/08/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	52	104	65-131
Trichloroethene		50	100	80-120
Benzene		50	100	76-122
Toluene		50	100	77-118
Chlorobenzene	✓	52	104	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:

SURROGATE COMPOUND	% RECOVERED
Toluene-d8	100
Bromofluorobenzene	100
1,2-Dichloroethane-d4	98

WATER VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC/MS DEPARTMENT

LCSD1

New Protocol

Inst. ID: R File ID: R1089

Lab Name: SWL-TULSA Client Code: BURLING Episode #: 13091

Matrix Spike–LCS No.: 04/06/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	52	104	65-131
Trichloroethene		50	100	80-120
Benzene		50	100	76-122
Toluene		52	104	77-118
Chlorobenzene	✓	52	104	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:

SURROGATE COMPOUND	% RECOVERED
Toluene-d8	100
Bromofluorobenzene	102
1,2-Dichloroethane-d4	102

WATER VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC/M DEPARTMENT

New Protocol

LCSD 2

Inst. ID: R File ID: R1090

Lab Name: SWL-TULSA Client Code: BURLING Episode #: 13091

Matrix Spike–LCS No.: 04/07/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	53	106	65-131
Trichloroethene		52	104	80-120
Benzene		51	102	76-122
Toluene		53	106	77-118
Chlorobenzene	✓	53	106	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:

SURROGATE COMPOUND	% RECOVERED
Toluene-d8	102
Bromofluorobenzene	104
1,2-Dichloroethane-d4	96

WATER VOLATILE LABORATORY
CONTROL SPIKE RECOVERY

VOLATILES GC/MS DEPARTMENT

LCSD 3

New Protocol

Inst. ID: R File ID: R1092

Lab Name: SWL-TULSA Client Code: BURLINGG Episode #: 13091

Matrix Spike–LCS No.: 04/08/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	52	104	65-131
Trichloroethene	|	50	100	80-120
Benzene	|	52	104	76-122
Toluene	|	50	100	77-118
Chlorobenzene	√	52	104	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:

SURROGATE COMPOUND	% RECOVERED
Toluene-d8	102
Bromofluorobenzene	104
1,2-Dichloroethane-d4	104

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Lab File ID: R10871.D Lab Sample ID: VBLK1

Date Analyzed: 04/05/93 Time Analyzed: 1114

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: R

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS1	LCS1	R10872.D	1150
02	W13-4-93	13091.01	R10876.D	1529
03	W2S3-4-93	13091.02	R10877.D	1551
04	W33-4-93	13091.03	R10878.D	1614
05	W5SD3-4-93	13091.05	R10880.D	1659
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COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Lab File ID: R10892.D Lab Sample ID: VBLK2

Date Analyzed: 04/06/93 Time Analyzed: 1105

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: R

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS2	LCS2	R10893.D	1138
02	LCSD1	LCSD1	R10894.D	1201
03	W5S3-4-93	13091.04	R10897.D	1439
04				
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COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK3

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Lab File ID: R10907.D Lab Sample ID: VBLK3

Date Analyzed: 04/07/93 Time Analyzed: 1047

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: R

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS3	LCS3	R10908.D	1126
02	LCSD2	LCSD2	R10909.D	1149
03	TB3-4-93	13091.08	R10910.D	1400
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COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK4

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Lab File ID: R10921.D Lab Sample ID: VBLK4

Date Analyzed: 04/08/93 Time Analyzed: 1126

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: R

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS4	LCS4	R10922.D	1157
02	LCSD3	LCSD3	R10923.D	1219
03	W63-3-4-93	13091.06	R10924.D	1345
04	PUR3-4-93	13091.07	R10925.D	1407
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COMMENTS:

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Lab File ID (Standard): R10869.D Date Analyzed: 04/05/93

Instrument ID: R Time Analyzed: 1022

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	122080	4.87	502081	6.47	363142	11.51
	UPPER LIMIT	244160	5.37	1004162	6.97	726284	12.01
	LOWER LIMIT	61040	4.37	251040	5.97	181571	11.01
	EPA SAMPLE No.						
01	VBLK1	115258	4.87	483852	6.48	351617	11.50
02	LCS1	126975	4.84	532323	6.45	385415	11.49
03	W13-4-93	114195	4.86	479397	6.47	349069	11.50
04	W2S3-4-93	106736	4.87	445037	6.47	320526	11.50
05	W33-4-93	112931	4.87	466766	6.48	340263	11.51
06	W5SD3-4-93	108903	4.88	456516	6.48	327000	11.51
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Lab File ID (Standard): R10890.D Date Analyzed: 04/06/93

Instrument ID: R Time Analyzed: 0958

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	126845	4.86	515968	6.47	368685	11.51
	UPPER LIMIT	253690	5.36	1031936	6.97	737370	12.01
	LOWER LIMIT	63422	4.36	257984	5.97	184342	11.01
	EPA SAMPLE No.						
01	VBLK2	122160	4.87	495677	6.48	354249	11.50
02	LCS2	121865	4.85	509314	6.46	361168	11.50
03	LCSD1	117541	4.87	493494	6.47	344977	11.51
04	W5S3-4-93	112890	4.88	465148	6.48	327858	11.51
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Lab File ID (Standard): R10905.D Date Analyzed: 04/07/93

Instrument ID: R Time Analyzed: 0941

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	128409	4.88	527551	6.48	376948	11.51
	UPPER LIMIT	256818	5.38	1055102	6.98	753896	12.01
	LOWER LIMIT	64204	4.38	263776	5.98	188474	11.01
	EPA SAMPLE No.						
01	VBLK3	119124	4.88	469794	6.48	329258	11.53
02	LCS3	128897	4.86	536895	6.46	376959	11.50
03	LCSD2	119770	4.88	497029	6.49	347003	11.52
04	TB3-4-93	124721	4.84	545235	6.46	379323	11.50
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Lab File ID (Standard): R10918.D Date Analyzed: 04/08/93

Instrument ID: R Time Analyzed: 0901

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	127682	4.87	522784	6.49	377355	11.52
	UPPER LIMIT	255364	5.37	1045568	6.99	754710	12.02
	LOWER LIMIT	63841	4.37	261392	5.99	188678	11.02
	EPA SAMPLE No.						
01	VBLK4	127118	4.86	546024	6.47	392018	11.51
02	LCS4	127887	4.86	540326	6.47	385793	11.50
03	LCSD3	122192	4.88	512557	6.48	372479	11.52
04	W63-3-4-93	126554	4.83	535552	6.45	384760	11.49
05	PUR3-4-93	120066	4.86	481250	6.47	351831	11.51
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PUR3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.07

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10925.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/08/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	14	
127-18-4	Tetrachloroethene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

PUR3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.07

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10925.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/08/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.08

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10910.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	10	U
127-18-4	Tetrachloroethene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TB3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.08

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10910.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W2S3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10877.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/05/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	10	U
127-18-4	Tetrachloroethene	14	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W2S3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10877.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/05/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W5SD3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.05

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10880.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/05/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	130	
127-18-4	Tetrachloroethene	14	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W5SD3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.05

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10880.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/05/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W5S3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10897.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	87	
127-18-4	Tetrachloroethene	13	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W5S3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10897.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W13-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10876.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/05/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	70	
127-18-4	Tetrachloroethene	14	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W13-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10876.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/05/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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27.					
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29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W33-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10878.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/05/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	63	
127-18-4	Tetrachloroethene	15	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W33-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10878.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/05/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W63-3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.06

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10924.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/08/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	14	
127-18-4	Tetrachloroethene	11	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W63-3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091.06

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10924.D

Level: (low/med) LOW Date Received: 04/01/93

% Moisture: not dec. _____ Data Analyzed: 04/08/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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30.					

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: VBLK1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10871.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/05/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	10	U
127-18-4	Tetrachloroethene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: VBLK1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10871.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/05/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: VBLK2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10892.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	10	U
127-18-4	Tetrachloroethene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: VBLK2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10892.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK3

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: VBLK3

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10907.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	10	U
127-18-4	Tetrachloroethene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK3

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: VBLK3

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10907.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK4

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: VBLK4

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10921.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/08/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	10	U
127-18-4	Tetrachloroethene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK4

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: VBLK4

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10921.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/08/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: LCS1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10872.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/05/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	52	
127-18-4	Tetrachloroethene	53	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: LCS2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10893.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	50	
127-18-4	Tetrachloroethene	49	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS3

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: LCS3

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10908.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	49	
127-18-4	Tetrachloroethene	51	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS4

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: LCS4

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10922.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/08/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	57	
127-18-4	Tetrachloroethene	50	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: LCSD1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10894.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	57	
127-18-4	Tetrachloroethene	49	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: LCSD2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10909.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	51	
127-18-4	Tetrachloroethene	51	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD3

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: LCSD3

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10923.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/08/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	68	
127-18-4	Tetrachloroethene	49	

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13091

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): DB-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKWE	98	108	104	110			0
02	LCS13091	88	108	92	92			0
03	PUR3-4-93	90	104	98	103			0
04	W13-4-93	96	114	101	102			0
05	W2S3-4-93	94	128	170*	188*			2
06	W2S3-4-93DL	122	184*	236*	222*			3
07	W33-4-93	91	105	102	112			0
08	W5S3-4-93	109	106	88	95			0
09	W5SD3-4-93	98	122	80	86			0
10	W63-3-4-93	94	111	91	94			0
11	W63-3-4-93DL	113	148	110	114			0

ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene (60-150)
DCB = Decachlorobiphenyl (60-150)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3LCC

WATER PESTICIDE LAB CONTROL SAMPLE RECOVERY

EPA SAMPLE NO. : LCS13091

Lab Name:SWL-TULSA Contract: BURLING

Lab Code:SWOK Case No.: BURL1 SAS No.: SDG No.:13091

Lab Sample ID: LCS13091
LCS Aliquot:1000 (uL)
Concentrated Extract Volume:10000 (uL)
Injection Volume:2.00(uL)
Sulfur Cleanup: (Y/N) N

LCS Lot No.:8-13-5
Date Extracted:04/01/93
Date Analyzed:04/02/93
Dilution Factor:1.0
pH:N/A

Instrument ID(1) : HP-06A GC Column(1) : DB-608 ID:W608-30

COMPOUND	AMOUNT ADDED (ug/L)	AMOUNT RECOVERED (ug/L)	% REC	#	QC LIMITS
gamma-BHC (Lindane)	.5	.50	99		56-123
Heptachlor	.5	.50	100		40-131
Aldrin	.5	.49	97		40-120
Dieldrin	1.0	1.04	104		52-126
Endrin	1.0	1.04	104		56-121
4,4'-DDT	1.0	.95	95		38-127

Instrument ID(2) : HP-06B GC Column(2) : DB-1701 ID:W1701-25

COMPOUND	AMOUNT ADDED (ug/L)	AMOUNT RECOVERED (ug/L)	% REC	#	QC LIMITS
gamma-BHC (Lindane)	.5	.49	98		56-123
Heptachlor	.5	.53	106		40-131
Aldrin	.5	.47	94		40-120
Dieldrin	1.0	1.01	101		52-126
Endrin	1.0	.97	97		56-121
4,4'-DDT	1.0	.93	93		38-127

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

LCS Recovery:0 outside limits out of 14 total.

COMMENTS: _____

FORM III LCP

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKWE

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: SDG No.: 13091

Lab Sample ID: PBLKWE Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) CONT

Sulfur Cleanup: (Y/N) N Date Extracted: 04/01/93

Date Analyzed (1): 04/02/93 Date Analyzed (2): 04/02/93

Time Analyzed (1): 1954 Time Analyzed (2): 1907

Instrument ID (1): HP-06A Instrument ID (2): HP-06B

GC Column (1): DB-608 ID: 0.53 (mm) GC Column (2): DB-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	LCS13091	LCS13091	04/02/93	04/02/93
02	PUR3-4-93	13091-07	04/03/93	04/03/93
03	W13-4-93	13091-01	04/02/93	04/02/93
04	W2S3-4-93	13091-02	04/02/93	04/02/93
05	W2S3-4-93DL	13091-02DL	04/03/93	04/03/93
06	W33-4-93	13091-03	04/03/93	04/02/93
07	W5S3-4-93	13091-04	04/03/93	04/03/93
08	W5SD3-4-93	13091-05	04/03/93	04/03/93
09	W63-3-4-93	13091-06	04/03/93	04/03/93
10	W63-3-4-93DL	13091-06DL	04/04/93	04/03/93

COMMENTS:

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PUR3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091-07

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/01/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/01/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/03/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W13-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091-01

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/01/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/01/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/02/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.050	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.50	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	0.050	U
12674-11-2	Aroclor-1016	5.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	2.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W2S3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091-02

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/01/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/01/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/02/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.19	
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.29	P
58-89-9	gamma-BHC (Lindane)	0.34	
76-44-8	Heptachlor	0.068	P
309-00-2	Aldrin	0.099	
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	2.1	PE
72-55-9	4,4'-DDE	2.3	PE
72-20-8	Endrin	5.6	E
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.13	P
50-29-3	4,4'-DDT	3.0	E
72-43-5	Methoxychlor	0.17	JP
53494-70-5	Endrin ketone	1.8	PE
7421-93-4	Endrin aldehyde	0.46	P
5103-71-9	alpha-Chlordane	0.66	P
5103-74-2	gamma-Chlordane	0.17	P
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W2S3-4-93DL

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091-02DL

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/01/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/01/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/03/93

Injection Volume: 2.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.50	U
319-85-7	beta-BHC	0.50	U
319-86-8	delta-BHC	0.50	U
58-89-9	gamma-BHC (Lindane)	0.50	U
76-44-8	Heptachlor	0.50	U
309-00-2	Aldrin	0.50	U
1024-57-3	Heptachlor epoxide	0.50	U
959-98-8	Endosulfan I	0.50	U
60-57-1	Dieldrin	2.0	PD
72-55-9	4,4'-DDE	2.4	D
72-20-8	Endrin	5.5	D
33213-65-9	Endosulfan II	1.0	U
72-54-8	4,4'-DDD	2.2	PD
1031-07-8	Endosulfan sulfate	1.0	U
50-29-3	4,4'-DDT	2.3	D
72-43-5	Methoxychlor	5.0	U
53494-70-5	Endrin ketone	1.7	PD
7421-93-4	Endrin aldehyde	1.0	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	50	U
12674-11-2	Aroclor-1016	10	U
11104-28-2	Aroclor-1221	20	U
11141-16-5	Aroclor-1232	10	U
53469-21-9	Aroclor-1242	10	U
12672-29-6	Aroclor-1248	10	U
11097-69-1	Aroclor-1254	10	U
11096-82-5	Aroclor-1260	10	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W33-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091-03

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/01/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/01/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/03/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W5S3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091-04

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/01/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/01/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/03/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W5SD3-4-93

Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091-05

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/01/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/01/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/03/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W63-3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091-06

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/01/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/01/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/03/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.053	
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.086	P
58-89-9	gamma-BHC (Lindane)	0.056	
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	1.1	
72-55-9	4,4'-DDE	0.48	
72-20-8	Endrin	1.7	PE
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	1.2	
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.67	P
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.072	P
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W63-3-4-93DL

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13091

Matrix: (soil/water) WATER Lab Sample ID: 13091-06DL

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/01/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/01/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/04/93

Injection Volume: 2.00 (uL) Dilution Factor: 5.00

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.25	U
319-85-7	beta-BHC	0.25	U
319-86-8	delta-BHC	0.25	U
58-89-9	gamma-BHC (Lindane)	0.25	U
76-44-8	Heptachlor	0.25	U
309-00-2	Aldrin	0.25	U
1024-57-3	Heptachlor epoxide	0.25	U
959-98-8	Endosulfan I	0.25	U
60-57-1	Dieldrin	1.1	
72-55-9	4,4'-DDE	0.45	JP
72-20-8	Endrin	1.6	
33213-65-9	Endosulfan II	0.50	U
72-54-8	4,4'-DDD	0.50	U
1031-07-8	Endosulfan sulfate	0.50	U
50-29-3	4,4'-DDT	1.0	
72-43-5	Methoxychlor	2.5	U
53494-70-5	Endrin ketone	0.66	P
7421-93-4	Endrin aldehyde	0.50	U
5103-71-9	alpha-Chlordane	0.25	U
5103-74-2	gamma-Chlordane	0.25	U
8001-35-2	Toxaphene	25	U
12674-11-2	Aroclor-1016	5.0	U
11104-28-2	Aroclor-1221	10	U
11141-16-5	Aroclor-1232	5.0	U
53469-21-9	Aroclor-1242	5.0	U
12672-29-6	Aroclor-1248	5.0	U
11097-69-1	Aroclor-1254	5.0	U
11096-82-5	Aroclor-1260	5.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKWE

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13091

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

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: _____

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/01/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/02/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

PROJECT MEMORANDUM

DATE: October 11, 1993

TO: David Eagleton

FROM: Kathy Blaine

PROJECT: 12883088
Woods Industries, Inc.

SUBJECT: ANALYTICAL DATA QA REVIEW

I have completed a review of the analytical data for the ten samples collected on April 1, 1993 and listed on COC# 6509. The Southwest Laboratories episode number was 13129. The samples included in this group are as follows:

TRN-5
TRS-5
UST4
W73-4/93
W5D3-4/93
W4D3-4/93
W2D3-4/93
2DFB3-4/93
WDWW1
WDWW2

A full CLP-type package was submitted by the laboratory and the review was conducted in accordance with the most recent USEPA Data Validation Functional Guidelines. Based on this information, the data appeared to be valid with no deviations from the project scope or QA objectives.

If you have any questions or need additional information, please feel free to contact me.

kab/kab/DAT13129.MEM

BURLINGTON
ENVIRONMENTAL

210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 0

PROJECT NAME WOODS INDUSTRIES (SOIL REMEDIAL
PROJECT NUMBER 12883088 MAJOR TASK 7856 F
SAMPLERS Michael S. Martin 7713
LAB DESTINATION SOUTHWEST, BROKEN ARROW OK

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: FULL LIST	HEXACHLOR BENZENE	PESTICIDES	VOA's	METALS	EPA 628/625T	ICED	PRESERVATIVES: CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)	BCI PHASE
TRN-S	4/1/93	1300	X		Temp Road - North 1/2	3	✓						X			7856
TRS-S	4/1/93	1300	X		" " South 1/2	3	✓						X			7856
UST 4	4/1/93	1300	X		SE CORNER LOADING DOCK	3	✓						X			7856
W73-4/93	4/1/93	1255		X	W7	7		X	X	X	X		X		HNO_3 TO METALS, HCL TO VOA's	7713
W5D3-4/93	4/1/93	0715		X	W5D	7		X	X	X	X		X			
W4D3-4/93	4/1/93	1130		X	W4D	7		X	X	X	X		X			
W2D3-4/93	4/1/93	1015		X	W2D	7		X	X	X	X		X			
2DFB3-4/93	4/1/93	1000		X	W2D/W2S	7		X	X	X	X		X			
WDWW1	4/1/93	1115		X	WELL DEV. TANK	2						X	X			
WDWW2	4/1/93	1115		X	WELL DEV. TANK	2						X	X			

RELINQUISHED BY

SIGNATURE	DATE	TIME
Michael S. Martin	4/1/93	1330

RECEIVED BY

SIGNATURE	DATE	TIME

SHIPPING NOTES

LAB NOTES FULL CLP ANALYSIS AND REPORTING ON ALL SAMPLES ~~EXCEPT~~ WW6

BE-34 (1/92)

BURLINGTON ENVIRONMENTAL

SOIL/SEDIMENT SAMPLING

SERIAL NO. SD 7856-1
PAGE 1 OF 1

PROJECT NAME WOODS INDUSTRIES SAMPLE LOCATION NO. NA
PROJECT NO. 288 3088 MAJOR TASK 7856 SUBTASK 77
DATE 4/1/93 SAMPLERS Michael A. Mato

SAMPLING METHOD Surficial Soil (Sec 6.1 RI/FS FIELD SAMPING AND ANALYSIS PLAN
TYPE OF SAMPLE: DUPLICATE ___ GRAB ___ BACKGROUND ___ COMPOSITE X
REASON FOR COLLECTION: LAB ANALYSIS ✓ HEADSPACE ___ PHYSICAL TESTING ___

SAMPLE NO.	SAMPLE LABEL NO.	TIME COLLECTED	VOLUME COLLECTED	SAMPLE DESCRIPTION
UST4	UST4	12:00 NOON	370 ml	SOIL BENEATH TANK
TRS-S	TRS-S	12:10 P.M	370 ml	SAND FROM TEMPORARY ROAD
TRN-S	TRN-S	12:20 P.M	370 ml	" " " "

INSTRUMENT READINGS

TYPE OF INSTRUMENT	SERIAL NO.	ACTUAL READING/ CONCENTRATION	LOCATION OF READING
NA			

DOCUMENTATION

SAMPLE SEALED YES/NO 1:30 P.M TIME MAM SEALER
: COMPLETED YES/NO 1:30 P.M TIME 6509 COC NO. MAM COMPLETED BY
ANALYSIS REQUEST COMPLETED ~~YES~~ NO - NO LONGER PROTOCOL TIME ___ LAR NO. ___ COMPLETED BY

SOUTHWEST LABORATORY
OF OKLAHOMA, INC.

April 23, 1993

Kathy Blaine
BURLINGTON ENVIRONMENAL
210 West Sand Bank Road
Post Office Box 330
Columbia, IL 62236-0330

SWLO ID: 13129.01 - 13129.10
Project: Woods Indurstries

Dear Ms. Blaine:

Enclosed, we are submitting a full CLP Organic Data Packages and accounting packages for water samples received in our laboratory on April 2, 1993, for the above captioned project.

Please note; the soil results were faxed to you from April 9th thru April 14th of 1993 as requested. The Inorganic Data Packages will be sent to you upon completion.

We apologize for any inconvenience this may have caused you.

If, in your review, you should have any questions or require additional information, please call.

Sincerely,

Chuck Hoover
Project Officer

CH/jl

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLK1	98	100	92		0
02	LCS1	99	99	98		0
03	LCSD1	100	102	102		0
04	2DFB3-4-93	99	104	91		0
05	W73-4-93	93	98	96		0
06	VBLK2	99	104	91		0
07	LCS2	101	103	92		0
08	LCSD2	102	105	96		0
09	W2D3-4-93	101	104	88		0
10	W4D3-4-93	99	99	92		0
11	VBLK3	102	100	97		0
12	LCS3	101	100	99		0
13	LCSD3	101	101	96		0
14	W5D3-4-93	102	100	92		0
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16						
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	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

WATER VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC DEPARTMENT

New Protocol

LCS 1

Inst. ID: R File ID: R1089

Lab Name: SWL-TULSA Client Code: BURLING Episode #: 1316

Matrix Spike–LCS No.: 04/06/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	53	106	65-131
Trichloroethene		50	100	80-120
Benzene		50	100	76-122
Toluene		51	102	77-118
Chlorobenzene	√	51	102	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:

SURROGATE COMPOUND	% RECOVERED
Toluene-d8	100
Bromofluorobenzene	98
1,2-Dichloroethane-d4	98

WATER VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC/ DEPARTMENT

LCS 2

New Protocal

Inst. ID: R File ID: R1090

Lab Name: SWL-TULSA Client Code: BURLING Episode #: 13120

Matrix Spike–LCS No.: 04/07/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	53	106	65-131
Trichloroethene		52	104	80-120
Benzene		48	96	76-122
Toluene		52	104	77-118
Chlorobenzene	✓	52	104	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:

SURROGATE COMPOUND	% RECOVERED
Toluene-d8	100
Bromofluorobenzene	104
1,2-Dichloroethane-d4	92

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 W. ALBANY • BROKEN ARROW, OKLAHOMA 74012 • OFFICE (918) 251-2858 • FAX (918) 251-2599

WATER VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC DEPARTMENT

New Protocol LCS 3

Lab Name: SWL-TULSA Inst. ID: R File ID: R109

Client Code: BURLING Episode #: 1312

Matrix Spike–LCS No.: 04/09/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	54	108	65-131
Trichloroethene		50	100	80-120
Benzene		51	102	76-122
Toluene		52	104	77-118
Chlorobenzene	↓	52	104	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:

SURROGATE COMPOUND	% RECOVERED
Toluene-d8	100
Bromofluorobenzene	100
1,2-Dichloroethane-d4	98

WATER VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC DEPARTMENT

LCSD 1

New Protocol

Inst. ID: R File ID: R108

Lab Name: SWL-TULSA Client Code: BURLING Episode #: 1312

Matrix Spike–LCS No.: 04/06/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	52	104	65-131
Trichloroethene		50	100	80-120
Benzene		50	100	76-122
Toluene		52	104	77-118
Chlorobenzene	✓	52	104	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:

SURROGATE COMPOUND	% RECOVERED
Toluene-d8	100
Bromofluorobenzene	102
1,2-Dichloroethane-d4	102

WATER VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC DEPARTMENT

New Protocol

LCSD 2

Inst. ID: R File ID: R109

Lab Name: SWL-TULSA Client Code: BURLING Episode #: 13120

Matrix Spike–LCS No.: 04/07/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	53	106	65-131
Trichloroethene		52	104	80-120
Benzene		51	102	76-122
Toluene		53	106	77-118
Chlorobenzene	✓	53	106	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:	SURROGATE COMPOUND	% RECOVERED
	Toluene-d8	102
	Bromofluorobenzene	104
	1,2-Dichloroethane-d4	96

WATER VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC DEPARTMENT

New Protocol LCSD 3

Lab Name: SWL-TULSA Inst. ID: R File ID: R109

Client Code: BURLENG Episode #: 13129

Matrix Spike–LCS No.: 04/09/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	52	104	65-131
Trichloroethene		50	100	80-120
Benzene		48	96	76-122
Toluene		51	102	77-118
Chlorobenzene	↓	53	106	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:	SURROGATE COMPOUND	% RECOVERED
	Toluene-d8	102
	Bromofluorobenzene	100
	1,2-Dichloroethane-d4	96

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W4D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.06

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10912.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 200.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	20000	
127-18-4	Tetrachloroethene	2000	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W2D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.07

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10911.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	210	
127-18-4	Tetrachloroethene	100	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W2D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.07

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10911.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W4D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.06

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10912.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 200.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W5D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.05

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10939.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. _____ Data Analyzed: 04/09/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	810	
127-18-4	Tetrachloroethene	100	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W5D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.05

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10939.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. _____ Data Analyzed: 04/09/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W73-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10902.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 2.5

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	390	
127-18-4	Tetrachloroethene	13	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W73-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10902.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 2.5

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2DFB3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.08

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10896.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	11	
127-18-4	Tetrachloroethene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

2DFB3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.08

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10896.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: VBLK1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10892.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	10	U
127-18-4	Tetrachloroethene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: VBLK1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10892.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: VBLK2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10907.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	10	U
127-18-4	Tetrachloroethene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: VBLK2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10907.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK3

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: VBLK3

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10936.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/09/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	10	U
127-18-4	Tetrachloroethene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK3

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: VBLK3

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10936.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/09/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: LCS1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10893.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	50	
127-18-4	Tetrachloroethene	49	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: LCS2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10908.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	49	
127-18-4	Tetrachloroethene	51	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS3

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: LCS3

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10937.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/09/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	44	
127-18-4	Tetrachloroethene	51	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: LCSD1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10894.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	57	
127-18-4	Tetrachloroethene	49	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: LCSD2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10909.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	51	
127-18-4	Tetrachloroethene	51	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD3

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: LCSD3

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: R10938.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/09/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	51	
127-18-4	Tetrachloroethene	50	

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

	EPA SAMPLE NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	SBLK1	51	82	60	98	82	82			0
02	LCS1	65	93	63	104	81	80			0
03	LCSD1	53	88	69	72	75	76			0
04	W73-4-93	46	81	64	74	61	74			0
05	W5D3-4-93	42	68	58	78	58	67			0
06	W4D3-4-93	37	50	43	72	70	54			0
07	W2D3-4-93	48	78	61	87	62	74			0
08	2DFB3-4-93	54	61	55	66	93	49			0
09										
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11										
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		QC LIMITS
S1	= 2-Fluorophenol	(21-100)
S2	= Nitrobenzene-d5	(35-114)
S3	= 2-Fluorobiphenyl	(43-116)
S4	= 2,4,6-Tribromophenol	(10-123)
S5	= Terphenyl-d14	(33-141)
S6	= Phenol-d5	(10- 94)
S7	= N/A	
S8	= N/A	

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix Spike - EPA Sample No.: LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Hexachlorobenzene	100	0	82	82	25-150
4,4'-DDD	100	0	60	60	25-150
4,4'-DDE	100	0	120	120	25-150
4,4'-DDT	100	0	50	50	25-150
Dieldrin	100	0	110	110	25-150

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	100	84	84	2	50	25-150
4,4'-DDD	100	58	58	3	50	25-150
4,4'-DDE	100	120	120	0	50	25-150
4,4'-DDT	100	50	50	0	50	25-150
Dieldrin	100	100	100	10	50	25-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Lab File ID: S798.D Lab Sample ID: BL040505W

Instrument ID: S Date Extracted: 04/05/93

Matrix: (soil/water) WATER Date Analyzed: 04/07/93

Level:(low/med) LOW Time Analyzed: 1346

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS1	LCS:13129	S799.D	04/07/93
02	LCSD1	LCSD:13129	S800.D	04/07/93
03	W73-4-93	13129.04	S801.D	04/07/93
04	W5D3-4-93	13129.05	S802.D	04/07/93
05	W4D3-4-93	13129.06	S803.D	04/07/93
06	W2D3-4-93	13129.07	S804.D	04/07/93
07	2DFB3-4-93	13129.08	S815.D	04/08/93
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COMMENTS:

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Lab File ID (Standard): S813.D Date Analyzed: 04/08/93

Instrument ID: S Time Analyzed: 0826

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	150396	5.26	485310	7.04	256093	9.92
	UPPER LIMIT	300792	5.76	970620	7.54	512186	10.42
	LOWER LIMIT	75198	4.76	242655	6.54	128046	9.42
	EPA SAMPLE No.						
01	2DFB3-4-93	130383	5.26	462225	7.04	240976	9.92
02							
03							
04							
05							
06							
07							
08							
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19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Lab File ID (Standard): S813.D Date Analyzed: 04/08/93

Instrument ID: S Time Analyzed: 0826

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	341075		12.43		179810		17.01		98481		19.32	
	UPPER LIMIT	682150		12.93		359620		17.51		196962		19.82	
	LOWER LIMIT	170538		11.93		89905		16.51		49240		18.82	
	EPA SAMPLE No.												
01	2DFB3-4-93	316818		12.41		136997		17.01		95703		19.32	
02													
03													
04													
05													
06													
07													
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22													

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Lab File ID (Standard): S794.D Date Analyzed: 04/07/93

Instrument ID: S Time Analyzed: 1054

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	130670	5.26	419292	7.04	222919	9.92
	UPPER LIMIT	261340	5.76	838584	7.54	445838	10.42
	LOWER LIMIT	65335	4.76	209646	6.54	111460	9.42
	EPA SAMPLE No.						
01	SBLK1	126351	5.26	439784	7.04	233915	9.92
02	LCS1	139660	5.26	479115	7.04	265795	9.92
03	LCSD1	143762	5.26	509408	7.04	265998	9.92
04	W73-4-93	139331	5.26	499069	7.04	258556	9.92
05	W5D3-4-93	140921	5.26	486624	7.04	248548	9.92
06	W4D3-4-93	143292	5.26	509239	7.04	253960	9.92
07	W2D3-4-93	136238	5.26	468146	7.04	242823	9.93
08							
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22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Lab File ID (Standard): S794.D Date Analyzed: 04/07/93

Instrument ID: S Time Analyzed: 1054

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	298693	12.43	145602	17.02	91660	19.32
	UPPER LIMIT	597386	12.93	291204	17.52	183320	19.82
	LOWER LIMIT	149346	11.93	72801	16.52	45830	18.82
	EPA SAMPLE No.						
01	SBLK1	329412	12.43	192292	17.02	129157	19.32
02	LCS1	371407	12.43	205726	17.01	148196	19.33
03	LCSD1	368506	12.43	210661	17.01	177635	19.33
04	W73-4-93	370422	12.43	218983	17.02	140878	19.34
05	W5D3-4-93	340626	12.43	187787	17.03	125629	19.33
06	W4D3-4-93	330141	12.43	174137	17.02	111277	19.33
07	W2D3-4-93	332497	12.43	189005	17.02	125432	19.33
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18							
19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Lab File ID: R10892.D Lab Sample ID: VBLK1

Date Analyzed: 04/06/93 Time Analyzed: 1105

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: R

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS1	LCS1	R10893.D	1138
02	LCSD1	LCSD1	R10894.D	1201
03	2DFB3-4-93	13129.08	R10896.D	1417
04	W73-4-93	13129.04	R10902.D	1634
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COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Lab File ID: R10907.D Lab Sample ID: VBLK2

Date Analyzed: 04/07/93 Time Analyzed: 1047

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: R

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS2	LCS2	R10908.D	1126
02	LCSD2	LCSD2	R10909.D	1149
03	W2D3-4-93	13129.07	R10911.D	1422
04	W4D3-4-93	13129.06	R10912.D	1445
05				
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COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK3

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Lab File ID: R10936.D Lab Sample ID: VBLK3

Date Analyzed: 04/09/93 Time Analyzed: 1017

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: R

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS3	LCS3	R10937.D	1049
02	LCSD3	LCSD3	R10938.D	1134
03	W5D3-4-93	13129.05	R10939.D	1203
04				
05				
06				
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COMMENTS:

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Lab File ID (Standard): R10890.D Date Analyzed: 04/06/93

Instrument ID: R Time Analyzed: 0958

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	126845	4.86	515968	6.47	368685	11.51
	UPPER LIMIT	253690	5.36	1031936	6.97	737370	12.01
	LOWER LIMIT	63422	4.36	257984	5.97	184342	11.01
	EPA SAMPLE No.						
01	VBLK1	122160	4.87	495677	6.48	354249	11.50
02	LCS1	121865	4.85	509314	6.46	361168	11.50
03	LCSD1	117541	4.87	493494	6.47	344977	11.51
04	2DFB3-4-93	117127	4.86	485012	6.47	341405	11.50
05	W73-4-93	120212	4.89	503894	6.49	355494	11.52
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Lab File ID (Standard): R10905.D Date Analyzed: 04/07/93

Instrument ID: R Time Analyzed: 0941

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
	12 HOUR STD	128409	4.88	527551	6.48	376948	11.51
	UPPER LIMIT	256818	5.38	1055102	6.98	753896	12.01
	LOWER LIMIT	64204	4.38	263776	5.98	188474	11.01
	EPA SAMPLE No.						
01	VBLK2	119124	4.88	469794	6.48	329258	11.53
02	LCS2	128897	4.86	536895	6.46	376959	11.50
03	LCSD2	119770	4.88	497029	6.49	347003	11.52
04	W2D3-4-93	125557	4.88	519942	6.49	361847	11.52
05	W4D3-4-93	119103	4.89	489936	6.49	349150	11.52
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Lab File ID (Standard): R10934.D Date Analyzed: 04/09/93

Instrument ID: R Time Analyzed: 0924

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	122334	4.84	503632	6.45	367818	11.50
	UPPER LIMIT	244668	5.34	1007264	6.95	735636	12.00
	LOWER LIMIT	61167	4.34	251816	5.95	183909	11.00
	EPA SAMPLE No.						
01	VBLK3	112456	4.88	464448	6.48	328324	11.52
02	LCS3	115999	4.85	487279	6.46	347264	11.50
03	LCSD3	118368	4.84	482081	6.46	349154	11.50
04	W5D3-4-93	113495	4.86	482513	6.47	341570	11.51
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2DFB3-4-93

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S815.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/08/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U
72-54-8	4,4'-DDD	10	U
72-55-9	4,4'-DDE	10	U
50-29-3	4,4'-DDT	10	U
60-57-1	Dieldrin	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W2D3-4-93

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S804.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/07/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U
72-54-8	4,4'-DDD	10	U
72-55-9	4,4'-DDE	10	U
50-29-3	4,4'-DDT	10	U
60-57-1	Dieldrin	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W4D3-4-93

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S803.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/07/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U
72-54-8	4,4'-DDD	10	U
72-55-9	4,4'-DDE	10	U
50-29-3	4,4'-DDT	10	U
60-57-1	Dieldrin	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W5D3-4-93

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S802.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/07/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U
72-54-8	4,4'-DDD	10	U
72-55-9	4,4'-DDE	10	U
50-29-3	4,4'-DDT	10	U
60-57-1	Dieldrin	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W73-4-93

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129.04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S801.D

Level: (low/med) LOW Date Received: 04/02/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/07/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U
72-54-8	4,4'-DDD	10	U
72-55-9	4,4'-DDE	10	U
50-29-3	4,4'-DDT	10	U
60-57-1	Dieldrin	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: BL040505W

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S798.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/07/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U
72-54-8	4,4'-DDD	10	U
72-55-9	4,4'-DDE	10	U
50-29-3	4,4'-DDT	10	U
60-57-1	Dieldrin	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: LCS:13129

Sample wt/vol: 1000-(g/mL) ML Lab File ID: S799.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/07/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	82	
72-54-8	4,4'-DDD	60	
72-55-9	4,4'-DDE	120	
50-29-3	4,4'-DDT	50	
60-57-1	Dieldrin	110	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: LCSD:13129

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S800.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/07/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	84	
72-54-8	4,4'-DDD	58	
72-55-9	4,4'-DDE	120	
50-29-3	4,4'-DDT	50	
60-57-1	Dieldrin	100	

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): DB-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC	#	TCX 2 %REC	#	DCB 1 %REC	#	DCB 2 %REC	#	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKWO	58*		58*		68		78				2
02	2DFB3-4-93	78		68		52*		45*				2
03	LCSD13129	66		49*		62		54*				2
04	W2D3-4-93	68		72		21*		20*				2
05	W4D3-4-93	71		84		39*		37*				2
06	W5D3-4-93	72		94		20*		19*				2
07	W73-4-93	71		68		48*		44*				2
08	WDWW1	78		82		27*		28*				2
09	WDWW2	70		105		23*		24*				2

ADVISORY QC LIMITS

TCX = Tetrachloro-m-xylene (60-150)
DCB = Decachlorobiphenyl (60-150)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: SDG No.: 13129

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): DB-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC	#	TCX 2 %REC	#	DCB 1 %REC	#	DCB 2 %REC	#	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKSX	69		73		77		84				0
02	LCS13129	66		68		80		79				0
03	TRN-5	66		71		159*		88				1
04	TRN-5DL	0D		0D		0D		0D				0
05	TRS-5	64		69		103		95				0
06	TRS-5DL	0D		0D		0D		0D				0
07	UST-4	45*		52*		59*		54*				4
08	UST-4DL	62		54*		76		65				1

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3LCC

SOIL PESTICIDE LAB CONTROL SAMPLE RECOVERY

EPA SAMPLE NO. :

LCS13129

Lab Name:SWL-TULSA Contract: BURLING

Lab Code:SWOK Case No.: BURL1 SAS No.: SDG No.:13129

Lab Sample ID: LCS13129
LCS Aliquot: 30 (g)
Concentrated Extract Volume: 5000 (uL)
Injection Volume:2.00(uL)
Sulfur Cleanup: (Y/N) N

LCS Lot No.:8-13-5
Date Extracted:04/05/93
Date Analyzed:04/08/93
Dilution Factor:1.0
pH:N/A

Instrument ID(1) : HP-04A GC Column(1) : DB-608 ID:W608-26

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	% REC	#	QC LIMITS
gamma-BHC (Lindane)	16.7	11.63	70		56-123
Heptachlor	16.7	14.93	90		40-131
Aldrin	16.7	13.16	79		40-120
Dieldrin	33.3	25.47	76		52-126
Endrin	33.3	26.64	80		56-121
4,4'-DDT	33.3	27.19	82		38-127

Instrument ID(2) : HP-04B GC Column(2) : DB-1701 ID:W1701-18

COMPOUND	AMOUNT ADDED (ug/Kg)	AMOUNT RECOVERED (ug/Kg)	% REC	#	QC LIMITS
gamma-BHC (Lindane)	16.7	8.20	49	*	56-123
Heptachlor	16.7	14.93	90		40-131
Aldrin	16.7	13.16	79		40-120
Dieldrin	33.3	25.47	76		52-126
Endrin	33.3	26.64	80		56-121
4,4'-DDT	33.3	27.19	82		38-127

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

LCS Recovery:1 outside limits out of 14 total.

COMMENTS: _____

_____

3LCC

WATER PESTICIDE LAB CONTROL SAMPLE RECOVERY

EPA SAMPLE NO. :

LCSD13129

Lab Name:SWL-TULSA Contract: BURLING

Lab Code:SWOK Case No.: BURL1 SAS No.: SDG No.:13129

Lab Sample ID: LCSD13129
LCS Aliquot: 1000 (uL)
Concentrated Extract Volume:10000 (uL)
Injection Volume:2.00(uL)
Sulfur Cleanup: (Y/N) N

LCS Lot No.:8-13-5
Date Extracted:04/05/93
Date Analyzed:04/09/93
Dilution Factor:1.0
pH:N/A

Instrument ID(1) : HP-04A GC Column(1) : DB-608 ID:W608-26

COMPOUND	AMOUNT ADDED (ug/L)	AMOUNT RECOVERED (ug/L)	% REC	#	QC LIMITS
gamma-BHC (Lindane)	.5	.38	77		56-123
Heptachlor	.5	.42	84		40-131
Aldrin	.5	.38	76		40-120
Dieldrin	1.0	.81	81		52-126
Endrin	1.0	.84	84		56-121
4,4'-DDT	1.0	.86	86		38-127

Instrument ID(2) : HP-04B GC Column(2) : DB-1701 ID:W1701-18

COMPOUND	AMOUNT ADDED (ug/L)	AMOUNT RECOVERED (ug/L)	% REC	#	QC LIMITS
gamma-BHC (Lindane)	.5	.27	54	*	56-123
Heptachlor	.5	.33	65		40-131
Aldrin	.5	.30	60		40-120
Dieldrin	1.0	.67	67		52-126
Endrin	1.0	.70	70		56-121
4,4'-DDT	1.0	.69	69		38-127

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

LCS Recovery:1 outside limits out of 14 total.

COMMENTS: _____

_____

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKSX

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: SDG No.: 13129

Lab Sample ID: PBLKSX Lab File ID:

Matrix:(soil/water) SOIL Extraction:(SepF/Cont/Sonc) SONC

Sulfur Cleanup: (Y/N) N Date Extracted: 04/05/93

Date Analyzed (1): 04/08/93 Date Analyzed (2): 04/08/93

Time Analyzed (1): 1753 Time Analyzed (2): 1707

Instrument ID (1): HP-04A Instrument ID (2): HP-04B

GC Column (1): DB-608 ID: 0.53 (mm) GC Column (2): DB-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	LCS13129	LCS13129	04/08/93	04/08/93
02	TRN-5	13129-01	04/08/93	04/08/93
03	TRN-5DL	13129-01DL	04/10/93	04/10/93
04	TRS-5	13129-02	04/08/93	04/08/93
05	TRS-5DL	13129-02DL	04/10/93	04/10/93
06	UST-4	13129-03	04/08/93	04/08/93
07	UST-4DL	13129-03DL	04/10/93	04/10/93

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKWO

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Lab Sample ID: PBLKWO Lab File ID: _____

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) CONT

Sulfur Cleanup: (Y/N) N Date Extracted: 04/05/93

Date Analyzed (1): 04/09/93 Date Analyzed (2): 04/09/93

Time Analyzed (1): 1357 Time Analyzed (2): 1311

Instrument ID (1): HP-04A Instrument ID (2): HP-04B

GC Column (1): DB-608 ID: 0.53 (mm) GC Column (2): DB-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	2DFB3-4-93	13129-08	04/09/93	04/09/93
02	LCSD13129	LCSD13129	04/09/93	04/09/93
03	W2D3-4-93	13129-07	04/09/93	04/09/93
04	W4D3-4-93	13129-06	04/09/93	04/09/93
05	W5D3-4-93	13129-05	04/09/93	04/09/93
06	W73-4-93	13129-04	04/09/93	04/09/93
07	WDWW1	13129-09	04/09/93	04/09/93
08	WDWW2	13129-10	04/09/93	04/09/93

COMMENTS:

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

2DFB3-4-93

Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129-08

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRN-5

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) SOIL Lab Sample ID: 13129-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S796.D

% Moisture: 5 decanted: (Y/N) N Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/05/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/08/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 8.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.8	
319-85-7	beta-BHC	5.8	P
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	94	
76-44-8	Heptachlor	3.7	
309-00-2	Aldrin	100	E
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	3.9	P
60-57-1	Dieldrin	38	P
72-55-9	4,4'-DDE	220	EC
72-20-8	Endrin	51	P
33213-65-9	Endosulfan II	3.5	U
72-54-8	4,4'-DDD	3.5	U
1031-07-8	Endosulfan sulfate	3.5	U
50-29-3	4,4'-DDT	560	PEC
72-43-5	Methoxychlor	140	P
53494-70-5	Endrin ketone	3.5	U
7421-93-4	Endrin aldehyde	3.5	U
5103-71-9	alpha-Chlordane	1.8	U
5103-74-2	gamma-Chlordane	14	
8001-35-2	Toxaphene	1300	P
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	71	U
11141-16-5	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	35	U
11096-82-5	Aroclor-1260	35	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRN-5DL

Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) SOIL Lab Sample ID: 13129-01DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S796.D

% Moisture: 5 decanted: (Y/N) N Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/05/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/10/93

Injection Volume: 2.00 (uL) Dilution Factor: 1000

GPC Cleanup: (Y/N) Y pH: 8.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1800	U
319-85-7	beta-BHC	1800	U
319-86-8	delta-BHC	1800	U
58-89-9	gamma-BHC (Lindane)	200	DJ
76-44-8	Heptachlor	1800	U
309-00-2	Aldrin	1800	U
1024-57-3	Heptachlor epoxide	1800	U
959-98-8	Endosulfan I	1800	U
60-57-1	Dieldrin	3500	U
72-55-9	4,4'-DDE	460	JPDC
72-20-8	Endrin	3500	U
33213-65-9	Endosulfan II	3500	U
72-54-8	4,4'-DDD	740	JPDC
1031-07-8	Endosulfan sulfate	3500	U
50-29-3	4,4'-DDT	11000	DC
72-43-5	Methoxychlor	18000	U
53494-70-5	Endrin ketone	3500	U
7421-93-4	Endrin aldehyde	3500	U
5103-71-9	alpha-Chlordane	1800	U
5103-74-2	gamma-Chlordane	1800	U
8001-35-2	Toxaphene	180000	U
12674-11-2	Aroclor-1016	35000	U
11104-28-2	Aroclor-1221	71000	U
11141-16-5	Aroclor-1232	35000	U
53469-21-9	Aroclor-1242	35000	U
12672-29-6	Aroclor-1248	35000	U
11097-69-1	Aroclor-1254	35000	U
11096-82-5	Aroclor-1260	35000	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRS-5

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) SOIL Lab Sample ID: 13129-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S786.D

% Moisture: 6 decanted: (Y/N) N Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/05/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/08/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	24	P
76-44-8	Heptachlor	9.0	P
309-00-2	Aldrin	21	
1024-57-3	Heptachlor epoxide	25	
959-98-8	Endosulfan I	1.8	U
60-57-1	Dieldrin	250	E
72-55-9	4,4'-DDE	390	E
72-20-8	Endrin	53	PE
33213-65-9	Endosulfan II	3.5	U
72-54-8	4,4'-DDD	570	E
1031-07-8	Endosulfan sulfate	3.5	U
50-29-3	4,4'-DDT	760	EC
72-43-5	Methoxychlor	150	P
53494-70-5	Endrin ketone	69	PE
7421-93-4	Endrin aldehyde	150	PE
5103-71-9	alpha-Chlordane	1.8	U
5103-74-2	gamma-Chlordane	76	PE
8001-35-2	Toxaphene	6000	P
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	71	U
11141-16-5	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	35	U
11096-82-5	Aroclor-1260	35	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRS-5DL

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) SOIL Lab Sample ID: 13129-02DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S786.D

% Moisture: 6 decanted: (Y/N) N Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/05/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/10/93

Injection Volume: 2.00 (uL) Dilution Factor: 1000

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1800	U
319-85-7	beta-BHC	1800	U
319-86-8	delta-BHC	1800	U
58-89-9	gamma-BHC (Lindane)	1800	U
76-44-8	Heptachlor	1800	U
309-00-2	Aldrin	1800	U
1024-57-3	Heptachlor epoxide	1800	U
959-98-8	Endosulfan I	1800	U
60-57-1	Dieldrin	610	DJ
72-55-9	4,4'-DDE	6100	D
72-20-8	Endrin	3500	U
33213-65-9	Endosulfan II	3500	U
72-54-8	4,4'-DDD	2100	JPD
1031-07-8	Endosulfan sulfate	3500	U
50-29-3	4,4'-DDT	40000	DC
72-43-5	Methoxychlor	18000	U
53494-70-5	Endrin ketone	3500	U
7421-93-4	Endrin aldehyde	3500	U
5103-71-9	alpha-Chlordane	1800	U
5103-74-2	gamma-Chlordane	1800	U
8001-35-2	Toxaphene	180000	U
12674-11-2	Aroclor-1016	35000	U
11104-28-2	Aroclor-1221	71000	U
11141-16-5	Aroclor-1232	35000	U
53469-21-9	Aroclor-1242	35000	U
12672-29-6	Aroclor-1248	35000	U
11097-69-1	Aroclor-1254	35000	U
11096-82-5	Aroclor-1260	35000	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UST-4

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) SOIL Lab Sample ID: 13129-03

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S814.D

% Moisture: 8 decanted: (Y/N) N Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/05/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/08/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	3.7	
76-44-8	Heptachlor	1.8	U
309-00-2	Aldrin	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	1.8	U
60-57-1	Dieldrin	3.6	U
72-55-9	4,4'-DDE	32	
72-20-8	Endrin	3.6	U
33213-65-9	Endosulfan II	3.6	U
72-54-8	4,4'-DDD	14	PC
1031-07-8	Endosulfan sulfate	3.6	U
50-29-3	4,4'-DDT	250	EC
72-43-5	Methoxychlor	21	P
53494-70-5	Endrin ketone	3.6	U
7421-93-4	Endrin aldehyde	3.6	U
5103-71-9	alpha-Chlordane	1.8	U
5103-74-2	gamma-Chlordane	1.8	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	73	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	36	U
11096-82-5	Aroclor-1260	36	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UST-4DL

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) SOIL Lab Sample ID: 13129-03DL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: S814.D

% Moisture: 8 decanted: (Y/N) N Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/05/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/10/93

Injection Volume: 2.00 (uL) Dilution Factor: 5.00

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.2	U
319-85-7	beta-BHC	9.2	U
319-86-8	delta-BHC	9.2	U
58-89-9	gamma-BHC (Lindane)	9.2	U
76-44-8	Heptachlor	9.2	U
309-00-2	Aldrin	9.2	U
1024-57-3	Heptachlor epoxide	9.2	U
959-98-8	Endosulfan I	9.2	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	33	D
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	18	U
72-54-8	4,4'-DDD	15	JPD
1031-07-8	Endosulfan sulfate	18	U
50-29-3	4,4'-DDT	280	D
72-43-5	Methoxychlor	92	U
53494-70-5	Endrin ketone	18	U
7421-93-4	Endrin aldehyde	18	U
5103-71-9	alpha-Chlordane	9.2	U
5103-74-2	gamma-Chlordane	9.2	U
8001-35-2	Toxaphene	920	U
12674-11-2	Aroclor-1016	180	U
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	180	U
53469-21-9	Aroclor-1242	180	U
12672-29-6	Aroclor-1248	180	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	180	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W2D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129-07

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.074	J
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W4D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129-06

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.8 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.24	
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: W5D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129-05

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 8.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W73-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129-04

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.11	
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WDWW1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129-09

Sample wt/vol: 944.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.14	
319-85-7	beta-BHC	0.053	U
319-86-8	delta-BHC	0.056	P
58-89-9	gamma-BHC (Lindane)	0.061	P
76-44-8	Heptachlor	0.053	U
309-00-2	Aldrin	0.053	U
1024-57-3	Heptachlor epoxide	0.053	U
959-98-8	Endosulfan I	0.053	U
60-57-1	Dieldrin	0.16	
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.33	P
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.53	U
53494-70-5	Endrin ketone	0.20	P
7421-93-4	Endrin aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.053	U
5103-74-2	gamma-Chlordane	0.053	U
8001-35-2	Toxaphene	5.3	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: WDWW2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: 13129-10

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.055	P
58-89-9	gamma-BHC (Lindane)	0.059	P
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.14	
72-55-9	4,4'-DDE	0.096	JP
72-20-8	Endrin	0.32	P
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.097	J
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.25	P
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKSX

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

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

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/05/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/08/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	1.7	U
76-44-8	Heptachlor	1.7	U
309-00-2	Aldrin	1.7	U
1024-57-3	Heptachlor epoxide	1.7	U
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	3.3	U
72-55-9	4,4'-DDE	3.3	U
72-20-8	Endrin	3.3	U
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	3.3	U
50-29-3	4,4'-DDT	3.3	U
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.7	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	67	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKWO

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

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

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: _____

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS13129

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) SOIL Lab Sample ID: LCS13129

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 0 decanted: (Y/N) N Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/05/93

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/08/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.7	U
319-85-7	beta-BHC	1.7	U
319-86-8	delta-BHC	1.7	U
58-89-9	gamma-BHC (Lindane)	8.2	P
76-44-8	Heptachlor	13	
309-00-2	Aldrin	12	
1024-57-3	Heptachlor epoxide	1.7	U
959-98-8	Endosulfan I	1.7	U
60-57-1	Dieldrin	24	
72-55-9	4,4'-DDE	3.3	U
72-20-8	Endrin	25	
33213-65-9	Endosulfan II	3.3	U
72-54-8	4,4'-DDD	3.3	U
1031-07-8	Endosulfan sulfate	3.3	U
50-29-3	4,4'-DDT	26	
72-43-5	Methoxychlor	17	U
53494-70-5	Endrin ketone	3.3	U
7421-93-4	Endrin aldehyde	3.3	U
5103-71-9	alpha-Chlordane	1.7	U
5103-74-2	gamma-Chlordane	1.7	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	67	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD13129

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL1 SAS No.: _____ SDG No.: 13129

Matrix: (soil/water) WATER Lab Sample ID: LCSD13129

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/02/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.27	P
76-44-8	Heptachlor	0.33	P
309-00-2	Aldrin	0.30	P
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.67	
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.70	
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.69	
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

PROJECT MEMORANDUM

DATE: October 11, 1993

TO: David Eagleton

FROM: Kathy Blaine

PROJECT: 12883088
Woods Industries, Inc.

SUBJECT: ANALYTICAL DATA QA REVIEW

I have completed a review of the analytical data for the five samples collected on April 2, 1993 and listed on COC# 6207. The Southwest Laboratories episode number was 13136. The samples included in this group are as follows:

W83-4/93
W93-4/93
W103-4/93
W10D3-4/93
W11D3-4/93

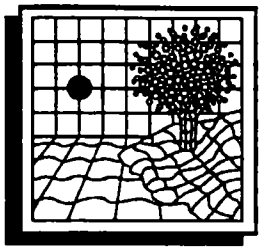
A full CLP-type package was submitted by the laboratory and the review was conducted in accordance with the most recent USEPA Data Validation Functional Guidelines. Based on this information, the data appeared to be valid with the following comment.

Although appropriately qualified in the data package, it should be noted that several pesticide compounds in samples W103-4/93 (including the dilution), W10D3-4/93 (including the dilution), and W93-4/93 had significant reporting concentrations differences between the primary and secondary GC columns. What this translates into is, the reported concentrations are questionable and should be considered estimated. There are no corrective action items required to be performed. The compounds affected are as follows:

W103-4/93	W10D3-4/93	W93-4/93
endrin	endrin	dieldrin
4,4'-DDD	4,4'-DDD	endrin
	Dieldrin	4,4'-DDE
		4,4'-DDT

If you have any questions or need additional information, please feel free to contact me.

kab/kab/DAT13136.MEM



SOUTHWEST LABORATORY OF OKLAHOMA, INC.

April 23, 1993

Kathy Blaine
BURLINGTON ENVIRONMENAL
210 West Sand Bank Road
Post Office Box 330
Columbia, IL 62236-0330

SWLO ID: 13136.01 - 13136.05
Project: Woods Industries

Dear Ms. Blaine:

Enclosed, we are submitting a full CLP Organic and Inorganic Data Packages and Accounting Packages for your samples received in our laboratory on April 3, 1993, for the above captioned project.

If, in your review, you should have any questions or require additional information, please call.

Sincerely,

Chuck Hoover
Project Officer

CH/jl

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLK1	99	104	88		0
02	LCS1	101	98	97		0
03	LCSD1	98	94	101		0
04	W83-4-93	102	105	97		0
05	VBLK2	100	104	92		0
06	LCS2	105	99	104		0
07	LCSD2	102	102	101		0
08	W93-4-93	97	106	83		0
09	W103-4-93	99	106	84		0
10	W10D3-4-93	98	107	85		0
11	W11D3-4-93	98	106	85		0
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(88-110)
SMC2 (BFB)	= Bromofluorobenzene	(86-115)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

WATER VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC DEPARTMENT

New Protocol LCS1

Lab Name: SWL-TULSA Inst. ID: N File ID: N1039

Client Code: BURLING Episode #: 1313

Matrix Spike–LCS No.: 04/06/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	54	108	65-131
Trichloroethene	↓	51	102	80-120
Benzene	↓	51	102	76-122
Toluene	↓	50	100	77-118
Chlorobenzene	↓	50	100	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:	SURROGATE COMPOUND	% RECOVERED
	Toluene-d8	100
	Bromofluorobenzene	98
	1,2-Dichloroethane-d4	96

WATER VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC DEPARTMENT

LCS 2

New Protocol

Inst. ID: N File ID: N1041

Lab Name: SWL – TULSA Client Code: BURLING Episode #: 1313

Matrix Spike–LCS No.: 04/07/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	52	104	65-131
Trichloroethene		50	100	80-120
Benzene		48	96	76-122
Toluene		51	102	77-118
Chlorobenzene	✓	51	102	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:

SURROGATE COMPOUND	% RECOVERED
Toluene-d8	104
Bromofluorobenzene	98
1,2-Dichloroethane-d4	104

WATER VOLATILE LABORATORY
CONTROL SPIKE RECOVERY

VOLATILES GC. DEPARTMENT

LCSD1

New Protocol

Inst. ID: N File ID: N103

Lab Name: SWL-TULSA Client Code: BURLING Episode #: 1313

Matrix Spike–LCS No.: 04/06/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	46	92	65-131
Trichloroethene		51	102	80-120
Benzene		49	98	76-122
Toluene		50	100	77-118
Chlorobenzene	✓	50	100	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:	SURROGATE COMPOUND	% RECOVERED
	Toluene-d8	98
	Bromofluorobenzene	94
	1,2-Dichloroethane-d4	100

WATER VOLATILE LABORATORY CONTROL SPIKE RECOVERY

VOLATILES GC DEPARTMENT

LCSD 2

New Protocol

Inst. ID: N File ID: N104

Lab Name: SWL-TULSA Client Code: BURLING Episode #: 1313

Matrix Spike–LCS No.: 04/07/93

COMPOUND	SPIKE ADDED (ug/l)	MS CONCENTRATION (ug/l)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	53	106	65-131
Trichloroethene		52	104	80-120
Benzene		51	102	76-122
Toluene		52	104	77-118
Chlorobenzene	↓	53	106	82-120

#Column to be used to flag recovery and RPD values with an asterisk

*Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Comments:	SURROGATE COMPOUND	% RECOVERED
	Toluene-d8	102
	Bromofluorobenzene	102
	1,2-Dichloroethane-d4	100

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Lab File ID: N10397.D Lab Sample ID: VBLK1

Date Analyzed: 04/06/93 Time Analyzed: 1111

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS1	LCS1	N10398.D	1144
02	LCSD1	LCSD1	N10399.D	1207
03	W83-4-93	13136.01	N10402.D	1522
04				
05				
06				
07				
08				
09				
10				
11				
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13				
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COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Lab File ID: N10417.D Lab Sample ID: VBLK2

Date Analyzed: 04/07/93 Time Analyzed: 1043

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS2	LCS2	N10418.D	1127
02	LCSD2	LCSD2	N10419.D	1150
03	W93-4-93	13136.02	N10423.D	1526
04	W103-4-93	13136.03	N10424.D	1548
05	W10D3-4-93	13136.04	N10425.D	1611
06	W11D3-4-93	13136.05	N10426.D	1633
07				
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COMMENTS:

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Lab File ID (Standard): N10395.D Date Analyzed: 04/06/93

Instrument ID: N Time Analyzed: 1007

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
	12 HOUR STD	58626	4.67	143017	6.29	148840	11.36
	UPPER LIMIT	117252	5.17	286034	6.79	297680	11.86
	LOWER LIMIT	29313	4.17	71508	5.79	74420	10.86
	EPA SAMPLE No.						
01	VBLK1	56410	4.67	129866	6.30	134952	11.37
02	LCS1	55091	4.67	138938	6.28	145797	11.37
03	LCSD1	63646	4.66	159691	6.30	154018	11.38
04	W83-4-93	57524	4.67	137565	6.30	132738	11.37
05							
06							
07							
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22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Lab File ID (Standard): N10415.D Date Analyzed: 04/07/93

Instrument ID: N Time Analyzed: 0941

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	62504	4.67	152193	6.30	155152	11.37
	UPPER LIMIT	125008	5.17	304386	6.80	310304	11.87
	LOWER LIMIT	31252	4.17	76096	5.80	77576	10.87
	EPA SAMPLE No.						
01	VBLK2	61594	4.68	148448	6.30	150251	11.37
02	LCS2	64470	4.66	172200	6.29	162968	11.38
03	LCSD2	61204	4.68	151243	6.30	152704	11.38
04	W93-4-93	53019	4.69	121511	6.32	136886	11.39
05	W103-4-93	53019	4.69	118636	6.32	133162	11.39
06	W10D3-4-93	51954	4.70	119705	6.32	137608	11.38
07	W11D3-4-93	53203	4.70	121916	6.33	137667	11.40
08							
09							
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14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W10D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10425.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 2.5

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	390	
127-18-4	Tetrachloroethene	9	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W10D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.04

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10425.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 2.5

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W11D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.05

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10426.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	28	
127-18-4	Tetrachloroethene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W11D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.05

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10426.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W83-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10402.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	160	
127-18-4	Tetrachloroethene	10	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W83-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10402.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W93-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10423.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	620	
127-18-4	Tetrachloroethene	50	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W93-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10423.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W103-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10424.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	530	
127-18-4	Tetrachloroethene	9	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W103-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10424.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: VBLK1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10397.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	10	U
127-18-4	Tetrachloroethene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: VBLK1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10397.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: VBLK2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10417.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	10	U
127-18-4	Tetrachloroethene	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: VBLK2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10417.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: LCS1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10398.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	58	
127-18-4	Tetrachloroethene	49	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: LCS2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10418.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	53	
127-18-4	Tetrachloroethene	51	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD1

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: LCSD1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10399.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/06/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	53	
127-18-4	Tetrachloroethene	48	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD2

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: LCSD2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N10419.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Data Analyzed: 04/07/93

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	55	
127-18-4	Tetrachloroethene	50	

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

	EPA SAMPLE NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	S7 #	S8 #	TOT OUT
01	SBLK1	51	82	60	98	82	82			0
02	LCS1	65	93	63	104	81	80			0
03	LCSD1	53	88	69	72	75	76			0
04	W83-4-93	52	77	58	74	70	59			0
05	W93-4-93	61	82	63	82	76	69			0
06	W103-4-93	60	82	63	76	68	67			0
07	W10D3-4-93	60	82	68	75	73	67			0
08	W11D3-4-93	46	63	52	77	90	49			0
09										
10										
11										
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		QC LIMITS
S1	= 2-Fluorophenol	(21-100)
S2	= Nitrobenzene-d5	(35-114)
S3	= 2-Fluorobiphenyl	(43-116)
S4	= 2,4,6-Tribromophenol	(10-123)
S5	= Terphenyl-d14	(33-141)
S6	= Phenol-d5	(10- 94)
S7	= N/A	
S8	= N/A	

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: ~~13129~~ 13136

Matrix Spike - EPA Sample No.: LCS

4r 4/16/93

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Hexachlorobenzene	100	0	82	82	25-150
4,4'-DDD	100	0	60	60	25-150
4,4'-DDE	100	0	120	120	25-150
4,4'-DDT	100	0	50	50	25-150
Dieldrin	100	0	110	110	25-150

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	100	84	84	2	50	25-150
4,4'-DDD	100	58	58	3	50	25-150
4,4'-DDE	100	120	120	0	50	25-150
4,4'-DDT	100	50	50	0	50	25-150
Dieldrin	100	100	100	10	50	25-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Lab File ID: S798.D Lab Sample ID: BL040505W

Instrument ID: S Date Extracted: 04/05/93

Matrix: (soil/water) WATER Date Analyzed: 04/07/93

Level:(low/med) LOW Time Analyzed: 1346

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS1	LCS:13129	S799.D	04/07/93
02	LCSD1	LCSD:13129	S800.D	04/07/93
03	W83-4-93	13136.01	S816.D	04/08/93
04	W93-4-93	13136.02	S817.D	04/08/93
05	W103-4-93	13136.03	S818.D	04/08/93
06	W10D3-4-93	13136.04	S819.D	04/08/93
07	W11D3-4-93	13136.05	S820.D	04/08/93
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COMMENTS:

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Lab File ID (Standard): S794.D Date Analyzed: 04/07/93

Instrument ID: S Time Analyzed: 1054

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	130670	5.26	419292	7.04	222919	9.92
	UPPER LIMIT	261340	5.76	838584	7.54	445838	10.42
	LOWER LIMIT	65335	4.76	209646	6.54	111460	9.42
	EPA SAMPLE No.						
01	SBLK1	126351	5.26	439784	7.04	233915	9.92
02	LCS1	139660	5.26	479115	7.04	265795	9.92
03	LCSD1	143762	5.26	509408	7.04	265998	9.92
04							
05							
06							
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18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Lab File ID (Standard): S794.D Date Analyzed: 04/07/93

Instrument ID: S Time Analyzed: 1054

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	298693		12.43		145602		17.02		91660		19.32	
	UPPER LIMIT	597386		12.93		291204		17.52		183320		19.82	
	LOWER LIMIT	149346		11.93		72801		16.52		45830		18.82	
	EPA SAMPLE No.												
01	SBLK1	329412		12.43		192292		17.02		129157		19.32	
02	LCS1	371407		12.43		205726		17.01		148196		19.33	
03	LCSD1	368506		12.43		210661		17.01		177635		19.33	
04													
05													
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20													
21													
22													

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Lab File ID (Standard): S813.D Date Analyzed: 04/08/93

Instrument ID: S Time Analyzed: 0826

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	150396	5.26	485310	7.04	256093	9.92
	UPPER LIMIT	300792	5.76	970620	7.54	512186	10.42
	LOWER LIMIT	75198	4.76	242655	6.54	128046	9.42
	EPA SAMPLE No.						
01	W83-4-93	135416	5.26	455260	7.04	237217	9.92
02	W93-4-93	135717	5.25	477183	7.04	252873	9.91
03	W103-4-93	144873	5.25	507773	7.04	261002	9.91
04	W10D3-4-93	148903	5.26	512008	7.04	260706	9.91
05	W11D3-4-93	131345	5.24	458036	7.02	231858	9.91
06							
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22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Lab File ID (Standard): S813.D Date Analyzed: 04/08/93

Instrument ID: S Time Analyzed: 0826

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	341075	12.43	179810	17.01	98481	19.32
	UPPER LIMIT	682150	12.93	359620	17.51	196962	19.82
	LOWER LIMIT	170538	11.93	89905	16.51	49240	18.82
	EPA SAMPLE No.						
01	W83-4-93	336898	12.43	179622	17.01	126978	19.32
02	W93-4-93	331856	12.41	169282	17.01	116708	19.32
03	W103-4-93	353667	12.41	189526	17.01	130545	19.32
04	W10D3-4-93	360427	12.42	185331	17.01	121119	19.31
05	W11D3-4-93	346108	12.42	183015	17.01	135376	19.31
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20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W10D3-4-93

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.04

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S819.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/08/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U
72-54-8	4,4'-DDD	10	U
72-55-9	4,4'-DDE	10	U
50-29-3	4,4'-DDT	6	J
60-57-1	Dieldrin	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W11D3-4-93

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S820.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/08/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U
72-54-8	4,4'-DDD	10	U
72-55-9	4,4'-DDE	10	U
50-29-3	4,4'-DDT	10	U
60-57-1	Dieldrin	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W83-4-93

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S816.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/08/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U
72-54-8	4,4'-DDD	10	U
72-55-9	4,4'-DDE	10	U
50-29-3	4,4'-DDT	10	U
60-57-1	Dieldrin	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W93-4-93

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S817.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/08/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U
72-54-8	4,4'-DDD	10	U
72-55-9	4,4'-DDE	10	U
50-29-3	4,4'-DDT	10	U
60-57-1	Dieldrin	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W103-4-93

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136.03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S818.D

Level: (low/med) LOW Date Received: 04/03/93

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/08/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U
72-54-8	4,4'-DDD	10	U
72-55-9	4,4'-DDE	10	U
50-29-3	4,4'-DDT	5	U
60-57-1	Dieldrin	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: BL040505W

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S798.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/07/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U
72-54-8	4,4'-DDD	10	U
72-55-9	4,4'-DDE	10	U
50-29-3	4,4'-DDT	10	U
60-57-1	Dieldrin	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: LCS:13129

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S799.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/07/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	82	
72-54-8	4,4'-DDD	60	
72-55-9	4,4'-DDE	120	
50-29-3	4,4'-DDT	50	
60-57-1	Dieldrin	110	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD1

Lab Name: SWL-TULSA Contract: BURLINGTON

Lab Code: SWOK Case No.: BURLING SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: LCSD:13129

Sample wt/vol: 1000 (g/mL) ML Lab File ID: S800.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted:04/05/93

Concentrated Extract Volume: 1000(UL) Date Analyzed: 04/07/93

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	84	
72-54-8	4,4'-DDD	58	
72-55-9	4,4'-DDE	120	
50-29-3	4,4'-DDT	50	
60-57-1	Dieldrin	100	

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: _____ SDG No.: 13136

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): DB-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC	#	TCX 2 %REC	#	DCB 1 %REC	#	DCB 2 %REC	#	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKWO	58*		58*		68		78				2
02	LCS13129	72		66		80		70				0
03	W103-4-93	68		70		26*		27*				2
04	W103-4-93DL	84		76		0*		30*				2
05	W10D3-4-93	66		64		19*		20*				2
06	W10D3-4-93DL	70		61		0*		0*				2
07	W11D3-4-93	77		78		42*		36*				2
08	W83-4-93	78		76		31*		31*				2
09	W93-4-93	62		37*		24*		14*				3

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3LCC

WATER PESTICIDE LAB CONTROL SAMPLE RECOVERY

EPA SAMPLE NO. : LCS13129

Lab Name:SWL-TULSA Contract: BURLING

Lab Code:SWOK Case No.: BURL2 SAS No.: SDG No.:13136

Lab Sample ID: LCS13129
LCS Aliquot:1000 (uL)
Concentrated Extract Volume:10000 (uL)
Injection Volume:2.00(uL)
Sulfur Cleanup: (Y/N) N

LCS Lot No.:8-13-5
Date Extracted:04/05/93
Date Analyzed:04/09/93
Dilution Factor:1.0
pH:N/A

Instrument ID(1) : HP-04A GC Column(1) : DB-608 ID:W608-26

COMPOUND	AMOUNT ADDED (ug/L)	AMOUNT RECOVERED (ug/L)	% REC	#	QC LIMITS
gamma-BHC (Lindane)	.5	.43	85		56-123
Heptachlor	.5	.50	100		40-131
Aldrin	.5	.45	89		40-120
Dieldrin	1.0	.92	92		52-126
Endrin	1.0	.98	98		56-121
4'-DDT	1.0	1.00	100		38-127

Instrument ID(2) : HP-04B GC Column(2) : DB-1701 ID:W1701-18

COMPOUND	AMOUNT ADDED (ug/L)	AMOUNT RECOVERED (ug/L)	% REC	#	QC LIMITS
gamma-BHC (Lindane)	.5	.36	72		56-123
Heptachlor	.5	.43	87		40-131
Aldrin	.5	.41	82		40-120
Dieldrin	1.0	.89	89		52-126
Endrin	1.0	.93	93		56-121
4,4'-DDT	1.0	.87	87		38-127

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

LCS Recovery:0 outside limits out of 14 total.

COMMENTS: _____

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKWO

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: _____ SDG No.: 13136

Lab Sample ID: PBLKWO Lab File ID: _____

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) CONT

Sulfur Cleanup: (Y/N) N Date Extracted: 04/05/93

Date Analyzed (1): 04/09/93 Date Analyzed (2): 04/09/93

Time Analyzed (1): 1357 Time Analyzed (2): 1311

Instrument ID (1): HP-04A Instrument ID (2): HP-04B

GC Column (1): DB-608 ID: 0.53 (mm) GC Column (2): DB-1701 ID: 0.53 (mm

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	LCS13129	LCS13129	04/09/93	04/09/93
02	W103-4-93	13136-03	04/09/93	04/09/93
03	W103-4-93DL	13136-03DL	04/10/93	04/10/93
04	W10D3-4-93	13136-04	04/09/93	04/09/93
05	W10D3-4-93DL	13136-04DL	04/10/93	04/10/93
06	W11D3-4-93	13136-05	04/09/93	04/09/93
07	W83-4-93	13136-01	04/09/93	04/09/93
08	W93-4-93	13136-02	04/09/93	04/09/93

COMMENTS:

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W103-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: _____ SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136-03

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/03/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.091	J
72-55-9	4,4'-DDE	0.28	
72-20-8	Endrin	0.078	JP
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.20	P
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	2.8	E
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: W103-4-93DL

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: _____ SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136-03DL

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/03/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/10/93

Injection Volume: 2.00 (uL) Dilution Factor: 5.00

GPC Cleanup: (Y/N) N pH: 7.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.25	U
319-85-7	beta-BHC	0.25	U
319-86-8	delta-BHC	0.25	U
58-89-9	gamma-BHC (Lindane)	0.25	U
76-44-8	Heptachlor	0.25	U
309-00-2	Aldrin	0.25	U
1024-57-3	Heptachlor epoxide	0.25	U
959-98-8	Endosulfan I	0.25	U
60-57-1	Dieldrin	0.50	U
72-55-9	4,4'-DDE	0.27	DJ
72-20-8	Endrin	0.50	U
33213-65-9	Endosulfan II	0.50	U
72-54-8	4,4'-DDD	0.26	JPD
1031-07-8	Endosulfan sulfate	0.50	U
50-29-3	4,4'-DDT	3.3	D
72-43-5	Methoxychlor	2.5	U
53494-70-5	Endrin ketone	0.50	U
7421-93-4	Endrin aldehyde	0.50	U
5103-71-9	alpha-Chlordane	0.25	U
5103-74-2	gamma-Chlordane	0.25	U
8001-35-2	Toxaphene	25	U
12674-11-2	Aroclor-1016	5.0	U
11104-28-2	Aroclor-1221	10	U
11141-16-5	Aroclor-1232	5.0	U
53469-21-9	Aroclor-1242	5.0	U
12672-29-6	Aroclor-1248	5.0	U
11097-69-1	Aroclor-1254	5.0	U
11096-82-5	Aroclor-1260	5.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W10D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: _____ SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136-04

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/03/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.12	
72-55-9	4,4'-DDE	0.40	
72-20-8	Endrin	0.085	JP
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.26	P
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	3.3	E
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: W10D3-4-93DL

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136-04DL

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

% Moisture: decanted: (Y/N) Date Received: 04/03/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/10/93

Injection Volume: 2.00 (uL) Dilution Factor: 5.00

GPC Cleanup: (Y/N) N pH: 7.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.25	U
319-85-7	beta-BHC	0.25	U
319-86-8	delta-BHC	0.25	U
58-89-9	gamma-BHC (Lindane)	0.25	U
76-44-8	Heptachlor	0.25	U
309-00-2	Aldrin	0.25	U
1024-57-3	Heptachlor epoxide	0.25	U
959-98-8	Endosulfan I	0.25	U
60-57-1	Dieldrin	0.090	JPD
72-55-9	4,4'-DDE	0.32	DJ
72-20-8	Endrin	0.50	U
33213-65-9	Endosulfan II	0.50	U
72-54-8	4,4'-DDD	0.50	U
1031-07-8	Endosulfan sulfate	0.50	U
50-29-3	4,4'-DDT	3.5	D
72-43-5	Methoxychlor	2.5	U
53494-70-5	Endrin ketone	0.50	U
7421-93-4	Endrin aldehyde	0.50	U
5103-71-9	alpha-Chlordane	0.25	U
5103-74-2	gamma-Chlordane	0.25	U
8001-35-2	Toxaphene	25	U
12674-11-2	Aroclor-1016	5.0	U
11104-28-2	Aroclor-1221	10	U
11141-16-5	Aroclor-1232	5.0	U
53469-21-9	Aroclor-1242	5.0	U
12672-29-6	Aroclor-1248	5.0	U
11097-69-1	Aroclor-1254	5.0	U
11096-82-5	Aroclor-1260	5.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W11D3-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: _____ SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136-05

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/03/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 8.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W83-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: _____ SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136-01

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/03/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.17	
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.27	
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.064	J
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W93-4-93

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: _____ SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: 13136-02

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/03/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.064	JP
72-55-9	4,4'-DDE	0.094	JP
72-20-8	Endrin	0.092	JP
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.43	P
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKWO

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: _____ SDG No.: 13136

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

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: _____

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS13129

Lab Name: SWL-TULSA Contract: BURLING

Lab Code: SWOK Case No.: BURL2 SAS No.: _____ SDG No.: 13136

Matrix: (soil/water) WATER Lab Sample ID: LCS13129

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

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/03/93

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 04/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/09/93

Injection Volume: 2.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.36	
76-44-8	Heptachlor	0.43	
309-00-2	Aldrin	0.41	
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.89	
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.92	
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.87	
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 WEST ALBANY
BROKEN ARROW, OK 74012
(918) 251-2858

INORGANIC

C A S E N A R R A T I V E

April 03, 1993

CASE NUMBER: 13136 SDG NUMBER: W8

MATRIX: Water

Per SOW 3/90, the sample IDs must consist of no more than 6 letters/numbers, therefore, the ID of the samples contained in this package has been altered to meet the SOW 3/90 specifics:

Original Client ID	Received Date	Lab ID used in the Raw Data & Pkg. Forms	Assigned Sample ID
W/3-4/93	04/03/93	13136.01	W8
W93-4/93	"	13136.02	W9
W103-4/93	"	13136.03	W10
W10DS-4/93	"	13136.04	W10D
W11D3-4/93	"	13136.05	W11D

Steve L. Markham
Inorganic Program Manager

April 03, 1993
Date

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

INORGANICS CLP QUALIFIER FLAGS

B	The reported values was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL), if the analyte was analyzed for but not detected, a "U" must be entered.
E	The reported value is estimated because of the presence of interference. An explanatory note must be included under Comments on the Cover Page (if the problem applies to all samples) or on the specific FORM I - IN (if it is an isolated problem).
M	Duplicate injection precision not met.
N	Spike sample recovery not within control limits.
S	The reported value was determined by the Method of Standard Additions (MSA).
W	Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance. (See Exhibit E.)
*	Duplicate analysis not within control limits.
+	Correlation coefficient for the MSA is less than 0.995.

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE **002**

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: W8

SOW No.: 3/90

EPA Sample No.	Lab Sample ID
W10	1313603
W10D	1313604
W11D	1313605
W8	1313601
W9	1313602

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Steve L. Markham Name: Steve L. Markham

Date: April 23, 1993 Title: Inorganic Program Manager

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W10

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: W8

Matrix (soil/water): WATER Lab Sample ID: 1313603

Level (low/med): LOW Date Received: 04/03/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	2.0	B		F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	11.6			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: TAN Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

EPA SAMPLE W10 = CLIENT SAMPLE ID W103-4/93

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W10D

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: W8

Matrix (soil/water): WATER Lab Sample ID: 1313604

Level (low/med): LOW Date Received: 04/03/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	5.0	B		P
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium	10.8			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	15.8			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver	5.2	B		P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: TAN Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

EPA SAMPLE W10D = CLIENT SAMPLE ID W10DS-4/93

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1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W11D

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: W8

Matrix (soil/water): WATER Lab Sample ID: 1313605

Level (low/med): LOW Date Received: 04/03/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium	4.7	B		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

EPA SAMPLE W11D = CLIENT SAMPLE ID W11D3-4/93

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

WB

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: WB

Matrix (soil/water): WATER Lab Sample ID: 1313601

Level (low/med): LOW Date Received: 04/03/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	4.7	B	4	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

EPA SAMPLE WB = CLIENT SAMPLE ID W/S-4/93

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W9

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: W8

Matrix (soil/water): WATER Lab Sample ID: 1313602

Level (low/med): LOW Date Received: 04/03/93

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	8.9	B		F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium	16.7			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	14.6			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		AV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver	3.6	B		P
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: TAN Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

EPA SAMPLE W9 = CLIENT SAMPLE ID W93-4/93

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2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 13136 SAS No.: _____ SDG No.: WB___

Initial Calibration Source: EPA-LV _____

Continuing Calibration Source: IN.VEN. _____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum									NR
Antimony									NR
Arsenic	50.4	51.00	101.2	50.0	48.50	97.0	50.50	101.0	F
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium	480.0	499.51	104.1	1000.0	994.83	99.5	990.59	99.1	P
Cobalt									NR
Copper									NR
Iron									NR
Lead	93.4	90.30	91.8	25.0	23.64	94.6	23.80	95.2	F
Magnesium									NR
Manganese									NR
Mercury	.9	5.00	102.0	5.0	4.80	96.0	.91	98.2	AV
Nickel									NR
Potassium									NR
Selenium									NR
Silver	478.0	500.29	104.7	1250.0	1276.85	102.1	1275.73	102.1	P
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

(1) Control Limits: Mercury 80-120; Other metals 90-110; Cyanide 85-115

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2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 13136 SAS No.: _____ SDG No.: 98 _____

Initial Calibration Source: EPA-LV _____

Continuing Calibration Source: IN.VEN. _____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum									NR
Antimony									NR
Arsenic				50.0	46.20	92.4			F
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium				1000.0	977.69	97.8			P
Cobalt									NR
Copper									NR
Iron									NR
Lead				25.0	24.52	98.1			F
Magnesium									NR
Manganese									NR
Mercury				5.0	5.00	100.0	5.09	101.8	AV
Nickel									NR
Potassium									NR
Selenium									NR
Silver				1250.0	1274.86	102.0			P
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 13136 SAS No.: _____ SDG No.: WB _____

Initial Calibration Source: EPA-LV

Continuing Calibration Source: IN.VEN.

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum									NR
Antimony									NR
Arsenic	50.0	50.20	99.6	50.0	49.50	99.0	54.40	108.8	F
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

2B

CRDL STANDARD FOR AA AND ICP

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13156 SAS No.: SDG No.: 98

AA CRDL Standard Source: PLASMACHEM

ICP CRDL Standard Source: IH.VEN.

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum								
Antimony								
Arsenic	10.0	10.20	102.0					
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium				20.0	21.50	107.5	18.69	93.4
Cobalt								
Copper								
Iron								
Lead	3.0	2.88	96.0					
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver				20.0	22.86	114.3	21.10	105.5
Sodium								
Thallium								
Vanadium								
Zinc								

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 13136 SAS No.: _____ SDG No.: WB_____

AA CRDL Standard Source: PLASMACHEM

ICP CRDL Standard Source: _____

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum								
Antimony								
Arsenic	10.0	9.60	96.0					
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver								
Sodium								
Thallium								
Vanadium								
Zinc								

3
BLANKS

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 13136 SAS No.: _____ SDG No.: MB_____

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium	4.0	U	4.0	U	4.0	U	4.5	B	4.000	U	P
Cobalt											NR
Copper											NR
Iron											NR
Lead	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	F
Magnesium											NR
Manganese											NR
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.200	U	AV
Nickel											NR
Potassium											NR
Selenium											NR
Silver	3.0	U	3.2	B	3.0	U	3.2	B	3.233	B	P
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

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3

BLANKS

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 13136 SAS No.: _____ SDG No.: WB_____

Preparation Blank Matrix (soil/water): _____

Preparation Blank Concentration Units (ug/L or mg/kg): _____

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic	2.0	U	2.0	U	2.0	U					F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury			0.2	U							AV
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

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ICP INTERFERENCE CHECK SAMPLE

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 13136 SAS No: _____ SDG No.: MB

ICP ID Number: TJA61 _____ ICS Source: EPA-LV87

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium	14	464	12	478.6	103.1	13	476.7	102.7
Cobalt								
Copper								
Iron								
Lead								
Magnesium								
Manganese								
Mercury								
Nickel								
Potassium								
Selenium								
Silver	0	899	10	997.8	111.0	10	997.8	111.0
Sodium								
Thallium								
Vanadium								
Zinc								

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LABORATORY CONTROL SAMPLE

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: WB

Solid LCS Source:

Aqueous LCS Source: EPA0392

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic	20.0	16.20	81.0						
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium	500.0	497.24	99.4						
Cobalt									
Copper									
Iron									
Lead	20.0	17.20	86.0						
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver	625.0	618.56	99.0						
Sodium									
Thallium									
Vanadium									
Zinc									
Cyanide									

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8

STANDARD ADDITION RESULTS

Lab Name: SOUTHWEST_LAB_OF_OK ______ Contract: ________

Lab Code: SWOK__ Case No.: 13136_ SAS No.:______ SDG No.:W8_____

Concentration Units: ug/L

EPA Sample No.	An	0 ADD ABS	1 ADD CON	1 ADD ABS	2 ADD CON	2 ADD ABS	3 ADD CON	3 ADD ABS	Final Conc.	r	Q

FORM VIII - IN ILM02.1

ICP SERIAL DILUTION

018

EPA SAMPLE NO.

WBL L

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: WB

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum							NR
Antimony							NR
Arsenic							NR
Barium							NR
Beryllium							NR
Cadmium							NR
Calcium							NR
Chromium	4.00	U	20.00	U			P
Cobalt							NR
Copper							NR
Iron							NR
Lead							NR
Magnesium							NR
Manganese							NR
Mercury							NR
Nickel							NR
Potassium							NR
Selenium							NR
Silver	3.00	U	15.00	U			P
Sodium							NR
Thallium							NR
Vanadium							NR
Zinc							NR

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10

Instrument Detection Limits (Quarterly)

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 13136 SAS No.: _____ SDG No.: 98 _____

ICP ID Number: TJA61 Date: 02/23/93

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium	267.72		10	4.0	P
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver	328.07		10	3.0	P
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

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10

Instrument Detection Limits (Quarterly)

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: WB

ICP ID Number: Date: 01/31/93

Flame AA ID Number :

Furnace AA ID Number : VAR400B

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic	193.70	BZ	10	1.0	F
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

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10

Instrument Detection Limits (Quarterly)

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 13136 SAS No.: _____ SDG No.: 08 _____

ICP ID Number: _____ Date: 02/01/93

Flame AA ID Number : _____

Furnace AA ID Number : TJA22A

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead	283.30	BS	3	2.0	F
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

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10

Instrument Detection Limits (Quarterly)

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 13136 SAS No.: _____ SDG No.: WB_____

ICP ID Number: _____ Date: 02/23/93

Flame AA ID Number : LEEMAN

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			30		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253.70		0.2	0.2	AV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

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1IA

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: WB

ICP ID Number: TJA6I Date: 10/26/92

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	CR
Aluminum	308.22	0.0000000	0.0000000	0.0008370	0.0011730	0.0006990
Antimony	217.58	0.0004100	0.0000000	0.0000400	0.0001130	0.0000000
Arsenic						
Barium	493.41	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	0.0000000	-0.0000400	0.0000000	0.0000000
Calcium	317.92	0.0007470	0.0000000	0.0000000	0.0000000	0.0018020
Chromium	267.72	0.0000210	0.0000000	0.0002000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000370	0.0000100	0.0003760
Copper	324.75	0.0000000	0.0000000	-0.0001900	-0.0000400	0.0000000
Iron	259.94	0.0004490	0.0000000	0.0000000	0.0000000	0.0001540
Lead						
Magnesium	279.08	0.0002047	0.0000000	0.0000000	0.0000000	-0.0022200
Manganese	257.61	0.0001520	0.0000000	0.0002420	0.0004580	0.0000000
Mercury						
Nickel	221.60	0.0000150	0.0000000	0.0004460	0.0000000	0.0000000
Potassium	776.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium						
Silver	328.07	0.0000000	0.0000000	-0.0001300	0.0000000	0.0000420
Sodium	588.99	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium						
Vanadium	292.40	0.0000000	0.0000000	-0.0002600	0.0000000	-0.0014800
Zinc	213.86	0.0002870	0.0000000	0.0001210	0.0000000	0.0000000

Comments:

1B

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: N8

ICP ID Number: TJA61 Date: 10/25/92

Analyte	Wave-length (nm)	Interelement Correction Factors for: CU	MN	NI	TI	V
Aluminum	308.22	0.0005070	0.0005770	0.0009100	0.0000000	0.0085440
Antimony	217.58	0.0000000	0.0005130	0.0054630	0.0000000	0.0012250
Arsenic						
Barium	493.41	0.0000360	0.0000000	0.0000030	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000460	0.0047490
Cadmium	228.80	0.0000000	0.0000000	-0.0011300	0.0000000	0.0000850
Calcium	317.92	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000090	0.0000720	0.0000470	0.0001510	0.0003100
Cobalt	228.62	0.0000000	0.0000000	-0.0006600	0.0021850	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000250	-0.0005900	0.0004540
Iron	259.94	0.0001650	0.0018050	0.0002090	0.0005280	0.0008700
Lead						
Magnesium	279.08	0.0000000	-0.0042000	0.0000000	-0.0002600	-0.0013200
Manganese	257.61	0.0000000	0.0000000	0.0000110	0.0000740	0.0000000
Mercury						
Nickel	221.60	0.0000000	0.0000620	0.0000000	-0.0003900	-0.0003900
Potassium	776.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium						
Silver	328.07	0.0000000	0.0001280	0.0001400	-0.0007200	-0.0024600
Sodium	588.99	0.0000000	0.0000000	0.0000000	0.0012750	0.0000000
Thallium						
Vanadium	292.40	0.0000000	-0.0000500	0.0000540	0.0007340	0.0000000
Zinc	213.86	0.0043310	0.0000000	0.0028410	0.0002700	-0.0015100

Comments:

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ICP LINEAR RANGES (QUARTERLY)

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: 38

ICP ID Number: TJA61 Date: 02/17/93

Analyte	Integ. Time (sec.)	Concentration (ug/L)	M
Aluminum	7.00	1000000.0	P
Antimony	7.00	50000.0	P
Arsenic			NR
Barium	7.00	100000.0	P
Beryllium	7.00	50000.0	P
Cadmium	7.00	100000.0	P
Calcium	7.00	600000.0	P
Chromium	7.00	50000.0	P
Cobalt	7.00	50000.0	P
Copper	7.00	50000.0	P
Iron	7.00	500000.0	P
Lead			NR
Magnesium	7.00	1000000.0	P
Manganese	7.00	50000.0	P
Mercury			NR
Nickel	7.00	50000.0	P
Potassium	7.00	1000000.0	P
Selenium			NR
Silver	7.00	50000.0	P
Sodium	7.00	700000.0	P
Thallium			NR
Vanadium	7.00	50000.0	P
Zinc	7.00	50000.0	P

Comments:

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13
PREPARATION LOG

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: W8

Aqueous: P

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSW	04/08/93		100
PBW	04/08/93		100
W10	04/08/93		100
W10D	04/08/93		100
W11D	04/08/93		100
W8	04/08/93		100
W9	04/08/93		100

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13
PREPARATION LOG

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: W8

Method: F

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSW	04/08/93		100
PBW	04/08/93		100
W10	04/08/93		100
W10D	04/08/93		100
W11D	04/08/93		100
W8	04/08/93		100
W9	04/08/93		100

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PREPARATION LOG

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: W8

Method: AV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
PBW	04/09/93		100
W10	04/09/93		100
W10D	04/09/93		100
W11D	04/09/93		100
W8	04/09/93		100
W9	04/09/93		100

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ANALYSIS RUN LOG

Lab Name: SOUTHWEST_LAB_OF_OK   Contract: ________

Lab Code: SWOK__   Case No.: 13136_   SAS No.: ______   SDG No.: W8 ____

Instrument ID Number: TJA61 ________   Method: P_

Start Date: 04/08/93   End Date: 04/08/93

EPA Sample No.	D/F	Time	% R	AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
[illegible]	1.00	1459									X											X					
[illegible]	1.00	1502									X											X					
[illegible]	1.00	1506																									
[illegible]	1.00	1509																									
[illegible]	1.00	1512																									
[illegible]	1.00	1513									X											X					
ICB	1.00	1516									X											X					
ICSA	1.00	1520									X											X					
ICSAB	1.00	1523									X											X					
CRI	1.00	1527									X											X					
[illegible]V	1.00	1530									X											X					
[illegible]B	1.00	1533									X											X					
PBW	1.00	1537									X											X					
LCSW	1.00	1540									X											X					
W8	1.00	1544									X											X					
W8L	5.00	1547									X											X					
W9	1.00	1551									X											X					
[illegible]	1.00	1554									X											X					
[illegible]	1.00	1558									X											X					
[illegible]	1.00	1601									X											X					
CCV	1.00	1604									X											X					
CCB	1.00	1608									X											X					
ICSA	1.00	1611									X											X					
ICSAB	1.00	1615									X											X					
CRI	1.00	1618									X											X					
CCV	1.00	1622									X											X					
CCB	1.00	1625									X											X					

14
ANALYSIS RUN LOG

Lab Name: SOUTHWEST_LAB_OF_OK_____ Contract: _____

Lab Code: SWOK__ Case No.: 13136_ SAS No.: _____ SDG No.:WB____

Instrument ID Number: VAR4008_____ Method: F_

Start Date: 04/08/93 End Date: 04/08/93

EPA Sample No.	D/F	Time	% R	Analytes																												
				ALB	SBS	ASA	BAE	BED	CAR	CRO	CUE	FBG	MGN	GI	HG	KSE	AGA	NAL	TV	ZN	CN
S0	1.00	1556				X																										
S10	1.00	1600				X																										
S50	1.00	1605				X																										
S100	1.00	1609				X																										
ICV	1.00	1613				X																										
ICB	1.00	1618				X																										
CRA	1.00	1622				X																										
CRA	1.00	1627																														
CCV	1.00	1631				X																										
CCB	1.00	1635				X																										
ZZZZZ	1.00	1640																														
ZZZZZ	1.00	1644																														
ZZZZZZ	1.00	1648																														
ZZZZZZ	1.00	1653																														
ZZZZZZ	1.00	1657																														
ZZZZZZ	1.00	1702																														
LCSW	1.00	1706				X																										
LCSWA	1.00	1711	115.0			X																										
W8	1.00	1715				X																										
W8A	1.00	1720	115.5			X																										
CCV	1.00	1724				X																										
CCB	1.00	1728				X																										
W9	1.00	1733				X																										
W9A	1.00	1737	127.0			X																										
W10	1.00	1741				X																										
W10A	1.00	1746	115.0			X																										
W10D	1.00	1750				X																										
W10DA	1.00	1755	116.5			X																										
W11D	1.00	1759				X																										
W11DA	1.00	1804	99.5			X																										
ZZZZZZ	1.00	1808																														
ZZZZZZ	1.00	1812																														

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ANALYSIS RUN LOG

Lab Name: SOUTHWEST_LAB_OF_OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.:W8

Instrument ID Number: VAR400B Method: F

Start Date: 04/08/93 End Date: 04/08/93

EPA Sample No.	D/F	Time	% R	AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV	1.00	1817				X																					
CCB	1.00	1821				X																					

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ANALYSIS RUN LOG

Lab Name: SOUTHWEST LAB OF OK Contract: _____

Lab Code: SWOK Case No.: 13136 SAS No.: _____ SDG No.: W8

Instrument ID Number: VAR400B Method: F

Start Date: 04/08/93 End Date: 04/09/93

EPA Sample No.	D/F	Time	% R	Analytes
				ALB SB SA BA BE BD CA CR CO CU CE FB PB MG MN HG NI K SE AG AN AL TV ZN CN
S0	1.00	2345		X
S10	1.00	2350		X
S20	1.00	2357		X
S50	1.00	0002		X
S100	1.00	0008		X
ICV	1.00	0014		X
ICB	1.00	0020		X
CRA	1.00	0026		X
CRA	1.00	0032		X
CCV	1.00	0038		X
[illegible]B	1.00	0043		X
[illegible]W	1.00	0049		X
PBWA	1.00	0055	103.5	X
ZZZZZZ	1.00	0101		
ZZZZZZ	1.00	0107		
ZZZZZZ	1.00	0113		
ZZZZZZ	1.00	0119		
ZZZZZZ	1.00	0125		
ZZZZZZ	1.00	0131		
ZZZZZZ	1.00	0137		
ZZZZZZ	1.00	0143		
CCV	1.00	0149		X
CCB	1.00	0155		X

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ANALYSIS RUN LOG

Lab Name: SOUTHWEST LAB OF OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.: W8

Instrument ID Number: TJA22A Method: F

Start Date: 04/08/93 End Date: 04/08/93

EPA Sample No.	D/F	Time	% R	Analytes
				ALBSASBABECDCACRCOCUFEPBMGMNHGNIKSEAGNATLVZNCCN
SO	1.00	1823		X
SS	1.00	1827		X
SSO	1.00	1831		X
SS2	1.00	1835		X
SS5	1.00	1839		X
ICV	4.00	1853		X
ICB	1.00	1857		X
CRA	1.00	1901		X
CCV	1.00	1904		X
CCB	1.00	1908		X
[illegible]W	1.00	1912		X
[illegible]WA	1.00	1916	114.5	X
LCSW	1.00	1920		X
LCSWA	1.00	1924	115.1	X
W8	1.00	1928		X
W8A	1.00	1932	104.0	X
W9	1.00	1936		X
W9A	1.00	1940	99.1	X
ZZZZZZ	1.00	1944		
ZZZZZZ	1.00	1948		
CCV	1.00	1952		X
CCB	1.00	1955		X
W10	1.00	1959		X
W10A	1.00	2003	102.8	X
W10D	1.00	2007		X
W10DA	1.00	2011	93.6	X
W11D	1.00	2015		X
W11DA	1.00	2019	103.6	X
ZZZZZZ	1.00	2023		
ZZZZZZ	1.00	2027		
ZZZZZZ	1.00	2031		
CCV	1.00	2035		X

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ANALYSIS RUN LOG

Lab Name: SOUTHWEST_LAB_OF_OK______ Contract: __________

Lab Code: SWOK__ Case No.: 13136_ SAS No.: ______ SDG No.:W8______

Instrument ID Number: TJA22A______ Method: F_

Start Date: 04/08/93 End Date: 04/08/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB	1.00	2039													X												

FORM XIV - IN ILM02.1

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ANALYSIS RUN LOG

Lab Name: SOUTHWEST_LAB_OF_OK Contract:

Lab Code: SWOK Case No.: 13136 SAS No.: SDG No.:W8

Instrument ID Number: LEEMAN Method: AV

Start Date: 04/09/93 End Date: 04/09/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1104																X									
S0.2	1.00	1106																X									
S1	1.00	1109																X									
S5	1.00	1111																X									
S10	1.00	1114																X									
ICV	1.00	1117																X									
ICB	1.00	1120																X									
CCV	1.00	1122																X									
CCB	1.00	1125																X									
ZZZZZZ	1.00	1127																									
ZZZZZZ	1.00	1130																									
ZZZZZZ	1.00	1132																									
ZZZZZZ	1.00	1135																									
ZZZZZZ	1.00	1137																									
ZZZZZZ	1.00	1140																									
ZZZZZZ	1.00	1142																									
ZZZZZZ	1.00	1144																									
ZZZZZZ	1.00	1147																									
ZZZZZZ	1.00	1149																									
CCV	1.00	1151																X									
CCB	1.00	1154																X									
ZZZZZZ	1.00	1157																									
ZZZZZZ	1.00	1159																									
ZZZZZZ	1.00	1201																									
ZZZZZZ	1.00	1204																									
ZZZZZZ	1.00	1206																									
PBW	1.00	1208																X									
W8	1.00	1211																X									
W9	1.00	1213																X									
W10	1.00	1215																X									
W10D	1.00	1218																X									
CCV	1.00	1220																X									

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ANALYSIS RUN LOG

Lab Name: SOUTHWEST_LAB_OF_OK

Contract:

Lab Code: SWOK

Case No.: 13136

SAS No.:

SDG No.: W8

Instrument ID Number: LEEMAN

Method: AV

Start Date: 04/09/93

End Date: 04/09/93

EPA Sample No.	D/F	Time	% R	AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB	1.00	1223																X									
W11D	1.00	1225																X									
ZZZZZZ	1.00	1228																									
ZZZZZZ	1.00	1230																									
ZZZZZZ	1.00	1232																									
ZZZZZZ	1.00	1234																									
ZZZZZZ	1.00	1237																									
ZZZZZZ	1.00	1239																									
ZZZZZZ	1.00	1242																									
ZZZZZZ	1.00	1244																									
ZZZZZZ	1.00	1247																									
CCV	1.00	1249																X									
CCB	1.00	1252																X									

BURLINGTON ENVIRONMENTAL

210 West Sand Bank Road
P.O Box 330
Columbia, IL 62236-0330
618/281-7173
618/281-5120 FAX

CHAIN-OF-CUSTODY RECORD

C.O.C. SERIAL NO. 6207

PROJECT NAME: WOODS INDUSTRIES
PROJECT NUMBER: 12883088 MAJOR TASK: 7713
SAMPLERS: J.W. DOLAN, W.V. GOODHUE
LAB DESTINATION: SOUTHWEST LABS, OK

SAMPLE NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	TYPE OF ANALYSIS: HERBICIDES/ACIDS	PESTICIDES	METALS	VOA's				PRESERVATIVES: ICED	PRESERVATIVES: CHEMICALS ADDED	REMARKS (CHEMICAL ANALYSIS REQUEST FORM NUMBER IF APPLICABLE)
W8 3-4/93	4/2/93	1050		X	W8	7	X	X	X	X				X	X	HCL TO VOA's, HNO_3 TO METALS
W9 3-4/93		0945		X	W9	7	X	X	X	X				X	X	
W10 3-4/93		0810		X	W10	7	X	X	X	X				X	X	
W10D 3-4/93		0810		X	W10	7	X	X	X	X				X	X	
W11D 3-4/93		0900		X	W11D	7	X	X	X	X				X	X	
						35										

RELINQUISHED BY

SIGNATURE	DATE	TIME
William J. Faucher	4/2/93	1330

RECEIVED BY

SIGNATURE	DATE	TIME
K Sollis	4/3/93	0845

SHIPPING NOTES

LAB NOTES: FULL CLP REQUIRED ON ALL SAMPLES

BE-34 (1/92)

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

Certificate of Analysis

CLIENT: Burlington Environmental
210 West Sand Bank Road
P.O. Box 330
Columbia, IL 62236-0330
ATTN : David Eagleton

Work Order# : 93-06-128
DATE RECEIVED : 06/04/93
DATE OF REPORT: 06/15/93

Work ID : _
Taken By : Client
Transported by: Courier
Type : Material

SAMPLE IDENTIFICATION:

	Sample Description	Collection Date
01	Pell-1	06/02/93

COMMENTS ON ANALYSIS OF SAMPLE 9306128-01 (CLIENT SAMPLE ID: PELL-1)

One pellet of material weighing 0.11 grams was dissolved in 10 ml of 1:1 methylene chloride/acetone. An aliquot of this extract was diluted 1:20 and analyzed by GC/MS. From this analysis, pentachlorophenol and a trace amount of 2,3,4,5-tetrachlorophenol were detected. The estimated amount of pentachlorophenol detected was 160,000 ppm (16 percent).

It was noted upon examination of the sample material that no discernible smell was present until after it was dissolved in solvent. This would seem consistent with the tentative identification of the material (pentachlorophenate) which was made by field personnel. Pentachlophenol present as a salt would not be expected to have the odor characteristic of phenols in general (i.e., sweet and very strong-smelling). However, dissolving the pellet in solvent most likely converted some or all of the pentachlorophenate present into the free acid, pentachlorophenol, which then yielded a more typical smell.

APPLIED SCIENCE

1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX (509) 452-1265

Chemistry, Microbiology, and Technical Services

CLIENT : Burlington Environmental

Certificate of Analysis

Work Order# : 93-06-128

Unless otherwise instructed all samples will be discarded on 07/30/93

Respectfully submitted,
TR Applied Science, Inc.

Tamis Root
Manager

L

APPENDIX L

Analysis on Pentachlorophenate-Containing Material