US EPA RECORDS CENTER REGION 5
407268

SPECIAL STUDY REPORT
FOR
U.S. SCRAP
CHICAGO, ILLINOIS

U.S. EPA ID: ILD980679484
SS ID: ILZ8
TDD: F05-8611-193
PAN: FIL0102VA

VOLUME 2 OF 6

OCTOBER 10, 1990

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

recycled paper

TABLE OF CONTENTS

VOLUME 2

Appendix		Page
A	BORING LOGS AND WELL CONSTRUCTION DETAILS FOR MONITORING WELLS AND TEST PIT LOGS (STS)	A-1
B	ANALYTICAL RESULTS OF SUBSURFACE SOIL SAMPLES, GROUNDWATER MONITORING WELL SAMPLES, AND TEST PIT AND SURFACE WASTE SAMPLES (STS)	B-1
C	ANALYTICAL RESULTS OF FIT-COLLECTED SURFACE WATER/ LEACHATE SAMPLES 1983	C-1
D	LOCATION OF METROPOLITAN SANITARY DISTRICT BENCHMARKS	D-1
E	FIT BORING LOG DESCRIPTIONS AND WELL CONSTRUCTION DETAILS	E-1
F	FIT-COLLECTED MAGNETOMETRY SURVEY DATA	F-1
G	FIT TEST PIT LOGS	G-1
H	LOGS OF ABANDONED PRODUCTION WELLS	H-1
I	ANALYTICAL RESULTS OF FIT-COLLECTED SAMPLES 1987-1988	I-1

A

APPENDIX A

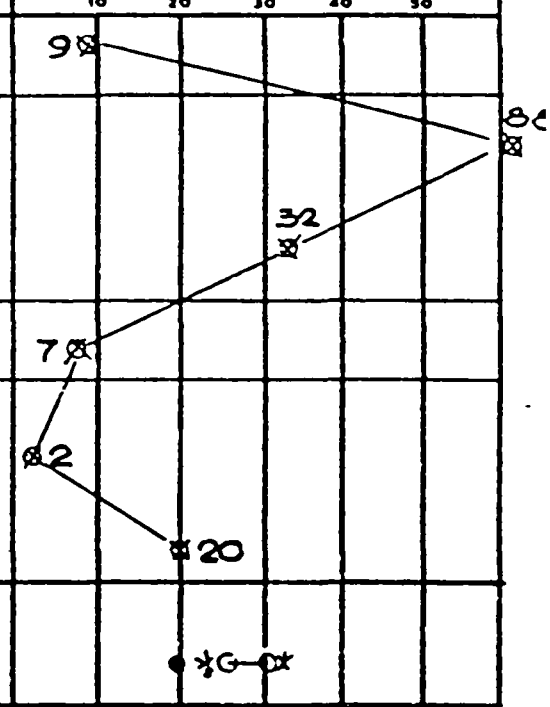
BORING LOGS AND WELL CONSTRUCTION DETAILS FOR MONITORING WELLS AND TEST PIT LOGS (STS)

OWNER	LOG OF BORING NUMBER
Illinois Attorney General	G-101
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	

SITE LOCATION
Lake Calumet Area, Chicago, Illinois

UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1, 2, 3, 4, 5)
PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % (10, 20, 30, 40, 50)
STANDARD PENETRATION BLOWS/FT (10, 20, 30, 40, 50)

ELEVATION / DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL (SURFACE ELEVATION +15.7 CCD)	UNIT DRY WT. LBS./FT.³
	1	SS PA			Silty clay fill, trace gravel, sand & roots -brown, gray & black (CL-Fill)	
5.0	2	SS PA			Tar-like material, trace wood fragments -black- saturated (Fill) Strong organic odor	
	3	SS PA			Tar-like material (sludge) -black- saturated (Fill) Strong turpentine-type odor (Geologist's observation)	
10.0	4	SS PA			Tar-like material (sludge) mixed with rusty brown cinders & gravel - black & rusty brown- saturated (Fill)	
	5	SS PB				
15.0		PB			Silty clay, trace gravel, sand and shale -gray- very stiff (CL) Slight sweet odor	
17.0	6	ST				111



END OF BORING

*CALIBRATED PENETROMETER

Casing used: 10' of 4"

NOTE: See "Well Detail - G-101" for monitoring well characteristics

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES: IN-SITU THE TRANSITION MAY BE GRADUAL

WL 2'	WD	BORING STARTED 6/22/81	SOIL TESTING SERVICES, INC.
WL BCR	ACR	BORING COMPLETED 6/22/81	111 PFINGSTEN ROAD

OWNER	LOG OF BORING NUMBER
Illinois Attorny General	G-102
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	

SITE LOCATION
Lake Calumet Area, Chicago, Illinois

UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1, 2, 3, 4, 5)
PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % (10, 20, 30, 40, 50)
STANDARD PENETRATION BLOWS/FT (10, 20, 30, 40, 50)

ELEVATION / DEPTH	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	STANDARD PENETRATION BLOWS/FT
					SURFACE ELEVATION +18.2 CCD		
	1	SS			"A" Little gravel (Fill) Paint sludge		16
	2	SS					9/6" 16
5.0	3	SS			Sand and cinder fill -black- medium dense (SP-Fill)		13
	4	SS			Silty clay, trace gravel & sand - light brown- stiff (CL)		5/6" 6 11
10.0	5	SS					25
	6	SS			Silty clay, trace gravel, sand and shale -brown & gray- very stiff to hard (CL)		26
		RB					
	7	SS			Silty clay, trace gravel, sand and shale -gray- hard (CL)		51
15.0		RB					

END OF BORING

"A" - Clayey topsoil, trace sand & roots -dark brown (OH-Fill)

Casing used: 10' of 4"

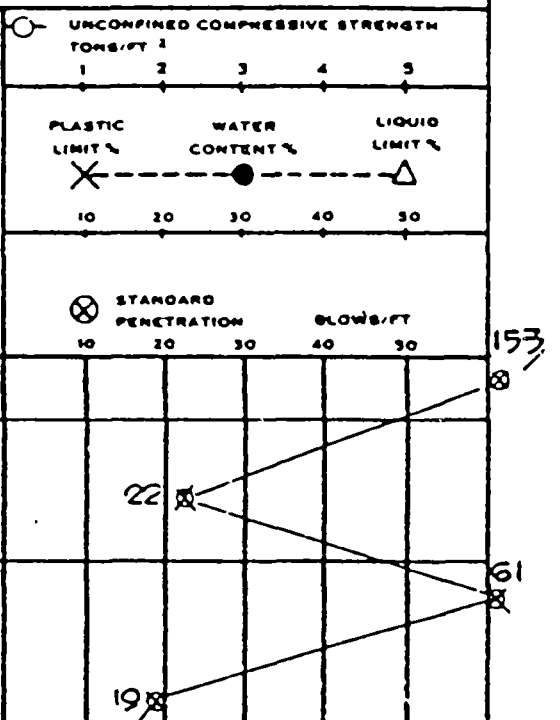
NOTE: Consistency of clay based upon Standard Penetration Tests.
See "Well Detail - G-102" for monitoring well characteristics.

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES; IN SITU, THE TRANSITION MAY BE GRADUAL

WL 1.5' WS XXXX	BORING STARTED 6/24/81	SOIL TESTING SERVICES, INC.
WL BCR ACR	BORING COMPLETED 6/24/81	111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062

OWNER	LOG OF BORING NUMBER
Illinois Attorney General	G-103
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	
SITE LOCATION	
Lake Calumet Area, Chicago, Illinois	

ELEVATION / DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
					SURFACE ELEVATION +13.7 CCD	
	1	SS			Miscellaneous fill material -dark & light brown- extr. dense (Fill)	
		RB			No noticeable odor	
	2	SS			Gravelly fill with wood fragments - gray- medium dense (Fill)	
5.0		RB				
	3	SS			Granular fill saturated with fluid having a strong organic odor -black- very dense to extr. dense (Fill)	
		RB				
	4	SS				
10.0		RB				
	5	SS			Silty clay, trace gravel, sand and shale -brown & gray with dk. gray spots - very stiff (CL) Strong chemical odor	
		RB				
	6	ST			$K = 1 \times 10^{-8}$ cm/sec	107
15.0		RB				
	7	ST			Silty clay, trace gravel, sand and shale -brown & partly gray- hard (CL-CH)	109
		RB				
	8	ST				105
20.0		RB			Silty clay, trace gravel, sand and shale -gray & little brown- very stiff (CL) $K = 3 \times 10^{-7}$ cm/sec	
22.0	9	ST				111



END OF BORING

*CALIBRATED PENETROMETER

NOTE: See "Well Detail - G-103" for monitoring well characteristics

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES; IN-SITU THE TRANSITION MAY BE GRADUAL

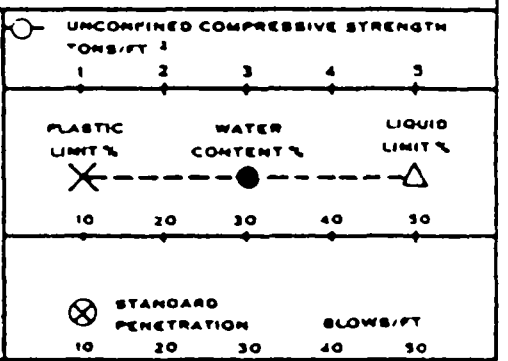
WL	WS or WD	BORING STARTED 6/25/91	SOIL TESTING SERVICES, INC.
WL	BCR	ACR	BORING COMPLETED 6/26/91	111 PFINGSTEN ROAD

OWNER	LOG OF BORING NUMBER
Illinois Attorney General	G-104
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	

SITE LOCATION

Lake Calumet Area, Chicago, Illinois

ELEVATION / DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL (SURFACE ELEVATION +15.7 CCD)	UNIT DRY WT. LBS/FT³
	1	SS			"A"	
	1A				"B"	
	1B				Tar-like material (sludge),-trace gravel, wood & brick (Fill) Strong paint odor	
	2	SS				
		PA			Sandy & gravelly fill material, trace brick & wood -black & gray- very dense (Fill) Strong paint odor (pH = 9 to 10)	
5.0						
	3	SS				
		PA			Sandy tar-like fill material -black & gray- med. dense - saturated at 6 ft (Fill) Strong turpentine odor	
	4	SS				
10.0		PA				
	5	SS			Silty clay, trace gravel & sand - brown & gray- very stiff (CL) Slight paint odor - Consistency based on Standard Penetration Test	
		RB				
		RB			Silty clay, trace gravel, sand and shale -gray- very stiff (CL)	
15.0						
	6	SS				111
17.0						



END OF BORING

*CALIBRATED PENETROMETER

"A" - Clayey topsoil, trace wood, slag & paint residue (Fill) Paint-like odor

"B" - Sandy and gravelly fill material (Fill) Strong paint-like odor (pH = 8 to 9)

Casing used: 10' of 4"

NOTE: See "Well Detail - G-104" for monitoring well characteristics.

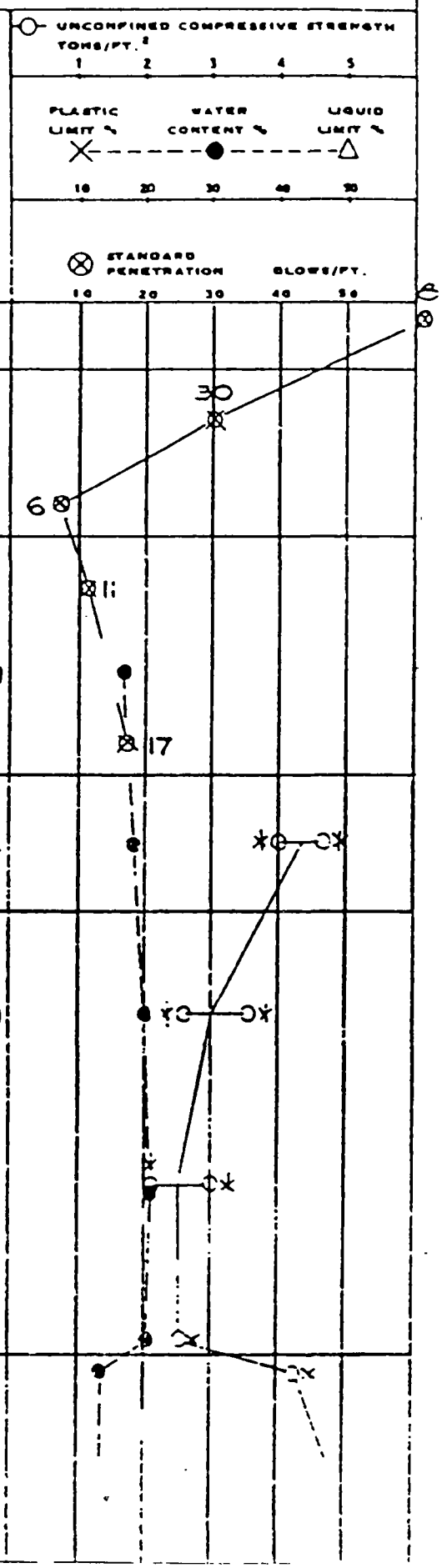
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES; IN SITU THE TRANSITION MAY BE GRADUAL

WL 5' WS WD	BORING STARTED 6/22/81	SOIL TESTING SERVICES, INC. 111 PRINGSTEN ROAD NORTHBROOK ILLINOIS 60062
WL BCR ACR	BORING COMPLETED 6/22/81	

OWNER	LOG OF BORING NUMBER
Illinois Attorney General	G-105
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	

SITE LOCATION
Lake Calumet Area, Chicago, Illinois

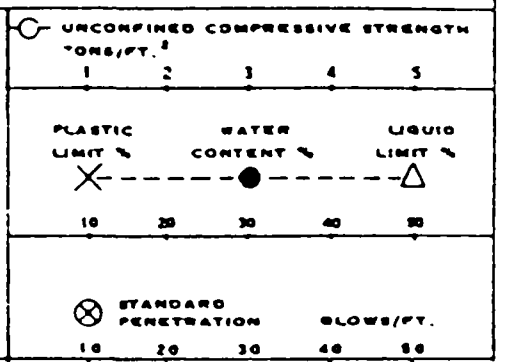
ELEVATION / DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
					SURFACE ELEVATION +15.2 CCD	
	1	SS RB			Cinder fill, little gravel -black- very dense (Fill) Strong paint odor	
5.0	2	SS RB			Brick fill, little clayey topsoil -red & black- (Fill) Strong paint odor	
	3	SS RB				
10.0	4	SS RB			Sandy clay, little silt -brown and gray- stiff (CL) Moderate paint odor. NOTE: Consistency based on Standard Penetration Test	
	5	ST FT				119
	6	ST FT				
15.0	7	ST FT			Silty clay, trace gravel, sand and shale -brown & gray- hard (CL)	114
20.0	8	ST FT			Silty clay, trace gravel, sand and shale -gray- very stiff (CL)	110
25.0	9	ST FT				109
30.0	10	ST				
	10A	FT			Silty clay, little sand, trace gravel & shale -gray- hard (CL)	128
35.0	11	ST				
37.0						



Continued on Next Page

OWNER	LOG OF BORING NUMBER
Illinois Attorney General	G-105 (cont.)
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	
SITE LOCATION	
Lake Calumet Area, Chicago, Illinois	

ELEVATION / DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT LBS/FT.³
37.0					Continued from Previous Page	
40.0		FT			Silty clay, little sand, trace gravel & shale -gray- hard (CL)	
	12	ST			K = 2 X 10^{-8} cm/sec	
45.0		FT				
	13	ST				125
50.0		FT				
	14	SS				
55.0		FT				
	15	SS				
60.0		FT				
	k6	SS			Clayey silt, trace gravel, sand and shale -gray- extr. dense - moist (ML)	
65.0		FT				
	17	SS			Broken bedrock and/or boulders. NOTE: Revert used at 66 ft to stop cave-in.	
66.0		RB			Limestone bedrock	
					END OF BORING	
					Continued on Next Page	



*CALIBRATED PENETROMETER

OWNER	LOG OF BORING NUMBER
Illinois Attorney General	G-105 (cont.)
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	

SITE LOCATION
Lake Calumet Area, Chicago, Illinois

ELEVATION / DEPTH	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT. LBS./FT³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5) / PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % (10 20 30 40 50) / STANDARD PENETRATION BLOWS/FT (10 20 30 40 50)
					Continued from Previous Page		
					NOTE: See "Well Detail - G-105" for monitoring well characteristics Obstruction encountered at 1.5 ft. Boring offset 4 ft north		
					Casing used: 10' of 4"		

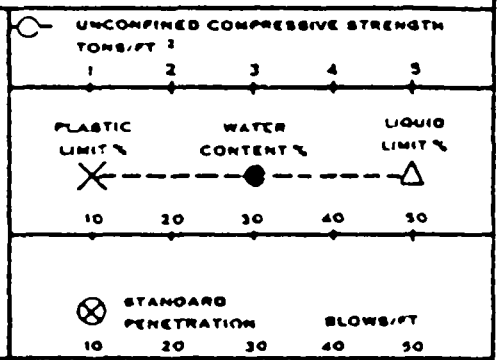
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES; IN-SITU THE TRANSITION MAY BE GRADUAL

WL 6'	WS or WD	BORING STARTED 6/23/81	SOIL TESTING SERVICES, INC.
WL	BCR	ACR	BORING COMPLETED 6/23/81	111 PFINGSTEN ROAD

OWNER	LOG OF BORING NUMBER
Illinois Attorney General	G-106
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	

SITE LOCATION
Lake Calumet Area, Chicago, Illinois

ELEVATION / DEPTH	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS/FT³
					SURFACE ELEVATION +9.9 CCD	
	1	SS			Granular fill -black (Fill)	
	1A				Med. to coarse sand -rust (SP)	
	2.	SS			"A"	
	2A				Med. to coarse sand -rust (SP)	
5.0	3	ST				110
	4	ST			Silty clay, trace gravel, sand, shale & gypsum crystals -brown & gray- stiff to very stiff (CL)	
		PA				
	5	SS				
	5A				Silty clay, trace gravel, sand and shale -gray- very stiff (CL)	
10.0		PA				
	6	ST			K = 3 X 10^{-8} cm/sec	113
		PA				
	7	ST				107
14.5						



END OF BORING

*CALIBRATED PENETROMETER

"A" - Silty clay, little topsoil -brown, gray and black (CL)

NOTE: See "Well Detail -G-106" for monitoring well characteristics

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES; IN-SITU THE TRANSITION MAY BE GRADUAL

WL 2'	WS	WD	BORING STARTED 6/26/81
WL	BCR	ACR	BORING COMPLETED 6/26/81

SOIL TESTING SERVICES, INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

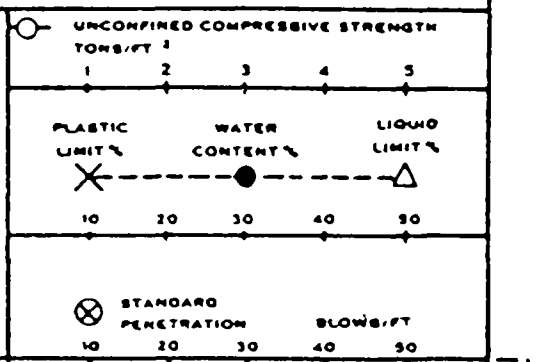
OWNER	LOG OF BORING NUMBER
Illinois Attorney General	G-132
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	

SITE LOCATION

Lake Calumet Area, Chicago, Illinois

ELEVATION / DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS./FT³
					SURFACE ELEVATION +19.8 CCD	
	1	SS			Sandy & gravelly fill (crushed stone) -lt. gray- medium dense to very dense (Fill) Very high pH level	
	2	SS				
5.0	3	SS			Wood - no sample recovered	
	4	SS				
	4A				Clayey fill, trace gravel, sand and wood -black & gray- very stiff - Very strong paint odor	
	5	SS				
	5A					
10.0					Oily cinder fill -black- medium dense - saturated with oil	
	6	SS				
		PB				
	7	SS			Silty organic clay -black- stiff to very stiff (OH)	
	7A					
15.0		PB				
	8	SS			Silty clay, trace gravel, sand and shale -brown & gray- very stiff (CL)	
		PB				
	9	SS				
20.0		PB			Silty clay, trace gravel, sand and shale -gray- hard (CL)	
	10	SS				
		PB				
	11	SS				
25.0					END OF BORING	

NOTE: Obstruction encountered at 4.5 ft. Boring reset 5 ft south. Consistencies of clay based on Standard Penetration Test. See "Well Detail -G-132" for monitoring well characteristics.



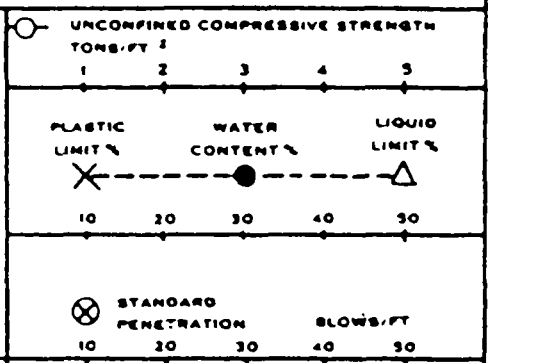
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES, IN-SITU THE TRANSITION MAY BE GRADUAL.

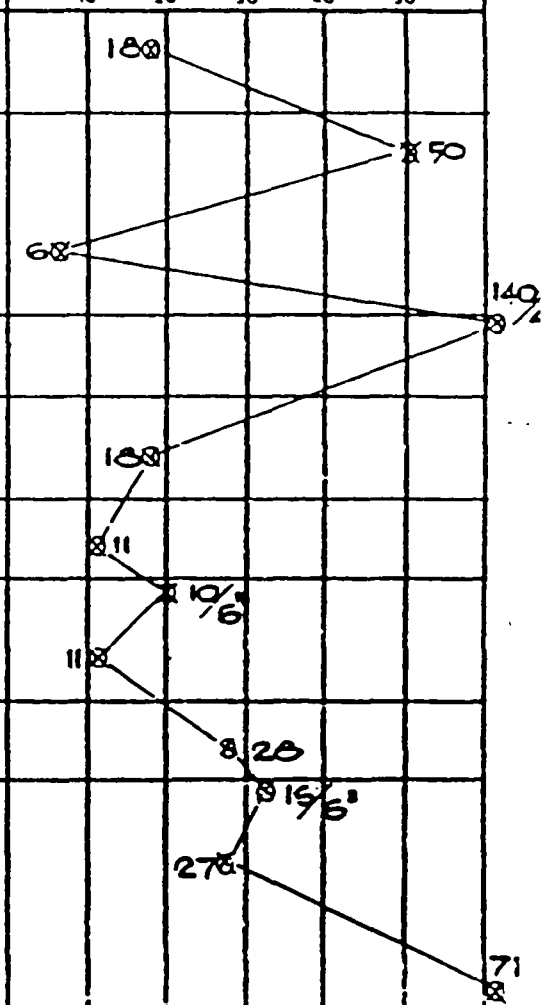
WL	WS or WD	BORING STARTED 6/25/81	SOIL TESTING SERVICES, INC
WL BCR	ACR	BORING COMPLETED 6/25/81	111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062

OWNER	LOG OF BORING NUMBER
Illinois Attorney General	G-133
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	

SITE LOCATION
Lake Calumet Area, Chicago, Illinois

ELEVATION / DEPTH	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS/FT³
					SURFACE ELEVATION +17.4 CCD	
	1	SS			Clayey topsoil, little wood, trace roots -dk. brown (OH-Fill)	
		RB				
	2	SS			Saturated wood fragments -black- (Fill) Sample 3: not recovered	
5.0		RB				
	3	SS				
		RB			Gravel fill -light gray- extr. dense - saturated (GP-Fill) Very high pH level	
	4	SS				
		RB				
10.0		RB			Sandy clay fill (slightly tar-like), trace wood, gravel & roots -black- very stiff (Fill) Paint odor	
	5	SS				
		RB				
	6	SS			Silty clay, trace gravel, sand and shale -brown, gray & black- stiff to very stiff (CL) Paint odor	
15.0		RB				
	7	SS			Silty clay, trace gravel, sand and shale -grayish brown- stiff (CL) Slight paint odor	
		RB				
	8	SS			Silty clay, trace gravel, sand and shale -grayish brown- very stiff to hard (CL)	
20.0		RB				
	9	SS			Silty clay, trace gravel, sand and shale -brownish gray- very stiff to hard (CL)	
		RB				
	10	SS				
25.0					END OF BORING	





NOTE: Consistencies of clay based on Standard Penetration Tests
See "Well Detail - G-133" for monitoring well characteristics.

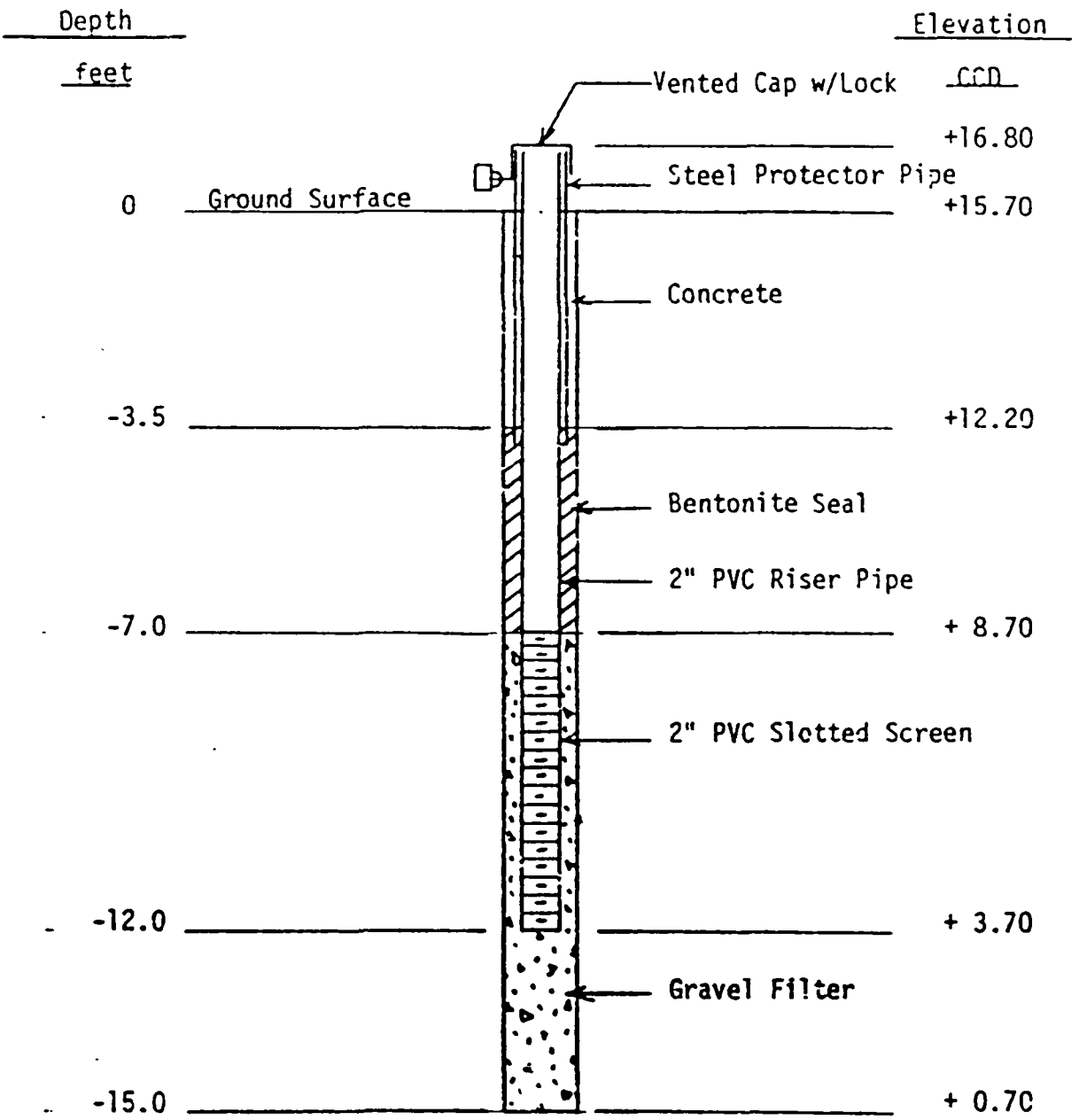
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN SITU THE TRANSITION MAY BE GRADUAL.

WL 3.2 WS or WD XXX	BORING STARTED 6/24/81	SOIL TESTING SERVICES, INC.
WL BCR ACR	BORING COMPLETED 6/24/81	111 PRINCETON ROAD NORTHBROOK ILLINOIS 60062

SOIL TESTING SERVICES, INC.	DATE 7/27/81	PAGE ___ OF ___
CLIENT Illinois Attorney General STS JOB NO 22063	BY MGS	CHK

WELL DETAIL

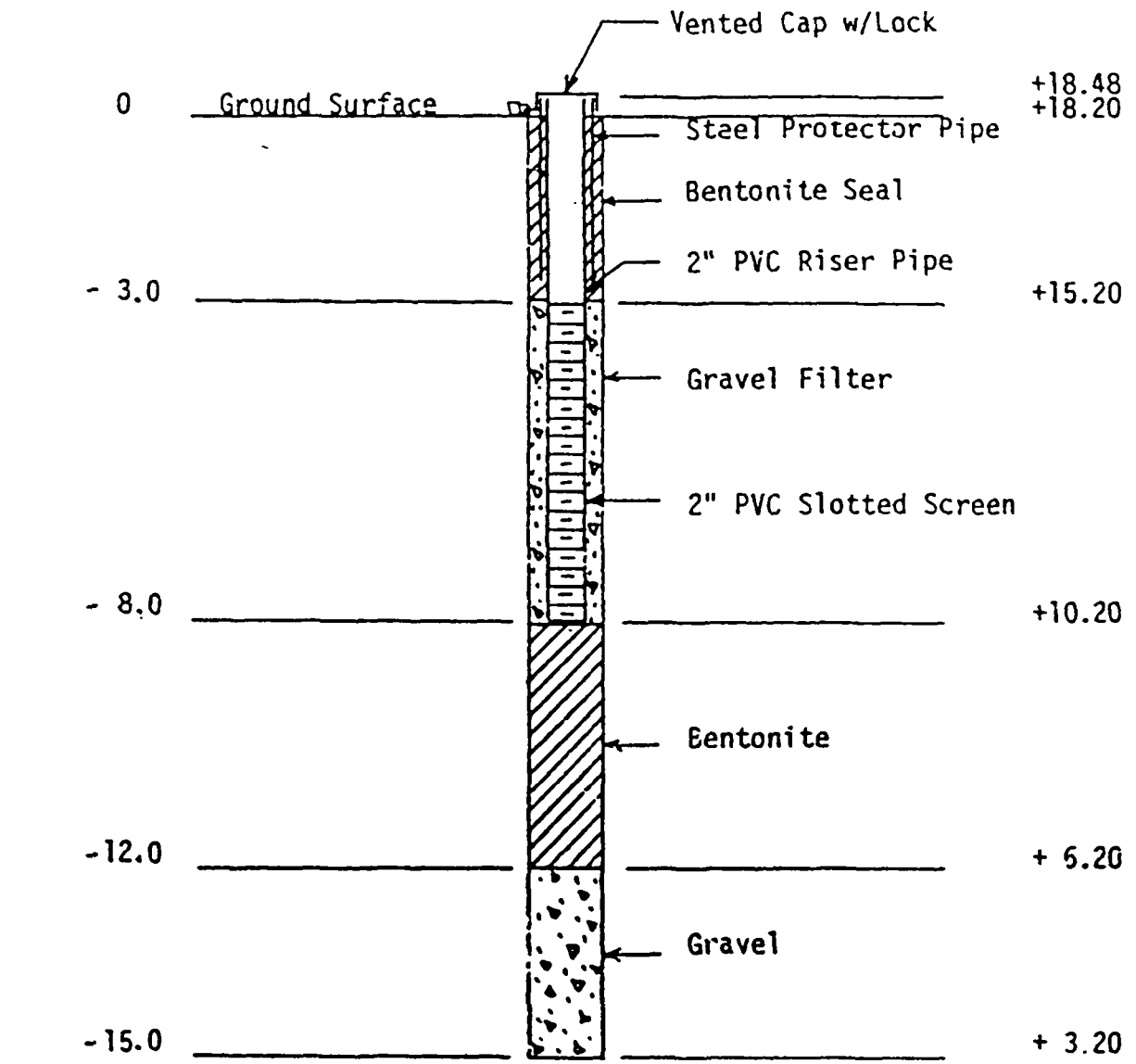
G-101



SOIL TESTING SERVICES, INC.	DATE 7/27/81	PAGE ___ OF ___
CLIENT Illinois Attorney General STS JOB NO 22063	BY MGS	CHK

WELL DETAIL

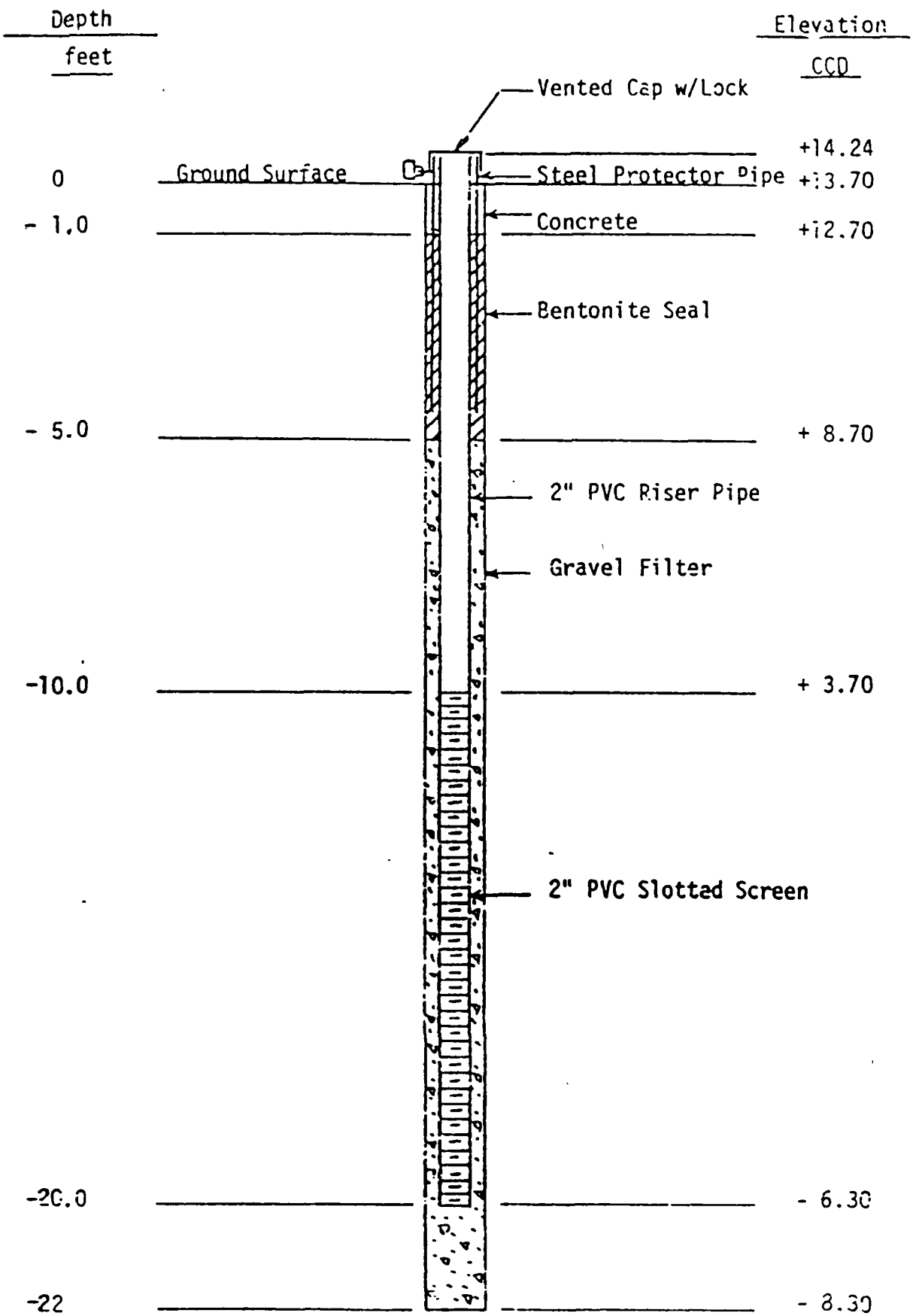
G-102



SOIL TESTING SERVICES, INC.	DATE 7/27/91	PAGE ___ OF ___
CLIENT Illinois Attorney General STS JOB NO 22063	BY MGS	CHK

WELL DETAIL

G-103

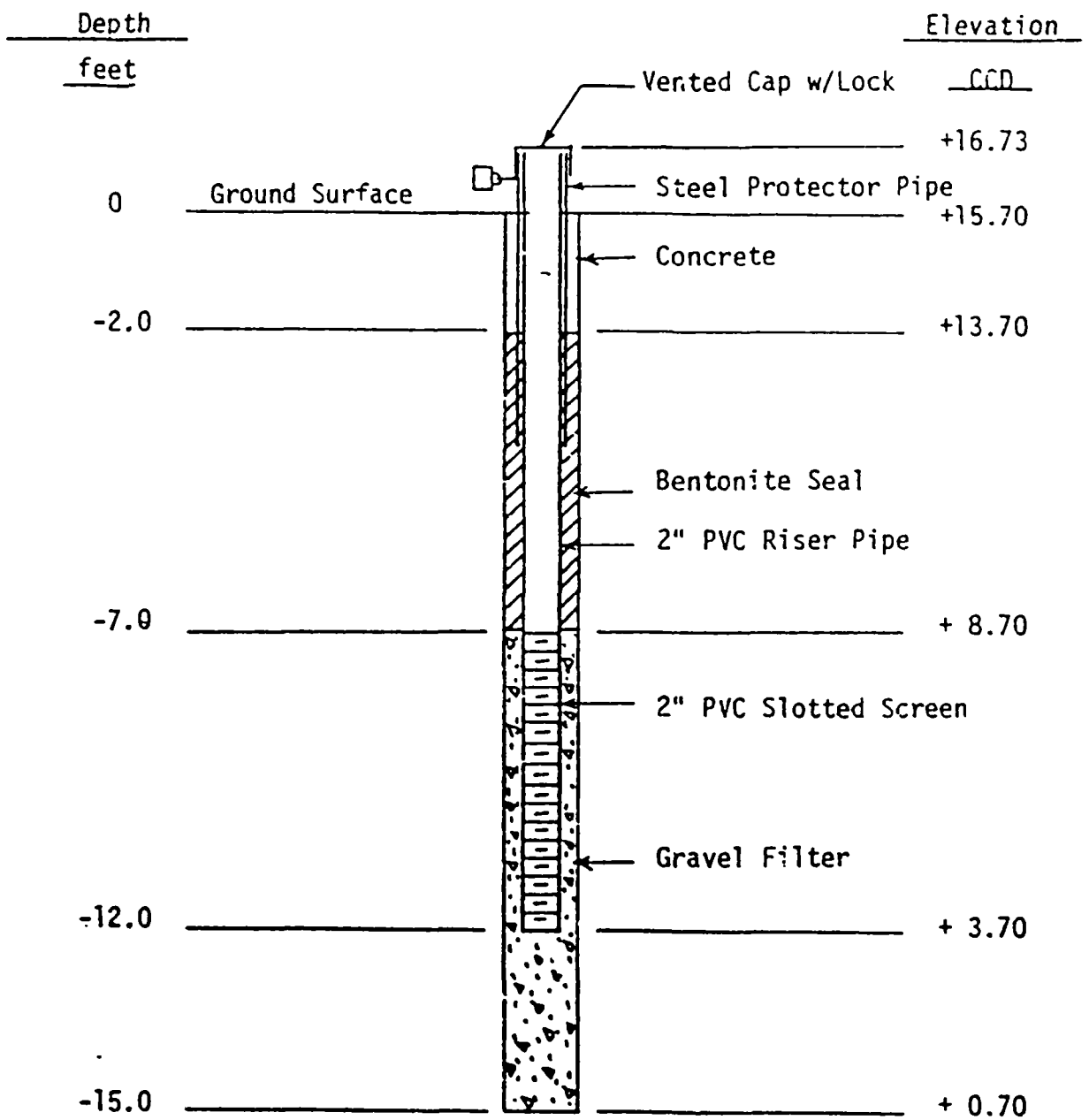


SOIL TESTING SERVICES, INC.

CLIENT Illinois Attorney General STS JOB NO 22063	DATE 7/27/81	PAGE ___ OF ___
	BY MGS	CHK ___

WELL DETAIL

G-104



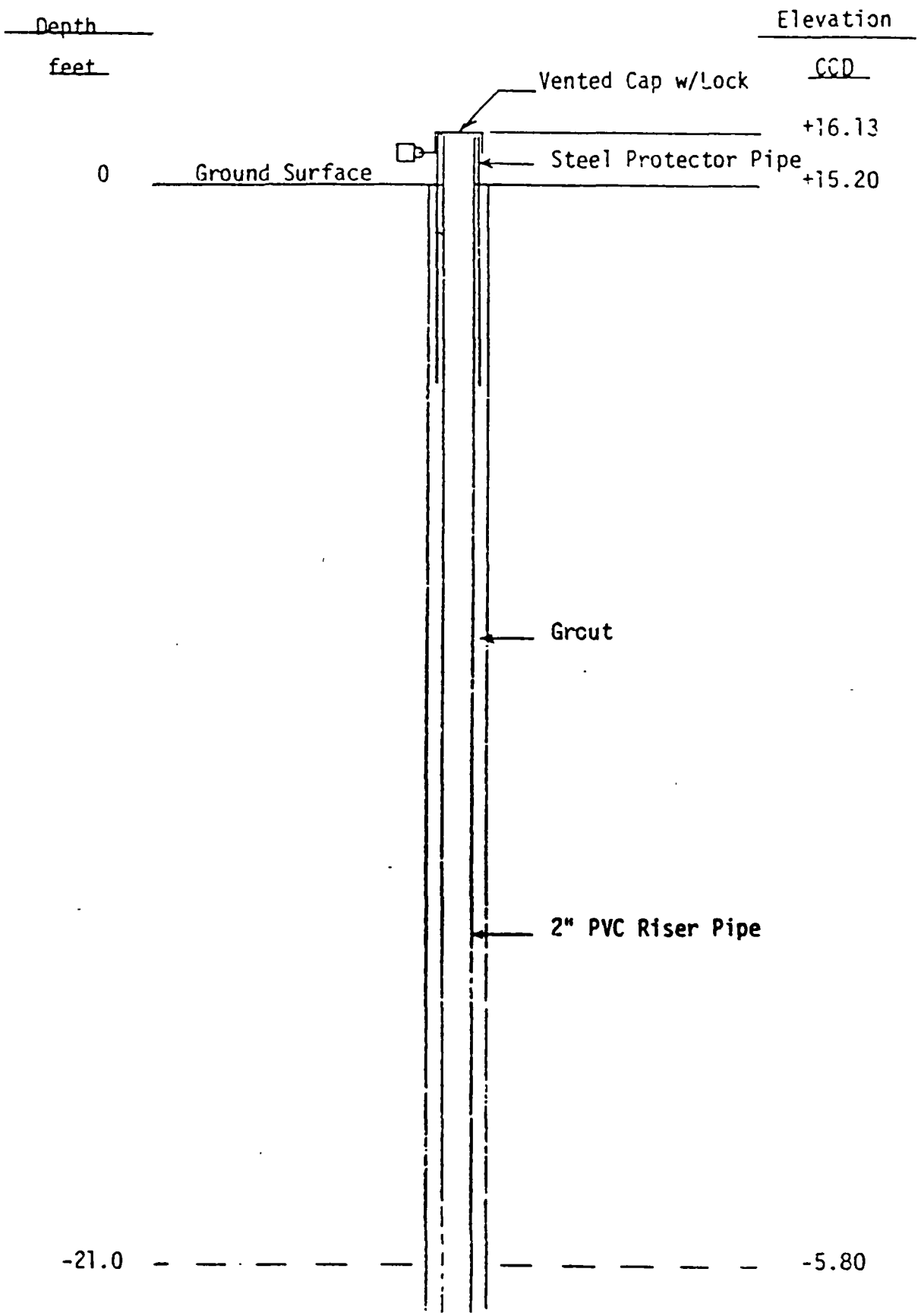
SOIL TESTING SERVICES, INC.

DATE 7/27/81	PAGE ___ OF ___
BY MGS	CHK

CLIENT Illinois Attorney General STS JOB NO 22063

WELL DETAIL

G-105

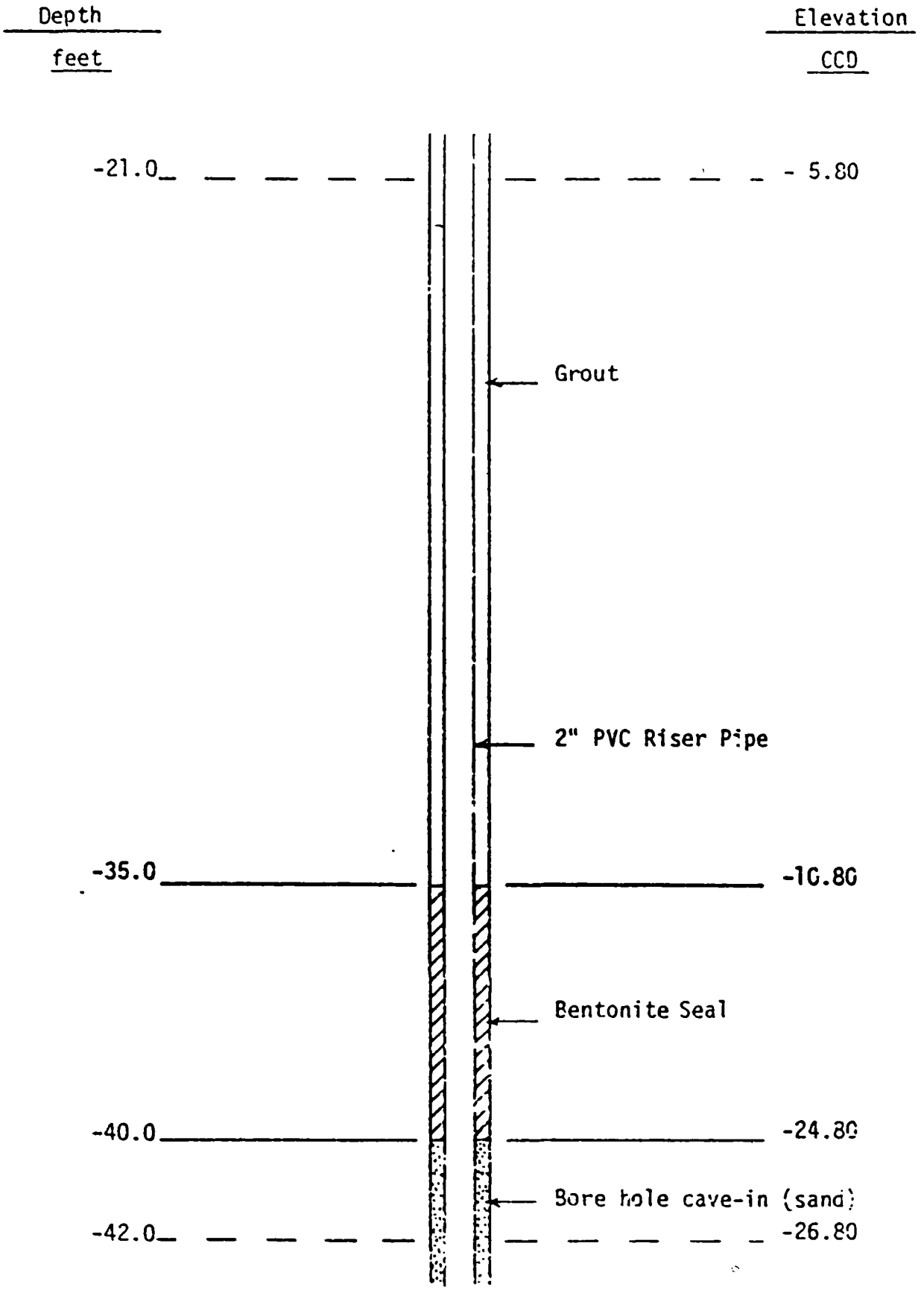


SOIL TESTING SERVICES, INC.

DATE 7/27/81	PAGE ___ OF ___	
CLIENT Illinois Attorney General	STS JOB NO 22063	BY MGS	CHK ___

WELL DETAIL (cont.)

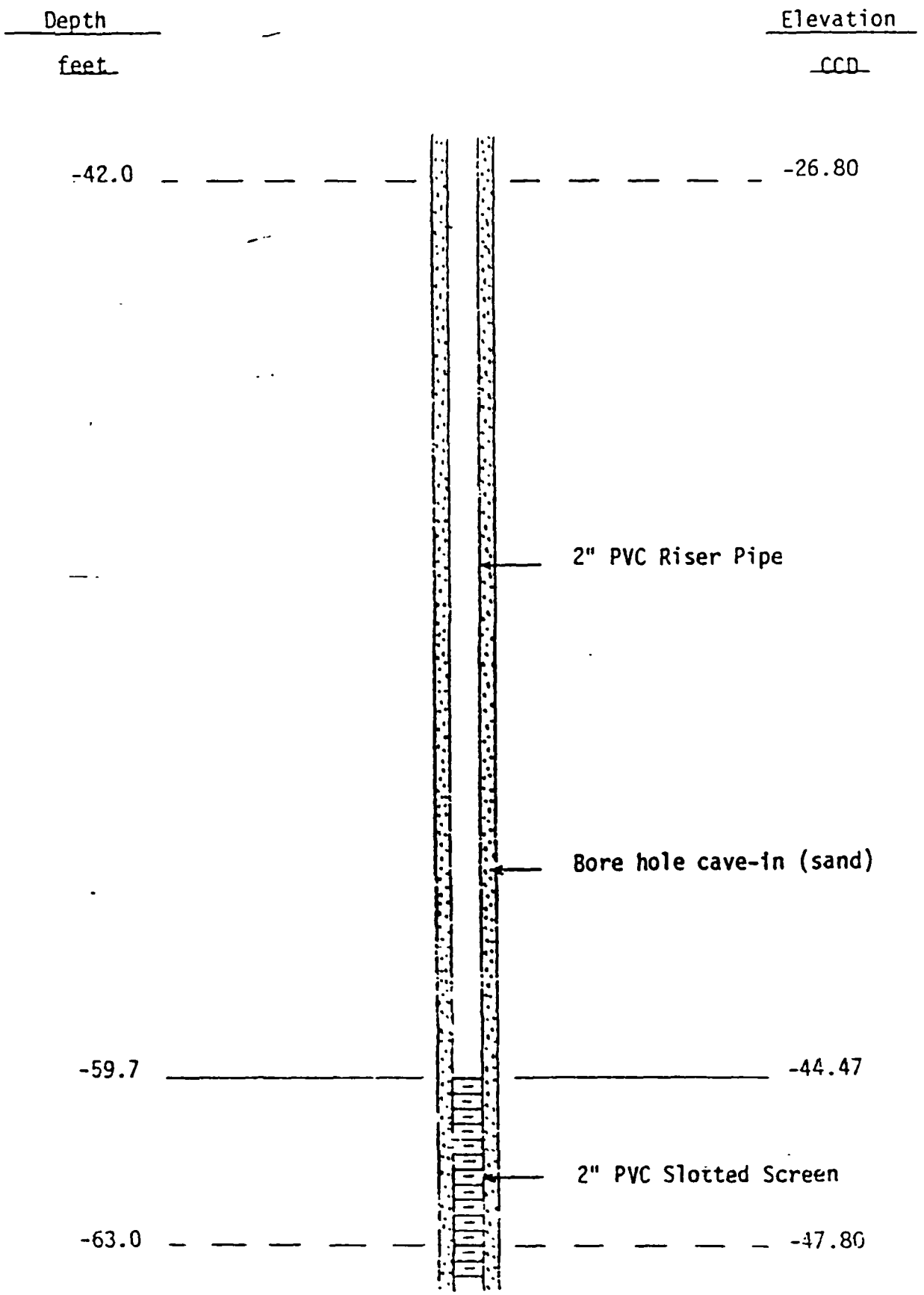
G-105



SOIL TESTING SERVICES, INC.	DATE 7/27/81	PAGE ___ OF ___
CLIENT Illinois Attorney General STS JOB NO 22063	BY MGS	CHK

WELL DETAIL (cont.)

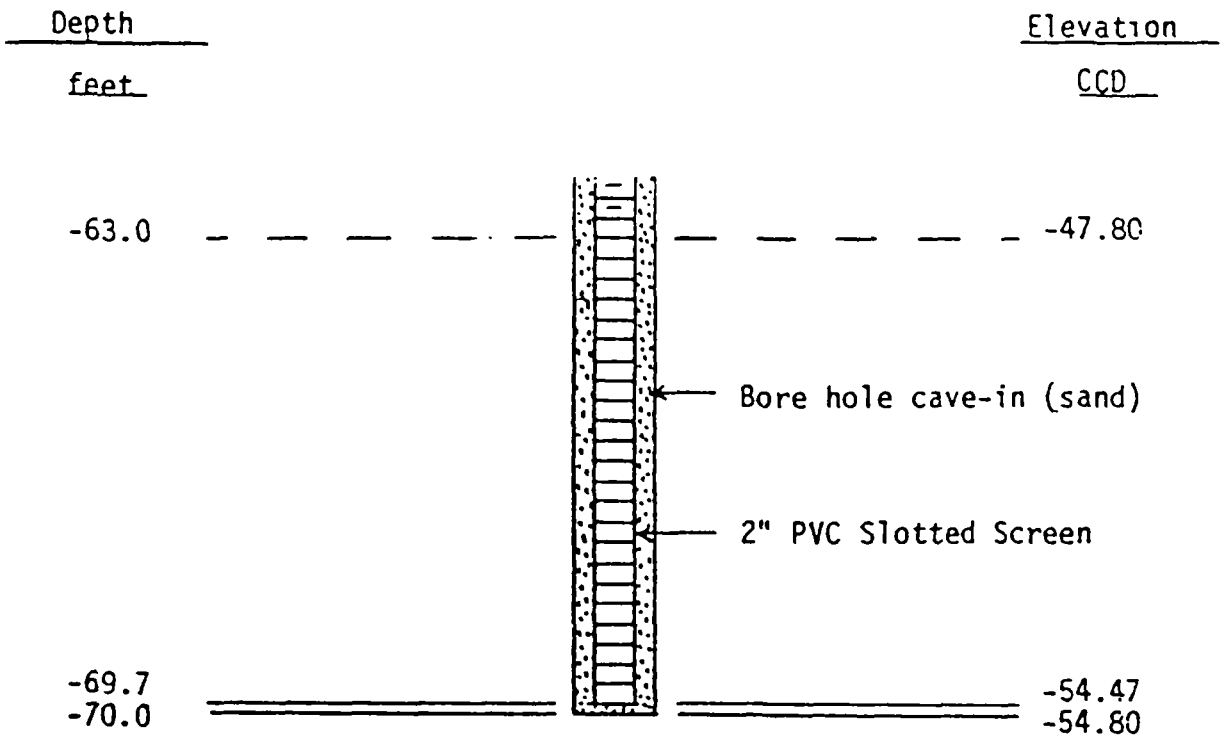
G-105



SOIL TESTING SERVICES, INC.	DATE 7/27/81	PAGE ___ OF ___
CLIENT Illinois Attorney General STS JOB NO 22063	BY MGS	CHK

WELL DETAIL (cont.)

G-105

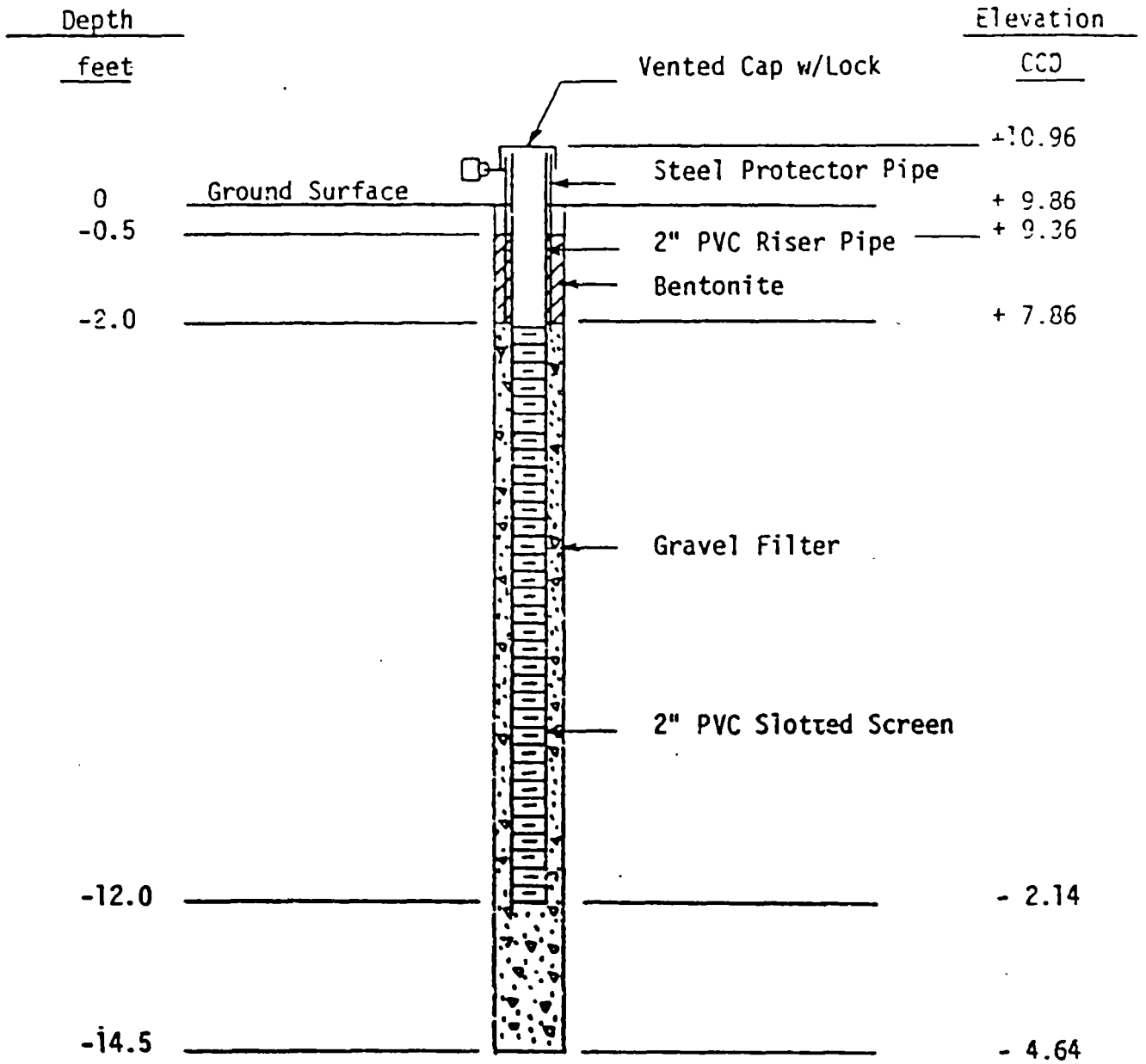


SOIL TESTING SERVICES, INC.

DATE 7/27/81	PAGE ___ OF ___	
CLIENT Illinois Attorney General	STS JOB NO 22063	BY MGS	CHK ___

WELL DETAIL

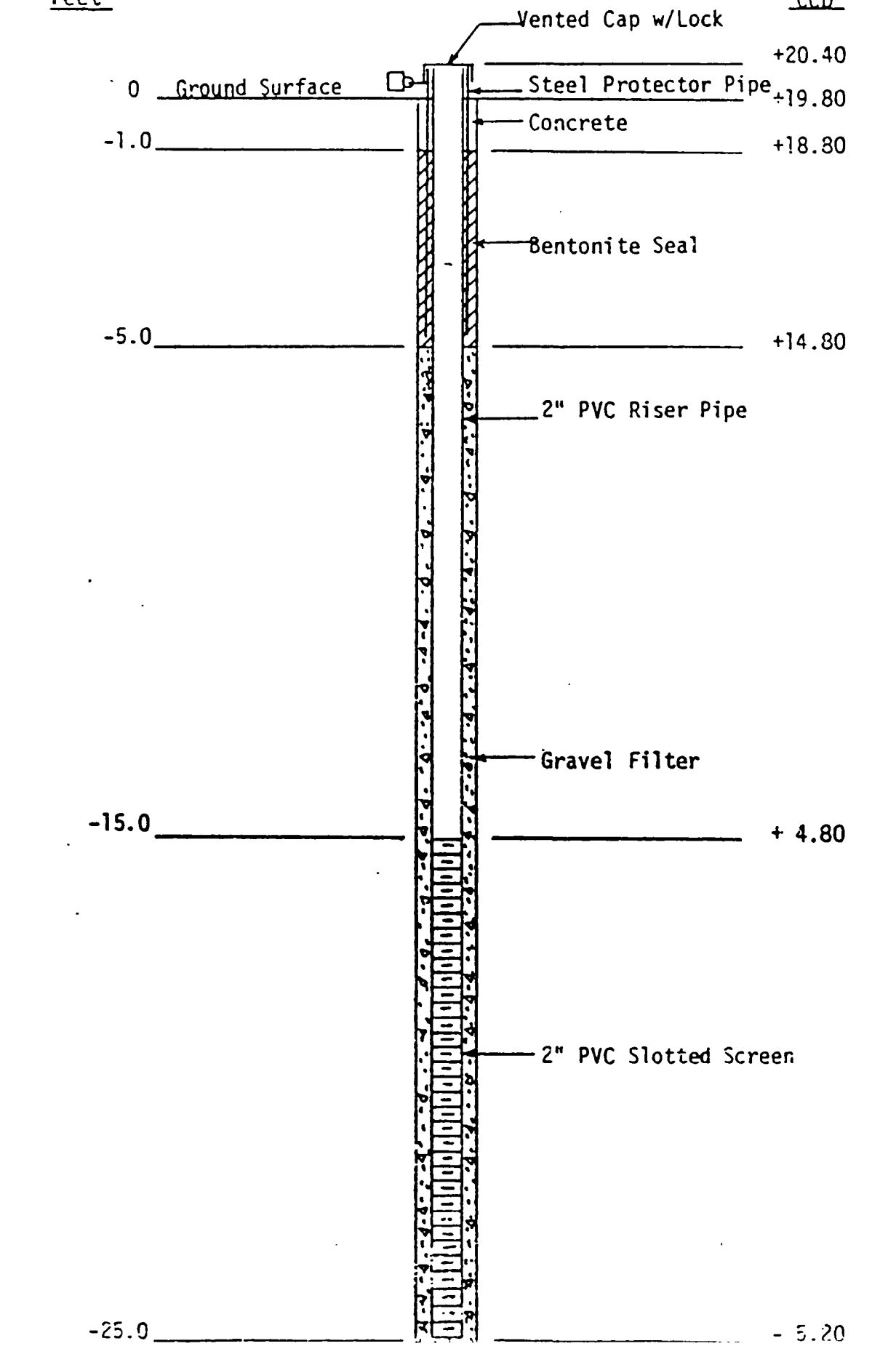
G-106



SOIL TESTING SERVICES, INC.

DATE 7/27/81	PAGE ___ OF ___	
CLIENT Illinois Attorney General STS JOB NO 22063	BY MGS	CHK ___

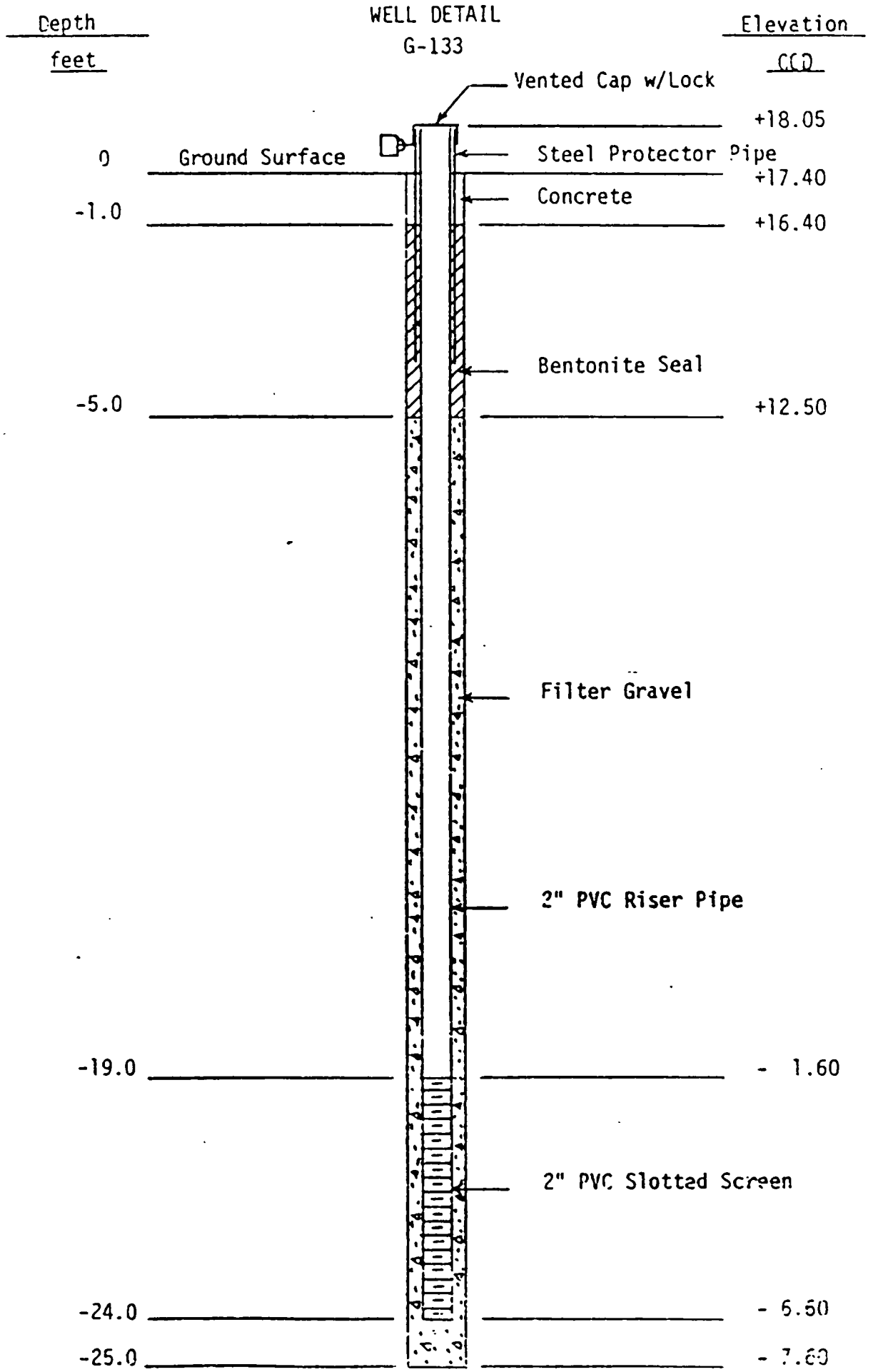
WELL DETAIL
G-132



SOIL TESTING SERVICES, INC.

DATE 7/27/81	PAGE ___ OF ___	
CLIENT Illinois Attorney General	STS JOB NO 22063	BY MGS	CHK ___

WELL DETAIL
G-133



OWNER	LOG OF TEST PIT
Illinois Attorney General	TP-1
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	
SITE LOCATION	
Lake Calumet Area, Chicago, Illinois	

ELEVATION / DEPTH	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT LBS/FT³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1, 2, 3, 4, 5)	PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % (10, 20, 30, 40, 50)	STANDARD PENETRATION BLOWS/FT (10, 20, 30, 40, 50)
5.0					Miscellaneous fill - wood, metal, sand, silt, large concrete blocks, metal containers - strong chemical smell (Fill)				
8.0					END OF TEST PIT				

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES, IN-SITU THE TRANSITION MAY BE GRADUAL

WL WS or WD	BORING STARTED 6/29/81	SOIL TESTING SERVICES INC. 111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062
WL BCR ACR	BORING COMPLETED 6/29/81	
WL	RIG Backhoe FOREMAN Crowley	APP'D BY MGS/ms STS JOB NO 22063

OWNER	LOG OF TEST PIT
Illinois Attorney General	TP-2
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	
SITE LOCATION	
Lake Calumet Area, Chicago, Illinois	

ELEVATION / DEPTH	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT LBS/FT³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5)	PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % (10 20 30 40 50)	STANDARD PENETRATION BLOWS/FT (10 20 30 40 50)
5.0					Miscellaneous fill - wood, metal, sand, silt, large concrete blocks, metal containers -strong chemical odor - oily substance encountered at 6.0 ft				
9.0					END OF TEST PIT				

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES; IN-SITU, THE TRANSITION MAY BE GRADUAL

WL	WS or WD	BORING STARTED 6/29/81	SOIL TESTING SERVICES, INC 111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062
WL	BCR ACR	BORING COMPLETED 6/29/81	
WL		RIG Backhoe FOREMAN Crowley	APP'D BY MGS/ms STS JOB NO. 22060

OWNER	LOG OF TEST PIT
Illinois Attorney General	TP-3
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	
SITE LOCATION	
Lake Calumet Area, Chicago, Illinois	

ELEVATION / DEPTH	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT LBS/FT³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5) / PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % (10 20 30 40 50) / STANDARD PENETRATION BLOWS/FT (10 20 30 40 50)
					"A" Oily material - saturated-(Fill)		
3.0							
					Slag -white- hard (Fill)		
					END OF TEST PIT		
					"A" - Cinder and slag fill -black- loose - saturated (Fill)		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES; IN-SITU THE TRANSITION MAY BE GRADUAL

WL	WS or WD	BORING STARTED 6/29/81	SOIL TESTING SERVICES, INC.
WL	BCR ACR	BORING COMPLETED 6/29/81	111 PFINGSTEN ROAD NORTHBROOK ILLINOIS 60062
WL		RIG Backhoe FOREMAN Crowley	APP'D BY MGS/ms STS JOB NO 22063

OWNER	LOG OF TEST PIT
Illinois Attorney General	TP-4
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	
SITE LOCATION	
Lake Calumet Area, Chicago, Illinois	

ELEVATION / DEPTH	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT LBS./FT³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5) / PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % (10 20 30 40 50) / STANDARD PENETRATION BLOWS/FT (10 20 30 40 50)
					Miscellaneous fill - sand, gravel, concrete & wood - saturated at 3.5 ft (Fill)		
					Silty clay -brown and black		
					END OF TEST PIT		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES; IN-SITU THE TRANSITION MAY BE GRADUAL

WL	WS or WD	BORING STARTED 6/29/81	SOIL TESTING SERVICES, INC. 111 PRINGSTEN ROAD NORTHBROOK ILLINOIS 60062
WL	SCR	AOR	BORING COMPLETED 6/29/81
WL		RIG Backhoe FOREMAN Crowley	APP'D BY MGS/ms STS JOB NO. 22062

OWNER	LOG OF TEST PIT
Illinois Attorney General	TP-5
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	

SITE LOCATION
Lake Calumet Area, Chicago, Illinois

C — UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1, 2, 3, 4, 5)

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % (10, 20, 30, 40, 50)

STANDARD PENETRATION BLOWS/FT (10, 20, 30, 40, 50)

ELEVATION / DEPTH	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT LBS/FT³
					"A"	
2.0					Wood - saturated with black water (Fill)	
					END OF TEST PIT	
					"A" - Silty topsoil and brick fill (Fill)	

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES; IN SITU THE TRANSITION MAY BE GRADUAL

W.L. WS or WD	BORING STARTED 6/29/81	SOIL TESTING SERVICES INC. 111 PRINGSTEN ROAD NORTHBROOK ILLINOIS 60062
W.L. BCR ACR	BORING COMPLETED 6/29/81	
W.L.	RIG Backhoe FOREMAN Crowley	APP'D BY MGS/ms STS JOB NO 22060

OWNER	LOG OF TEST PIT
Illinois Attorney General	TP-6
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	

SITE LOCATION
Lake Calumet Area, Chicago, Illinois

ELEVATION / DEPTH	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT LBS/FT³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5)	PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % (10 20 30 40 50)	STANDARD PENETRATION BLOWS/FT (10 20 30 40 50)
4.0					Concrete rubble, extremely dense (Fill)				
					END OF TEST PIT				

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES; IN-SITU THE TRANSITION MAY BE GRADUAL

WL WS or WD	BORING STARTED 6/29/81	SOIL TESTING SERVICES, INC. 111 PRINGSTEN ROAD NORTHBROOK ILLINOIS 60062
WL BCR ACR	BORING COMPLETED 6/29/81	
WL	RIG Backhoe FOREMAN Crowley	APP'D BY MGS/ms STS JOB NO 22063

OWNER	LOG OF TEST PIT
Illinois Attorney General	TP-7
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	

SITE LOCATION
Lake Calumet Area, Chicago, Illinois

ELEVATION / DEPTH	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT. LBS./FT³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5)	PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % (10 20 30 40 50)	STANDARD PENETRATION BLOWS/FT (10 20 30 40 50)
3.0					Miscellaneous fill - wood and concrete Saturated with black water at 2.5 feet				
					END OF TEST PIT				

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES; IN-SITU THE TRANSITION MAY BE GRADUAL

WL 2.5'	WS or WD	BORING STARTED 6/29/81	SOIL TESTING SERVICES, INC. 111 PRINGSTEN ROAD NORTHBROOK ILLINOIS 60062
WL	BCR	ACR	BORING COMPLETED 6/29/81
WL		RIG Backhoe FOREMAN Crowley	APP'D BY MGS/ms STS JOB NO 22063

BLI

OWNER	LOG OF TEST PIT
Illinois Attorney General	TP-8
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	

SITE LOCATION

Lake Calumet Area, Chicago, Illinois

ELEVATION / DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT. LBS/FT³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1 2 3 4 5) / PLASTIC LIMIT % / WATER CONTENT % / LIQUID LIMIT % (10 20 30 40 50) / STANDARD PENETRATION BLOWS/FT (10 20 30 40 50)
5.0					Miscellaneous fill - concrete, rebar, electrical conduits, silt clay (Fill)		
9.0					END OF TEST PIT NOTE: Test pit performed in area of high anomaly in geophysical survey		

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN SITU, THE TRANSITION MAY BE GRADUAL

WL Dry WS ∞ WD	BORING STARTED 6/29/81	SOIL TESTING SERVICES, INC [illegible] PRINGSTEN ROAD NORTHBROOK ILLINOIS 60062
WL BCR ACR	BORING COMPLETED 6/29/81	
	FOREMAN	APP'D BY	STS JOB NO.

OWNER	LOG OF TEST PIT
Illinois Attorney General	TP-9
PROJECT NAME	**ARCHITECT-ENGINEER**
Contamination Survey	

SITE LOCATION
Lake Calumet Area, Chicago, Illinois

UNCONFINED COMPRESSIVE STRENGTH TONS/FT² (1, 2, 3, 4, 5)
PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % (10, 20, 30, 40, 50)
STANDARD PENETRATION BLOWS/FT (10, 20, 30, 40, 50)

ELEVATION / DEPTH	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL / SURFACE ELEVATION	UNIT DRY WT. LBS./FT.³
					Miscellaneous fill - wood, concrete, steel drums, metal, etc. (Fill)	
5.0						
7.0					END OF TEST PIT	

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES; IN SITU THE TRANSITION MAY BE GRADUAL

WL WS or WD	BORING STARTED 6/29/81	SOIL TESTING SERVICES, INC
WL BCR ACR	BORING COMPLETED 6/29/81	111 PFINGSTEN ROAD
	RIG backhoe FOREMAN [illegible]	NORTHBROOK ILLINOIS 60062
		APP'D BY MCS/[illegible]

B

APPENDIX B

ANALYTICAL RESULTS OF SUBSURFACE SOIL SAMPLES, GROUNDWATER MONITORING WELL SAMPLES, AND TEST PIT AND SURFACE WASTE SAMPLES (STS)

NEEDS TO Be Readable

TABLE 2

Chemical Analyses*
Ground Water Monitoring Wells

U.S. Scrap Site

Chemical Constituent (ppm)	Well No. / Date Sample Obtained	G-101 5/23/81	G-101 10/27/81	G-102 6/25/81	G-102 10/27/81	G-103 6/29/81	G-103 10/27/81	G-104 6/24/81	G-104 10/27/81	G-105 6/24/81	G-105 10/27/81	G-106 10/27/81
Aliphatic Hydrocarbons		1.50	10.00			1.30	54.00			22.30	2.70	
Bromoxy - 2 - Di			0.16									
C3-Benzenes		1.00	6.80		3.30	0.38	12.00					
C4-Benzenes		1.20	1.90		0.92	0.70	51.00					
C5-Benzenes							11.30					
1,3-Dihydro-4-Methylindene							3.20					
Dimethylnaphthalene			0.65				0.51					
Ethylbenzene						0.49	30.00					
Ethylmethylbenzene				0.64								
Ethylphenol			2.10				7.10		3.80			
Fatty Acid Methylester				0.29								
Isophorone						0.40	18.00			2.20		
Methylbiphenyl			0.23									
Methylhexanol								0.96				
Methylnaphthalene			0.57		0.17							
Methylphenol			6.30						11.00			6.30
4-Methyl-2-Nitrophenol							1.70					
4-Methyl-2-Pentanol								22.00				
4-Methyl-2-Pentanone		5.10	3.30					22.30				
Naphthalene		0.56	1.90		0.81	3.23	6.70		0.45	1.30	0.55	
Nitrophenol							3.20					
PCB's			0.029		0.022		1.22		0.044		0.12	0.0056
Phenol			11.00				5.00		4.30			5.60
Toluene		4.80	12.00			1.30	46.00	57.30	32.00	26.30	7.70	
Trichloroethane			0.66				4.30					
Trimethylcyclohexanol		5.20		2.00	1.40			1.50	6.60			
Trimethylcyclohexanone		4.90	7.20	6.30	12.00		5.70	9.70	21.00			
Trimethylnaphthalene			0.38									
Trimethyl-3-Cyclohexene-1-Methanol Acetate								1.90				
Xylenes		10.00	22.00	14.00	27.00	0.47	120.00	24.00	22.00	47.00	11.00	
Alkalinity		1,300	1,130	1,050	2,740	2,500	3,650	3,200	2,800	320	640	NT
Ammonia		52.0	58.0	20.0	52.0	32.0	28.0	80.0	94.0	0.43	1.3	3.71
Arsenic		0.20	0.018	0.004	0.05	0.18	0.12	0.019	0.13	0.009	0.09	0.02
Barium		0.3	2.9	0.2	INT	INT	INT	INT	INT	0.	INT	INT
BOD-5		>2,266	>2,192	NT	189	NT	>2,147	NT	>2,167	NT	171	NT
Boron		1.2	1.6	1.7	4.1	16.3	12.9	4.4	5.4	1.5	2.5	NT
Cadmium		0.00	0.01	0.00	0.00	1.2	1.3	0.30	0.00	0.00	0.01	0.01
Calcium		275	225	270	412	1,389	1,302	1,189	1,319	122	1,186	NT
COD		2,820	4,000	535	1,610	149,500	34,000	27,300	20,000	860	2,360	1,780
Chloride		500	600	160	440	530	660	950	940	29	58	NT
Chromium (Cr tot.)		0.01	0.69	0.01	0.32	0.29	0.30	0.05	0.32	0.01	0.12	0.13
Chromium (Cr + 6)		0.00	0.00	0.00	0.00	CI	INT	CI	INT	0.00	0.00	NT
Copper		0.02	0.48	0.00	0.44	0.66	0.79	0.01	0.36	0.18	0.26	0.51
Cyanide		NT	0.02	NT	0.31	NT	NT	NT	0.17	NT	0.00	NT
Fluoride		7.0	6.8	1.4	1.3	2.7	3.1	0.9	0.9	0.8	0.4	NT
Hardness		1,400	1,000	1,400	2,300	5,400	5,900	5,700	7,600	250	420	NT
Iron		2.0	85.9	0.4	67.9	257.6	250.8	420.4	563.4	10.0	178.7	183.4
Lead		0.00	1.57	0.30	0.58	0.15	0.88	0.00	0.42	0.00	3.37	0.38
Magnesium		135	155	195	500	1,326	858	797	934	28.5	597	415
Manganese		0.93	1.20	0.94	1.87	27.6	30.6	13.46	15.7	0.23	6.86	5.78
Mercury		0.0000	<0.00005	0.0000	<0.00005	0.001	<0.0026	0.0000	0.00030	0.0000	<0.00025	<0.00005
Nickel		0.2	0.2	0.3	0.9	1.8	2.2	2.3	3.3	0.0	0.2	0.1
Nitrate-Nitrite		0.1	0.1	0.2	0.0	42.0	25.0	0.3	0.1	0.3	0.1	0.2
pH (units)		8.2	8.2	7.6	7.2	6.1	6.2	6.2	6.1	7.3	7.4	NT
Phenolics		65.0	84.0	0.350	0.660	122.5	120.0	58.75	62.0	0.270	0.260	0.095
Phosphorus		0.16	2.8	0.18	2.0	1.1	5.2	0.25	4.4	0.32	3.7	NT
Potassium		124.0	163.0	42.3	113	1,575	162	151.3	178	5.2	19.0	12.7
S.O.D. (180°)		4,000	4,150	2,130	3,850	2,580	13,600	12,400	15,500	765	800	NT
Selenium		0.007	0.014	0.003	0.008	0.002	0.25	0.027	0.13	0.002	0.01	0.001
Silver		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sodium		616	717	152	382	492	466	613	702	51.3	137	NT
Specific Conductance (umhos/cm)		4,346	4,578	2,221	4,901	6,337	8,494	7689	10,173	629	1,123	NT
Sulfate		350	65	290	33	1,330	1,040	950	1,240	30	59	NT
Zinc		0.2	5.1	0.1	1.7	122	123	0.2	11.1	0.4	5.2	2.5

*Analyses performed by the Illinois Environmental Protection Agency.

**As submitted to STS by the Illinois Attorney General's Office on January 4, 1982.

NT indicates sample not tested for this constituent
INT indicates interference
CI indicates color interference

TABLE 4

Chemical Analyses*
Soil Samples from Borings

Chemical Constituent (ppm)	Sample No.	CS101	CS112	CS111	CS110	CS131	CS133	CS132	CS102	CS103	CS104	CS108	CS117
	Boring No.	G-101	G-102	G-102	G-102	G-103	G-103	G-103	G-104	G-104	G-105	G-105	G-132
	Depth (ft)	7.6-9	2.6-4	4-6	6-7	0-1.2	5-7	10-11	5-7	7.5-9	0-1.5	2.5-4.5	12.5-14.5
Aliphatic Hydrocarbons		150	100	70	120	700	35	56	170	790		2,100	47
C_3-Benzene									390	560		2,600	
C_4-Benzene			67	12	19				95	560		1,900	
C_5-Benzene										55		450	
Napthalene									78	180		710	
Toluene		90							440	1,400		3,100	
Xylenes		360	320	18	39		230	76	2,200	3,300	20	6,800	
Ammonia		2.5	3.2	1.8	1.6				1.2				
Arsenic		<0.001	<0.001	<0.001	0.002				0.008				
Barium		0.1	0.0	0.0	0.0				0.0				
Boron		0.4	0.6	0.3	0.4				0.4				
Cadmium		0.00	0.00	0.00	0.00				0.00				
Chlorides		28	5	8	8				15				
Chromium (Cr tot.)		0.00	0.00	0.00	0.00				0.00				
Copper		0.00	0.00	0.00	0.00				0.03				
Iron		0.2	0.0	0.1	0.2				0.0				
Lead		<0.03	<0.03	<0.03	<0.03				<0.03				
Manganese		0.15	0.04	0.09	0.06				<0.01				
Mercury		<0.05ug/l	<0.05ug/l	<0.05ug/l	<0.05ug/l				<0.05ug/l				
Nickel		0.0	0.0	0.0	0.0				0.0				
pH (units)		7.6	7.9	7.6	7.9				8.4				
Phenols		6,200	0.043	0.068	0.063				0.7/0				
Phosphorus		0.02	0.02	0.03	0.03				0.03				
Selenium		<0.001	<0.001	<0.001	<0.001				0.003				
Sulfate		33.0	3	4	5				135				
Zinc		0.1	0.1	0.0	0.0				0.0				

*Analyses performed by the Illinois Environmental Protection Agency.

TABLE 5

Chemical Analyses*

Surface Samples **

Chemical Constituent (ppm)	Sample Numbers**				
	CS 109	CS 113	CS 114	CS 115	CS 116
Alkalinity	850				
Ammonia	1.7				
Arsenic	0.007				
Barium	0.2				
BOD-5	417				
Boron	2.0				
Cadmium	0.00				
Calcium	151				
COD	860				
Chloride	120				
Chromium (CR total)	0.04				
Chromium (CR + 6)	0.00				
Copper	0.04				
Cyanide	0.00				
Fluoride	1.7				
Hardness	1000				
Iron	11.3				
Lead	0.12				
Magnesium	182				
Manganese	1.06				
Mercury	0.0000				
Nickel	0.2				
Nitrate-Nitrite	0.0				
pH (units)	8.1				
Phenolics	1.000				
Phosphorus	0.58				
Potassium	41.2				
R.O.E. (180° C)	1440				
Selenium	0.004				
Silver	0.00				
Sodium	57.9				
Specific Conductance(umhos/cm)	1470				
Sulfate	12				
Zinc	0.4				
Aliphatic Hydrocarbons		4,800	130	1,300	21,000
C_3-Benzene		3,800	97		
C_4-Benzene		5,400		270	
Fatty Acid Methylesters		1,100		980	
Fatty Acids		830		2,000	
Isophorone				1,000	
Methylnapthalene		430			
Napthalene		2,200		140	
Phthalic Acid			74		
Stearic Acid			380		
Tetradecanoic Acid	0.51				
Toluene		5,300	280	1,900	5,100
Trimethylcyclohexanal	0.46				
Trimethylcyclohexanone	0.34				
Xylenes		4,000	610	1,500	4,200
Sulfide	57.7				

* Analyses performed by the Illinois Environmental Protection Agency

**Sample CS 109 - Oily residue obtained on ground surface. Light gray with solvent odor.

**Sample CS 113 - Tan, viscous fluid leaking from drum marked: DeSoto Chemical. Drum found near center of site.

**Sample CS 114 - Black, viscous fluid with no detectable odor.

**Sample CS 115 - Black, viscous fluid with solvent odor.

**Sample CS 116 - Black sludge with slight solvent odor.

Chemical Analyses*

Samples from Test Pit Excavations**

Chemical Constituent (ppm)	Sample Numbers**					
	CS 125	CS 126	CS 127	CS 128	CS 129	CS 130
Aliphatic Hydrocarbons	2,500	124	4.20	2,700		680
C_3-Benzene				220		1,400
C_4-Benzene		11				
Isophorone	190					
Napthalene		8.6				
Phthalic Anhydride					2,900	
Pthalates					1,100	23,000
Styrene				800		
Toluene		84		1,500	520	370
Trimethylcyclohexanol		15				
Trimethylcyclohexanone		38				
Xylenes	180	85	0.63	1,200	88	510

* Analyses performed by the Illinois Environmental Protection Agency

**Sample CS 125 - Test Pit No.2 @ 6' depth (bottom of pit). Brown liquid with solvent odor.

**Sample CS 126 - Test Pit No.3 @ 4' depth (bottom of pit). Brown liquid with solvent odor.

**Sample CS 127 - Test Pit No.4 @ 4' depth - Clear liquid with black solids. Solvent odor.

**Sample CS 128 - Test Pit No.2. Sample from smashed 55-gallon drum found in test pit. Red colored semi-solid material with slight solvent odor.

**Sample CS 129 - Test Pit No.2. Sample from smashed 55-gallon drum found in test pit. Caramel colored semi-solid material with slight solvent odor.

**Sample CS 130 - Test Pit No.9. Sample from smashed 55-gallon drum found in test pit. White colored solid to semi-solid material with no odor.

APPENDIX B

ANALYTICAL RESULTS OF SUBSURFACE SOIL SAMPLES, GROUNDWATER MONITORING WELL SAMPLES, AND TEST PIT AND SURFACE WASTE SAMPLES (STS)

NEEDS TO Be Readable

TABLE 2

Chemical Analyses*
Ground Water Monitoring Wells

U.S. Scrap Site

Chemical Constituent (ppm)	Well No.	G-101		G-102		G-103		G-104		G-105		G-106	
	Date Sample Obtained	5/23/81	10/27/81	6/25/81	10/27/81	6/29/81	10/27/81	6/24/81	10/27/81	6/24/81	10/27/81	10/27/81
Aliphatic Hydrocarbons		1.50	10.00			1.30	54.00			22.30	2.70	
Bromoethyl - 2 - Cl			0.16									
C3-Benzenes		1.00	6.80		3.30	0.58	12.00					
C4-Benzenes		1.20	3.90		0.92	0.70	51.00					
C5-Benzenes							17.30					
2,3-Dihydro-4-Methylindene							3.20					
Dimethylnaphthalene			0.65				0.57					
Ethylbenzene						0.40	30.00					
Ethylmethylbenzene				0.64								
Ethylphenol			2.10				7.10		3.80			
Fatty Acid Methylester				0.29								
Isophorone						0.40	18.00			2.20		
Methylbiphenyl			0.23									
Methylhexanol								0.96				
Methylnaphthalene			0.57		0.17							
Methylphenol			6.30						11.00			6.30
4-Methyl-2-Nitrophenol							3.70					
4-Methyl-2-Pentanol								22.00				
4-Methyl-2-Pentanone		5.10	3.30					22.00				
Naphthalene		0.56	1.90		0.81	0.23	6.70		0.45	1.30	0.55	
Nitrophenol							3.20					
PCB's			0.029		0.022		1.22		0.044		0.12	0.0056
Phenol			11.00				5.00		4.30			5.60
Toluene		4.80	12.00			1.30	44.00	57.00	32.00	26.00	7.70	
Trichloroethane			0.66				4.30					
Trimethylcyclohexanol		5.20		2.00	1.40			1.50	6.60			
Trimethylcyclohexanone		4.90	7.20	6.30	12.00		5.70	9.70	21.00			
Trimethylnaphthalene			0.38									
Trimethyl-3-Cyclohexene-1-Methanol Acetate								1.90				
Xylenes		10.00	22.00	14.00	27.00	0.47	120.00	24.00	22.00	47.00	11.00	
Alkalinity		1,300	1,130	1,050	2,740	2,500	3,650	3,200	2,800	320	640	NT
Ammonia		52.0	58.0	20.0	52.0	32.0	28.0	80.0	94.0	0.43	1.3	3.91
Arsenic		0.20	0.018	0.004	0.05	0.18	0.12	0.019	0.11	0.009	0.09	0.02
Barium		0.3	2.0	0.2	INT	INT	INT	INT	INT	0.	INT	INT
BOD-5		>2,266	>2,192	NT	189	NT	>2,147	NT	>2,167	NT	371	NT
Boron		1.2	1.6	1.7	4.1	16.3	12.9	4.4	5.4	1.5	2.5	NT
Cadmium		0.00	0.01	0.00	0.00	1.2	1.3	0.00	0.00	0.00	0.01	0.01
Calcium		275	225	270	412	1,389	1,302	1,139	1,319	121	1,186	NT
COD		2,820	4,000	535	1,610	149,500	34,000	27,300	20,000	860	2,360	1,780
Chloride		500	600	160	440	530	660	850	940	29	38	NT
Chromium (Cr tot.)		0.01	0.69	0.01	0.32	0.29	0.30	0.05	0.33	0.01	0.12	0.13
Chromium (Cr + 6)		0.00	0.00	0.00	0.00	CI	INT	CI	INT	0.00	0.00	NT
Copper		0.02	0.48	0.00	0.44	0.66	0.79	0.01	0.36	0.18	0.26	0.51
Cyanide		NT	0.02	NT	0.31	NT	NT	NT	0.17	NT	0.00	NT
Fluoride		7.0	6.6	1.4	1.3	2.7	1.1	0.9	0.9	0.8	0.4	NT
Hardness		1,400	1,000	1,400	2,300	3,400	3,900	3,700	7,600	250	420	NT
Iron		2.0	52.9	0.4	57.9	257.5	250.5	420.4	563.4	10.0	178.[illegible]	183.4
Lead		0.00	1.57	0.20	0.58	6.15	6.88	0.00	0.42	0.00	3.37	2.38
Magnesium		135	156	195	500	1,326	858	797	934	28.5	597	415
Manganese		0.93	1.20	0.94	1.87	27.6	30.6	13.46	15.7	0.23	6.86	0.76
Mercury		0.0000	<0.00005	0.0000	<0.00005	0.201	<0.0026	0.0000	0.00030	0.0000	<0.00005	<0.00005
Nickel		0.2	0.2	0.3	0.9	1.9	2.2	2.3	1.3	0.0	0.2	0.1
Nitrate-Nitrite		0.1	0.1	0.2	0.0	42.0	25.0	0.3	0.1	0.3	0.1	0.2
pH (units)		8.2	8.2	7.6	7.2	6.1	6.2	6.2	6.1	7.3	7.4	NT
Phenolics		65.0	84.0	0.350	0.360	122.5	120.0	58.75	62.0	0.270	0.260	0.095
Phosphorus		0.12	2.8	0.18	2.0	1.1	5.2	0.25	4.4	0.32	3.7	NT
Potassium		124.0	153.0	42.3	119	1,575	162	151.3	178	5.2	19.0	12.7
S.C.E. (18C°)		4,000	4,150	2,130	3,650	2,580	13,600	12,400	15,500	765	830	NT
Selenium		0.007	0.014	0.003	0.008	0.002	0.25	0.027	0.13	0.002	0.01	0.001
Silver		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sodium		615	717	152	382	492	466	613	702	51.3	137	NT
Specific Conductance (umhos/cm)		4,346	4,578	2,221	4,901	6,337	8,494	7689	10,[illegible]73	625	1,123	NT
Sulfate		350	65	290	33	1,330	1,040	750	1,240	30	59	NT
Zinc		3.2	5.1	0.1	1.7	122	123	0.2	11.1	3.4	5.2	2.5

*Analyses performed by the Illinois Environmental Protection Agency.

**As submitted to STS by the Illinois Attorney General's Office on January 4, 1982.

NT indicates sample not tested for this constituent
INT indicates interference
CI indicates color interference

TABLE 4

Chemical Analyses*
Soil Samples from Borings

Chemical Constituent (ppm)	Sample No.	CS101	CS112	CS111	CS110	CS131	CS133	CS132	CS102	CS103	CS104	CS108	CS117
	Boring No.	G-101	G-102	G-102	G-102	G-103	G-103	G-103	G-104	G-104	G-105	G-105	G-132
	Depth (ft)	7.6-9	2.6-4	4-6	6-7	0-1.2	5-7	10-11	5-7	7.5-9	0-1.5	2.5-4.5	12.5-14.5
Aliphatic Hydrocarbons		150	100	70	120	700	35	56	170	790		2,100	47
C_3-Benzene									390	560		2,600	
C_4-Benzene			67	12	19				95	560		1,900	
C_5-Benzene										55		450	
Napthalene									78	180		710	
Toluene		90							440	1,400		3,100	
Xylenes		360	320	18	39		230	76	2,200	3,300	20	6,800	
Ammonia		2.5	3.2	1.8	1.6				1.2				
Arsenic		<0.001	<0.001	<0.001	0.002				0.008				
Barium		0.1	0.0	0.0	0.0				0.0				
Boron		0.4	0.6	0.3	0.4				0.4				
Cadmium		0.00	0.00	0.00	0.00				0.00				
Chlorides		28	5	8	8				15				
Chromium (Cr tot.)		0.00	0.00	0.00	0.00				0.00				
Copper		0.00	0.00	0.00	0.00				0.03				
Iron		0.2	0.0	0.1	0.2				0.0				
Lead		<0.03	<0.03	<0.03	<0.03				<0.03				
Manganese		0.15	0.04	0.09	0.06				<0.01				
Mercury		<0.05ug/l	<0.05ug/l	<0.05ug/l	<0.05ug/l				<0.05ug/l				
Nickel		0.0	0.0	0.0	0.0				0.0				
pH (units)		7.6	7.9	7.6	7.9				8.4				
Phenols		6,200	0.043	0.068	0.063				0.770				
Phosphorus		0.02	0.02	0.03	0.03				0.03				
Selenium		<0.001	<0.001	<0.001	<0.001				0.003				
Sulfate		33.0	3	4	5				135				
Zinc		0.1	0.1	0.0	0.0				0.0				

*Analyses performed by the Illinois Environmental Protection Agency.

TABLE 5

Chemical Analyses*

Surface Samples **

Chemical Constituent (ppm)	Sample Numbers**				
	CS 109	CS 113	CS 114	CS 115	CS 116
Alkalinity	850				
Ammonia	1.7				
Arsenic	0.007				
Barium	0.2				
BOD-5	417				
Boron	2.0				
Cadmium	0.00				
Calcium	151				
COD	860				
Chloride	120				
Chromium (CR total)	0.04				
Chromium (CR + 6)	0.00				
Copper	0.04				
Cyanide	0.00				
Fluoride	1.7				
Hardness	1000				
Iron	11.3				
Lead	0.12				
Magnesium	182				
Manganese	1.06				
Mercury	0.0000				
Nickel	0.2				
Nitrate-Nitrite	0.0				
pH (units)	8.1				
Phenolics	1.000				
Phosphorus	0.58				
Potassium	41.2				
R.O.E. (180° C)	1440				
Selenium	0.004				
Silver	0.00				
Sodium	57.9				
Specific Conductance(umhos/cm)	1470				
Sulfate	12				
Zinc	0.4				
Aliphatic Hydrocarbons		4,800	130	1,300	21,000
C_3-Benzene		3,800	97		
C_4-Benzene		5,400		270	
Fatty Acid Methylesters		1,100		980	
Fatty Acids		830		2,000	
Isophorone				1,000	
Methylnapthalene		430			
Napthalene		2,200		140	
Phthalic Acid			74		
Stearic Acid			380		
Tetradecanoic Acid	0.51				
Toluene		5,300	280	1,900	5,100
Trimethylcyclohexanal	0.46				
Trimethylcyclohexanone	0.34				
Xylenes		4,000	610	1,500	4,200
Sulfide	57.7				

* Analyses performed by the Illinois Environmental Protection Agency

**Sample CS 109 - Oily residue obtained on ground surface. Light gray with solvent odor.

**Sample CS 113 - Tan, viscous fluid leaking from drum marked: DeSoto Chemical. Drum found near center of site.

**Sample CS 114 - Black, viscous fluid with no detectable odor.

**Sample CS 115 - Black, viscous fluid with solvent odor.

**Sample CS 116 - Black sludge with slight solvent odor.

Chemical Analyses*

Samples from Test Pit Excavations**

Chemical Constituent (ppm)	Sample Numbers**					
	CS 125	CS 126	CS 127	CS 128	CS 129	CS 130
Aliphatic Hydrocarbons	2,500	124	4.20	2,700		680
C_3-Benzene				220		1,400
C_4-Benzene		11				
Isophorone	190					
Napthalene		8.6				
Phthalic Anhydride					2,900	
Pthalates					1,100	23,000
Styrene				800		
Toluene		84		1,500	520	370
Trimethylcyclohexanol		15				
Trimethylcyclohexanone		38				
Xylenes	180	85	0.63	1,200	88	510

* Analyses performed by the Illinois Environmental Protection Agency
**Sample CS 125 - Test Pit No.2 @ 6' depth (bottom of pit). Brown liquid with solvent odor.
**Sample CS 126 - Test Pit No.3 @ 4' depth (bottom of pit). Brown liquid with solvent odor.
**Sample CS 127 - Test Pit No.4 @ 4' depth - Clear liquid with black solids. Solvent odor.
**Sample CS 128 - Test Pit No.2. Sample from smashed 55-gallon drum found in test pit. Red colored semi-solid material with slight solvent odor.
**Sample CS 129 - Test Pit No.2. Sample from smashed 55-gallon drum found in test pit. Caramel colored semi-solid material with slight solvent odor.
**Sample CS 130 - Test Pit No.9. Sample from smashed 55-gallon drum found in test pit. White colored solid to semi-solid material with no odor.

C

APPENDIX C

ANALYTICAL RESULTS OF FIT-COLLECTED SURFACE WATER/LEACHATE SAMPLES 1983

FIT Copy

IL-102-07

LOW CONCENTRATION SAMPLES:

E 1418 = SUMP

E 1419 = DITCH, UPGRADIENT FROM LEACHATE

E 1420 = POND ON-SITE

E 1421 = DITCH, DOWNGRADIENT FROM LEACHATE

MEDIUM CONCENTRATION SAMPLES:

E 1412 = LEACHATE SEEP

E

NO INORGANICS COLLECTED

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REC...

DATE

SUBJECT Review of Region V Contractor Data; Received for Review on 5/24/8 v

FROM Curtis Ross, Director
Central Regional Laboratory

TO Data User: FJT

F5-8203-02 #22
CYNDI BACHUNAS

We have reviewed the data for the following Case(s):

Site Name: Chicago / US Scrap SMD Case No: 943

EPA Data Set No: SF 1607 Decision Unit: Y306

CRL No's: 82M 509529

SMD Traffic No.'s: E 1412

Contractor Lab: CAL. ANAL Person-hours required for review: 3

Following are our findings:

* Should include total ion chromatogram and area counts for the standard's not just report the response factors of them.

* In calculating the "Tailing Factor" should choose the maxima of the peak as the dividing point and report exact value of the TF.

(X) Data are acceptable for use.

( ) Data are unacceptable for use.

( ) Data are preliminary - this case has been forwarded to Dr. Alfred Haeberer, EPA Support Services, for review - pending reply.

cc: Dr. Alfred Haeberer, EPA Support Services

EPA FORM 1320-6 (REV. 3-76)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE 5/24/82

RECEIVED

SUBJECT: Assignment of CRL Numbers to VIAR Data and Review of File for Tracking VIAR Data

FROM: Data Management Coordinator: Central Regional Laboratory

TO: VIAR Contract Coordinator

The below information is provided for tracking VIAR data:

SMO CASE NO and TRAFFIC NO.'s	CRL NUMBERS (Decision Unit)	SITE NAME and DATA SET	DATE INFO ASSIGNED TO SHEET	OUTSTANDING DATA NOT IN	DATE RETURNED TO SMO COORDINATOR
993	Y306	Chicago/US Scrap	5/24/82		5/24/82
E1412	183M649529	SF1607	↓		↓

FORM 1320-6 (REV. 3-76)

U.S. ENVIRONMENTAL PROTECTION AGENCY - HQ Sample Management Office
VA 22313 - 703/557-2490

RECEIVED

ORGANICS ANALYSIS DATA SHEET

LABORATORY NAME: California Analytical Labs, Inc.
SAMPLE ID NO: 1383
CASE NO: 993
QC REPORT NO: green 49

DELIVER MAY 2 TO US EPA CENTRAL REGIONAL LAB 536 S. CLARK STREET CHICAGO, ILLINOIS 60605

BETTER VS. AN INTEGRAL PART OF THIS REPORT - PLEASE READ

CHICAGO / US. SCRAP
FS-8203-02 #22

ACID COMPOUNDS CX1

FP #	CAS #		µg/g (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	10 U
(22A)	59-50-7	p-chloro-m-cresol	20 U
(24A)	95-57-8	2-chlorophenol	10 U
(31A)	120-83-2	2,4-dichlorophenol	10 U
(34A)	105-67-9	2,4-dimethylphenol	10 U
(57A)	88-75-5	2-nitrophenol	10 U
(58A)	100-02-7	4-nitrophenol	90 U
(59A)	51-28-5	2,4-dinitrophenol	40 U
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 U
(64A)	87-86-5	pentachlorophenol	25 U
(65A)	108-95-2	phenol	10 K

BASE/NEUTRAL COMPOUNDS CX1

FP #	CAS #		µg/g (circle one)
(1B)	83-32-9	acenaphthene	10 U
(5B)	92-87-5	benzidine	25 U
(8B)	120-82-1	1,2,4-trichlorobenzene	10 U
(9B)	118-74-1	hexachlorobenzene	10 U
(12B)	67-72-1	hexachloroethane	10 U
(18B)	111-44-4	bis(2-chloroethyl)ether	10 U
(20B)	91-58-7	2-chloronaphthalene	10 U
(25B)	95-50-1	1,2-dichlorobenzene	10 U
(26B)	541-73-1	1,3-dichlorobenzene	10 U
(27B)	106-46-7	1,4-dichlorobenzene	10 U
(28B)	91-94-1	3,3'-dichlorobenzidine	10 U
(35B)	121-14-2	2,4-dinitrotoluene	10 U
(36B)	606-20-2	2,6-dinitrotoluene	10 U
(37B)	122-66-7	1,2-diphenylhydrazine	10 U
(39B)	206-44-0	fluoranthene	10 U
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 U
(41B)	101-55-3	4-bromophenyl phenyl ether	10 U
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	10 U
(43B)	111-91-1	bis (2-chloroethoxy) methane	10 U
(52B)	87-68-3	hexachlorobutadiene	10 U
(53B)	77-47-4	hexachlorocyclopentadiene	10 U
(54B)	78-59-1	isophorone	10 U
(55B)	91-20-3	naphthalene	10 U
(56B)	98-95-3	nitrobenzene	10 U
(62B)	86-30-6	N-nitrosodiphenylamine	10 U
(63B)	621-64-7	N-nitrosodipropylamine	10 U
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10 U
(67B)	85-68-7	benzyl butyl phthalate	10 U
(68B)	84-74-2	di-n-butyl phthalate	10 U
(69B)	117-84-0	di-n-octyl phthalate	10 U
(70B)	84-66-2	diethyl phthalate	10 U
(71B)	131-11-3	dimethyl phthalate	10 U

FP #	CAS #		µg/g (circle one)
(73B)	50-32-8	benzo(a)pyrene	10 U
(74B)	205-99-2	benzo(b)fluoranthene	10 U
(75B)	207-08-9	benzo(k)fluoranthene	10 U
(76B)	218-01-9	chrysene	10 U
(77B)	208-96-8	acenaphthylene	10 U
(78B)	120-12-7	anthracene	10 U
(79B)	191-24-2	benzo(ghi)perylene	25 U
(80B)	86-73-7	fluorene	10 U
(81B)	85-01-8	phenanthrene	10 U
(82B)	53-70-3	dibenzo(a,h)anthracene	25 U
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	25 U
(84B)	129-00-0	pyrene	25 U

VOLATILES ~~VB 30427~~ it

(2V)	107-02-8	acrolein	10 U
(3V)	107-13-1	acrylonitrile	10 U
(4V)	71-43-2	benzene	1 K
(6V)	56-23-5	carbon tetrachloride	1 U
(7V)	108-90-7	chlorobenzene	1 U
(10V)	107-06-2	1,2-dichloroethane	1 U
(11V)	71-55-6	1,1,1-trichloroethane	1 K
(13V)	75-34-3	1,1-dichloroethane	1 K
(14V)	79-00-5	1,1,2-trichloroethane	1 U
(15V)	79-34-5	1,1,2,2-tetrachloroethane	1 U
(16V)	75-00-3	chloroethane	1 U
(19V)	110-75-8	2-chloroethylvinyl ether	1 U
(23V)	67-66-3	chloroform	1 U
(29V)	75-35-4	1,1-dichloroethene	1 U
(30V)	156-60-5	trans-1,2-dichloroethene	1 K
(32V)	78-87-5	1,2-dichloropropane	1 U
(33V)	10061-02-6	trans-1,3-dichloropropene	1 U
	10061-01-05	cis-1,3-dichloropropene	1 U
(38V)	100-41-4	ethylbenzene	1 K
(44V)	75-09-2	methylene chloride	8.9
(45V)	74-87-3	chloromethane	1 U
(46V)	74-83-9	bromomethane	1 U
(47V)	75-25-2	bromoform	1 U
(48V)	75-27-4	bromodichloromethane	1 U
(49V)	75-69-4	fluorotrichloromethane	1 U
(50V)	75-71-8	dichlorodifluoromethane	1 U
(51V)	124-48-1	chlorodibromomethane	1 U
(85V)	127-18-4	tetrachloroethene	1 K
(86V)	108-88-3	toluene	3.0 ~~1 K~~
(87V)	79-01-6	trichloroethene	1 K
(88V)	[illegible]	[illegible]	[illegible]

COVER [illegible] IS AN INTEGRAL PART OF THIS REPORT - PLEASE READ

Sample Number
E1412

ORGANICS ANALYSIS DATA SHEET

LABORATORY NAME: California Analytical Labs, Inc. CASE NO: 993

LAB SAMPLE ID NO: A1383 QC REPORT NO: [illegible]

PESTICIDES CX 10

PP #	CAS #		µg/g (circle one)
(89P)	309-00-2	aldrin	0.1 U
(90P)	60-57-1	dieldrin	0.1 U
(91P)	57-74-9	chlordane	0.1 U
(92P)	50-29-3	4,4'-DDT	0.1 U
(93P)	72-55-9	4,4'-DDE	0.1 U
(94P)	72-54-8	4,4'-DDD	0.1 U
(95P)	115-29-7	α-endosulfan	0.1 U
(96P)	115-29-7	β-endosulfan	0.1 U
(97P)	1031-07-8	endosulfan sulfate	0.1 U
(98P)	72-20-8	endrin	0.1 U
(99P)	7421-93-4	endrin aldehyde	0.1 U
(100P)	76-44-8	heptachlor	0.1 U
(101P)	1024-57-3	heptachlor epoxide	0.1 U
(102P)	319-84-6	α-BHC	0.1 U

PESTICIDES

PP #	CAS #		µg/g (circle one)
(103P)	319-85-7	β-BHC	0.1 U
(104P)	319-86-8	δ-BHC	0.1 U
(105P)	58-89-9	γ-BHC (lindane)	0.1 U
(106P)	53469-21-9	PCB-1242	0.1 U
(107P)	11097-69-1	PCB-1254	0.1 U
(108P)	11104-28-2	PCB-1221	0.1 U
(109P)	11141-16-5	PCB-1232	0.1 U
(110P)	12672-29-6	PCB-1248	0.1 U
(111P)	11096-82-5	PCB-1260	0.1 U
(112P)	12674-11-2	PCB-1016	0.1 U
(113P)	8001-35-2	toxaphene	0.4 U

DIOXINS CX 10

(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.1 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit however.

Value - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates compound was analyzed for but not detected. Report the minimum detection limit value with the U, e.g., 10U. The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum detection limit.

K - If the mass spectral data indicate the presence of a compound that meets the identification criteria but the quantitative result is less than the specified detection limit but greater than zero, report the detection limit as K, e.g., 10K. The footnote should read: K - Actual value, within the limitations of this method, is less than the value given.

FS - This flag applies to analysis performed by Fused Silica Capillary Column.

J - Indicates an estimated value which is used when estimating a concentration for tentatively identified compounds; e.g., 1200J. The footnote should read: J - Estimated value.

Other - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described in a page attached to the data summary report.

** - This flag applies to pesticides parameters where the identification has been performed using two column confirmation (as specified in Method 608) but the level is too low for verification of the compound by mass spectrometry.

CX - This flag is used to indicate those compounds which were concentrated by a factor of 10 times.

(1/12/81)

Lab Name: California Analytical Laboratories, Inc.

QC Report No: [illegible] -9

A. SURROGATE SPIKE RESULTS

µg/sample

COMPOUND	Fraction	Conc. (ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
2-Fluorophenol	ACID	27	50	54
D5-phenol	ACID	23	50	46
D5-nitrobenzene	B/N	34	50	68
2-fluorobiphenyl	B/N	35	50	70
D6-benzene	VOA	118	100	120
D8-toluene	VOA	111	100	110

COVER LETTER IS AN INTEGRAL PART OF THIS REPORT - PLEASE READ

COVER LETTER IS [illegible] OF THIS REPORT - PLEASE READ

ORGANICS ANALYSIS DATA SHEET

Lab Name: Calif. Analytical Labs Case No: 993

QC Report No: [illegible]

Sample Number: E1412

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	Fraction	% Maximum Score Attained Mass Matching Routines Purity	Incos purity J Value ug/om
1.	74-95-3	dibromomethane	VOA	395	0.3 ug/g J
2.					
3.					
4.					
5.					
6.					
7.					
8.		only compound found			
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

(1/12/81)

9/25

RECEIVED

SUBJECT: Review of Region V Contractor Data; Received for Review on 6/25/82
Date QC complete

FROM: Curtis Ross, Director Chuck Elly for
Central Regional Laboratory

TO: Data User: FIT Cyndi Bachuncas
FS-8203-2 #22
Low Water

We have reviewed the data for the following Case(s):

Site Name: Chicago/U.S. Scrap S'D Case No: 981

EPA Data Set No: 0/SF 1604 Division Unit: Y306

CRL No's: 82MB09R06 to 82MB09S28

S'D Traffic No.'s: E1418 to E1421

Contractor Lab: Acurex Corporation Person-hours required for review: 4

Following are our findings:

* No detection limits for ND
* Should staple the reports of each sample
* Poor sample matrix spike recovery
* Duplicate result for volatile sample is out of acceptable range

But ok for screening.

( ) Data are acceptable for use.

( ) Data are unacceptable for use.

(X) Data are preliminary - this case has been forwarded to Dr. Alfred Haeberer, EPA Support Services, for review - pending reply.

cc: Dr. Alfred Haeberer, EPA Support Services

FORM 1327 (REV. 3-76)

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

SION/BRANCH SUPERFUND SAMPLING DATE 4/13/82 LAB ARRIVAL DATE 4/26/82 DUE DATE 5/25/82

MBER 4306 DATASET NUMBER 1604 STUDY CHICAGO/U.S. SCRAP PRIORITY N CONTRACTOR ACUREX

...UD ...R	SAMPLE DESCRIPTION	WATER-LOW CONC. PRIORITY POLLUTANT ORGANICS UG/L 46175 TOX ~~281671~~
9806	E1418	✓
9826	E1419	✓
9827	E1420	✓
9828	E1421	✓

log off

Chicago/US Scrap
Low Waters

Sample Number E 418

Scrap H2O

ORGANICS ANALYSIS DATA SHEET

LABORATORY NAME ACUREX

LAB SAMPLE ID NO. A82-04-027

QC REPORT NO. LUT819

JUN 2 1982

US EPA CENTRAL REGIONAL LAB

ACID COMPOUNDS

		ug/l
21A	2,4,6- trichlorophenol	N.D.
22A	p-chloro-m-cresol	
24A	2- chlorophenol	
31A	2,4-dichlorophenol	
34A	2,4- dimethylphenol	
57A	2- nitrophenol	
58A	4- nitrophenol	
59A	2,4- dinitrophenol	
60A	4,6- dinitro-o-cresol	
64A	pentachlorophenol	
65A	phenol	

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	N.D.
5B	benzidine	
8B	1,2,4- trichlorobenzene	
9B	hexachlorobenzene	
12B	hexachloroethane	
18B	bis(2-chloroethyl)ether	
20B	2-chloronaphthalene	
25B	1,2-dichlorobenzene	
26B	1,3-dichlorobenzene	
27B	1,4-dichlorobenzene	
28B	3,3'-dichlorobenzidine	
35B	2,4- dinitrotoluene	
36B	2,6- dinitrotoluene	
37B	1,2- diphenylhydrazine (as azobenzene)	
39B	fluoranthene	
40B	4- chlorophenyl phenyl ether	

BASE/NEUTRAL COMPOUNDS

		ug/l
41B	4-bromophenyl phenyl ether	N.D.
42B	bis (2-chloroisopropyl) ether	
43B	bis (2-chloroethoxy) methane	
52B	hexachlorobutadiene	
53B	hexachlorocyclopentadiene	
54B	isophorone	
55B	naphthalene	
56B	nitrobenzene	
61B	N-nitrosodimethylamine	
62B	N-nitrosodiphenylamine	
63B	N-nitrosodi-n-propylamine	
66B	bis (2-ethylhexyl) phthalate	
67B	butyl benzyl phthalate	
68B	di-n-butyl phthalate	
69B	di-n-octyl phthalate	
70B	diethyl phthalate	
71B	dimethyl phthalate	
72B	benzo(a)anthracene	
73B	benzo(a)pyrene	
74B	3,4-benzofluoranthene	
75B	benzo(k)fluoranthene	
76B	chrysene	
77B	acenaphthylene	
78B	anthracene	
79B	benzo(ghi)perylene	
80B	fluorene	
81B	phenanthrene	
82B	dibenzo(a,h)anthracene	
83B	indeno(1,2,3-cd)pyrene	
84B	pyrene	

ORGANICS ANALYSIS DATA SHEET - Page 2

E/418

LABORATORY NAME Acurex Corporation

LAB SAMPLE ID NO. A82-04027

QC REPORT NO. LU-8 19

RECEIVED JUL 25 1982 US EPA REGION V LAB

	VOLATILES	ug/l
2V	acrolein	N.D.
3V	acrylonitrile	
4V	benzene	
6V	carbon tetrachloride	
7V	chlorobenzene	
10V	1,2-dichloroethane	
11V	1,1,1-trichloroethane	
13V	1,1-dichloroethane	
14V	1,1,2-trichloroethane	
15V	1,1,2,2-tetrachloroethane	
16V	chloroethane	
19V	2-chloroethylvinyl ether	
23V	chloroform	
29V	1,1-dichloroethylene	
30V	1,2-trans-dichloroethylene	
32V	1,2-dichloropropane	
33V	1,3-dichloropropylene	
38V	ethylbenzene	
44V	methylene chloride	
45V	methyl chloride	
46V	methyl bromide	
47V	bromoform	
48V	dichlorobromomethane	
49V	trichlorofluoromethane	
50V	dichlorodifluoromethane	
51V	chlorodibromomethane	
85V	tetrachloroethylene	
86V	toluene	
87V	trichloroethylene	
88V	vinyl chloride	

	PESTICIDES	ug/l
89P	aldrin	N.D.
90P.	dieldrin	
91P	chlordane	
92P	4,4'-DDT	
93P	4,4'-DDE	
94P	4,4'-DDD	
95P	α-endosulfan	
96P	β-endosulfan	
97P	endosulfan sulfate	
98P	endrin	
99P	endrin aldehyde	
100P	heptachlor	
101P	heptachlor epoxide	
102P	α-BHC	
103P	β-BHC	
104P	γ-BHC	
105P	δ-BHC	
106P	PCB-1242	
107P	PCB-1254	
108P	PCB-1221	
109P	PCB-1232	
110P	PCB-1248	
111P	PCB-1260	
112P	PCB-1016	
113P	toxaphene	

	DIOXINS	
129B	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.D.

*Less than 10 ug/l
(pesticides less than 0.1 ug/l)

Lab Name: ACUREX

QC Report No: LU19

Sample Number: E1418

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc. (ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
d_5-Phenol	Acid	22	78	28
d_4-2-Nitrophenol	Acid	15	64	23
d_5-Nitrobenzene	B/N	55	90	61
d_8-Naphthalene	B/N	52	84	62
d_{10}-Fluorene	B/N	74	90	82
d_{12}-Chrysene	B/N	69	92	75
d_6-Benzene	VOA	18	20	90
d_4-1,2-Dichloroethane	VOA	18	20	90
d_8-Toluene	VOA	19	20	95

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	Fraction	% Maximum Score Attained Mass Matching Routine: (specify)
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

[illegible] Box 212, Alexandria, VA 22313 - 703/683-[illegible]

ORGANICS ANALYSIS DATA SHEET

LABORATORY NAME ACUREX

LAB SAMPLE ID NO. A82-04-027

QC REPORT NO. LV 19

Chicago/US Scrap
Low Water

ACID COMPOUNDS

		ug/l
[illegible]1A	2,4,6- trichlorophenol	N.D.
22A	p-chloro-m-cresol	
[illegible]4A	2- chlorophenol	
31A	2,4-dichlorophenol	
[illegible]4A	2,4- dimethylphenol	
[illegible]7A	2- nitrophenol	
[illegible]8A	4- nitrophenol	
[illegible]9A	2,4- dinitrophenol	
[illegible]0A	4,6- dinitro-o-cresol	
[illegible]A	pentachlorophenol	
[illegible]5A	phenol	

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	N.D.
[illegible]B	benzidine	
8B	1,2,4- trichlorobenzene	
[illegible]	hexachlorobenzene	
12B	hexachloroethane	
[illegible]B	bis(2-chloroethyl)ether	
20B	2-chloronaphthalene	
[illegible]B	1,2-dichlorobenzene	
6B	1,3-dichlorobenzene	
[illegible]B	1,4-dichlorobenzene	
[illegible]B	3,3'-dichlorobenzidine	
[illegible]B	2,4- dinitrotoluene	
[illegible]B	2,6- dinitrotoluene	
[illegible]B	1,2- diphenylhydrazine (as azobenzene)	
[illegible]9B	fluoranthene	
[illegible]B	4- chlorophenyl phenyl ether	

BASE/NEUTRAL COMPOUNDS

		ug/l
41B	4-bromophenyl phenyl ether	N.D.
42B	bis (2-chloroisopropyl) ether	
43B	bis (2-chloroethoxy) methane	
52B	hexachlorobutadiene	
53B	hexachlorocyclopentadiene	
54B	isophorone	
55B	naphthalene	
56B	nitrobenzene	
61B	N-nitrosodimethylamine	
62B	N-nitrosodiphenylamine	
63B	N-nitrosodi-n-propylamine	
66B	bis (2-ethylhexyl) phthalate	
67B	butyl benzyl phthalate	
68B	di-n-butyl phthalate	
69B	di-n-octyl phthalate	
70B	diethyl phthalate	
71B	dimethyl phthalate	
72B	benzo(a)anthracene	
73B	benzo(a)pyrene	
74B	3,4-benzofluoranthene	
75B	benzo(k)fluoranthene	
76B	chrysene	
77B	acenaphthylene	
78B	anthracene	
79B	benzo(ghi)perylene	
80B	fluorene	
81B	phenanthrene	
82B	dibenzo(a,h)anthracene	
83B	indeno(1,2,3-cd)pyrene	
84B	pyrene	

Sample Number

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Acurex Corporation

LAB SAMPLE ID NO. A82-04-027

QC REPORT NO. LV 19

	VOLATILES	ug/l
2V	acrolein	N.D
3V	acrylonitrile	↓
4V	benzene	1100
6V	carbon tetrachloride	N.D
7V	chlorobenzene	↓
10V	1,2-dichloroethane	↓
11V	1,1,1-trichloroethane	80
13V	1,1-dichloroethane	42
14V	1,1,2-trichloroethane	N.D.
15V	1,1,2,2-tetrachloroethane	↓
16V	chloroethane	↓
19V	2-chloroethylvinyl ether	↓
23V	chloroform	↓
29V	1,1-dichloroethylene	↓
30V	1,2-trans-dichloroethylene	1100
32V	1,2-dichloropropane	N.D
33V	1,3-dichloropropylene	↓
38V	ethylbenzene	50
44V	methylene chloride	275
45V	methyl chloride	N.D.
46V	methyl bromide	↓
47V	bromoform	↓
48V	dichlorobromomethane	↓
49V	trichlorofluoromethane	32
50V	dichlorodifluoromethane	N.D.
51V	chlorodibromomethane	↓
85V	tetrachloroethylene	40
86V	toluene	2600
87V	trichloroethylene	135
88V	vinyl chloride	52

	PESTICIDES	ug/l
89P	aldrin	N.D.
90P.	dieldrin	.14
91P	chlordane	N.D
92P	4,4'-DDT	1.3
93P	4,4'-DDE	.22
94P	4,4'-DDD	N.D.
95P	α-endosulfan	4.4
96P	β-endosulfan	N.D
97P	endosulfan sulfate	1.4
98P	endrin	1.11
99P	endrin aldehyde	N.D
100P	heptachlor	N.D.
101P	heptachlor epoxide	.43
102P	α-BHC	2.9
103P	β-BHC	N.D
104P	γ-BHC	↓
105P	δ-BHC	↓
106P	PCB-1242	↓
107P	PCB-1254	↓
108P	PCB-1221	↓
109P	PCB-1232	↓
110P	PCB-1248	↓
111P	PCB-1260	↓
112P	PCB-1016	↓
113P	toxaphene	↓

	DIOXINS	
129B	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.D.

*Less than 10 ug/l
(pesticides less than 0.1 ug/l)

Site Name: ACUREX

Date: JUL 19

E1419

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc. (ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
d_5-Phenol	Acid	36	78	46
d_4-2-Nitrophenol	Acid	1	64	2
d_5-Nitrobenzene	B/N	85	90	94
d_8-Naphthalene	B/N	68	84	81
d_{10}-Fluorene	B/N	74	90	82
d_{12}-Chrysene	B/N	21	92	23
d_6-Benzene	VOA	27	20	135
d_4-1,2-Dichloroethane	VOA	26	20	130
d_8-Toluene	VOA	26	20	130

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	Fraction	% Maximum Score Attained Mass Matching Routine: PURITY/FIT (specify)
1.		METHYL PHENOL	A	939/998
2.		HEXANOIC ACID	A	810/820
3.		3-METHYL 2(5H) FURANONE	A	633/966
4.		ETHYL PHENOL	A	748/968
5.		8 UNIDENTIFIED		
6.		PEAKS	A	
7.		2-PROPANOL	V	964/966
8.		2-BUTANONE	V	774/910
9.		1-BUTANOL	V	823/955
10.		4-METHYL-2-PENTANONE	V	900/968
11.		2-BUTANOL	V	906/930
12.	-	ALPHA-METHOXY-		
13.		METHYLESTER-		
14.		BENZENEACETIC ACID	B/N	590/852
15.		1,4-DIMETHYLBENZENE	B/N	941/989
16.		1,2-DIMETHYLBENZENE	B/N	584/933
17.		1,2-BUTOETHOXYETHANOL	B/N	653/726
18.		3,3,5-TRIMETHYLCYCLO-		
19.		HEXANOL	B/N	810/[illegible]

Lab Name: ACUREX

Report No. LU-19

4

Sample Number: E1419

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc. (ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
d_5-Phenol	Acid			
d_4-2-Nitrophenol	Acid			
d_5-Nitrobenzene	B/N			
d_8-Naphthalene	B/N			
d_{10}-Fluorene	B/N			
d_{12}-Chrysene	B/N			
d_5-Benzene	VOA			
d_4-1,2-Dichloroethane	VOA			
d_8-Toluene	VOA			

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	Fraction	% Maximum Score Attained Mass Matching Routine: PURITY / FIT (specify)
1.		3,3,5-TRIMETHYL-		
2.		CYCLOHEXANONE	B/N	840/957
3.		DICYCLOHEXYLAMINE	B/N	839/992
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

P.O. Box 818, Alexandria, VA 22313 - 703/683-0683

Sample Number

ORGANICS ANALYSIS DATA SHEET

LABORATORY NAME ACUREX

LAB SAMPLE ID NO. A82-04-027

QC REPORT NO. LU 19

Chicago / US Scrap
Raw Water

ACID COMPOUNDS

		ug/l
21A	2,4,6- trichlorophenol	N.D.
22A	p-chloro-m-cresol	
24A	2- chlorophenol	
31A	2,4-dichlorophenol	
34A	2,4- dimethylphenol	32
57A	2- nitrophenol	N.D.
58A	4- nitrophenol	
59A	2,4- dinitrophenol	
60A	4,6- dinitro-o-cresol	
64A	pentachlorophenol	
65A	phenol	

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	N.D.
5B	benzidine	
8B	1,2,4- trichlorobenzene	
9B	hexachlorobenzene	
12B	hexachloroethane	
18B	bis(2-chloroethyl)ether	
20B	2-chloronaphthalene	
25B	1,2-dichlorobenzene	
26B	1,3-dichlorobenzene	
27B	1,4-dichlorobenzene	
28B	3,3'-dichlorobenzidine	
35B	2,4- dinitrotoluene	
36B	2,6- dinitrotoluene	
37B	1,2- diphenylhydrazine (as azobenzene)	
39B	fluoranthene	
40B	4- chlorophenyl phenyl ether	

BASE/NEUTRAL COMPOUNDS

		ug/l
41B	4-bromophenyl phenyl ether	N.D.
42B	bis (2-chloroisopropyl) ether	
43B	bis (2-chloroethoxy) methane	
52B	hexachlorobutadiene	
53B	hexachlorocyclopentadiene	
54B	isophorone	390
55B	naphthalene	N.D.
56B	nitrobenzene	
61B	N-nitrosodimethylamine	
62B	N-nitrosodiphenylamine	
63B	N-nitrosodi-n-propylamine	
66B	bis (2-ethylhexyl) phthalate	
67B	butyl benzyl phthalate	
68B	di-n-butyl phthalate	14
69B	di-n-octyl phthalate	N.D.
70B	diethyl phthalate	
71B	dimethyl phthalate	12
72B	benzo(a)anthracene	N.D.
73B	benzo(a)pyrene	
74B	3,4-benzofluoranthene	
75B	benzo(k)fluoranthene	
76B	chrysene	
77B	acenaphthylene	
78B	anthracene	
79B	benzo(ghi)perylene	
80B	fluorene	
81B	phenanthrene	
82B	dibenzo(a,h)anthracene	
83B	indeno(1,2,3-cd)pyrene	
84B	pyrene	

1720

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Acurex Corporation

LAB SAMPLE ID NO. A82-04-027

QC REPORT NO. LU 19

	VOLATILES	ug/l
2V	acrolein	N.D.
3V	acrylonitrile	↓
4V	benzene	77
6V	carbon tetrachloride	N.D.
7V	chlorobenzene	↓
10V	1,2-dichloroethane	↓
11V	1,1,1-trichloroethane	340
13V	1,1-dichloroethane	N.D
14V	1,1,2-trichloroethane	↓
15V	1,1,2,2-tetrachloroethane	↓
16V	chloroethane	↓
19V	2-chloroethylvinyl ether	↓
23V	chloroform	↓
29V	1,1-dichloroethylene	↓
30V	1,2-trans-dichloroethylene	2400
32V	1,2-dichloropropane	N.D.
33V	1,3-dichloropropylene	↓
38V	ethylbenzene	↓
44V	methylene chloride	↓
45V	methyl chloride	↓
46V	methyl bromide	↓
47V	bromoform	↓
48V	dichlorobromomethane	↓
49V	trichlorofluoromethane	↓
50V	dichlorodifluoromethane	↓
51V	chlorodibromomethane	↓
85V	tetrachloroethylene	62
86V	toluene	6800
87V	trichloroethylene	930
88V	vinyl chloride	N.D.

	PESTICIDES	ug/l
89P	aldrin	.78
90P.	dieldrin	N.D.
91P	chlordane	↓
92P	4,4'-DDT	↓
93P	4,4'-DDE	↓
94P	4,4'-DDD + β-ENDOSULFAN	1.4
95P	α-endosulfan	N.D.
96P	β-endosulfan	N.D.
97P	endosulfan sulfate	.55
98P	endrin	.43
99P	endrin aldehyde	.18
100P	heptachlor	.29
101P	heptachlor epoxide	.85
102P	α-BHC	3.1
103P	β-BHC	N.D.
104P	γ-BHC	↓
105P	δ-BHC	↓
106P	PCB-1242	↓
107P	PCB-1254	↓
108P	PCB-1221	↓
109P	PCB-1232	↓
110P	PCB-1248	↓
111P	PCB-1260	↓
112P	PCB-1016	↓
113P	toxaphene	↓

	DIOXINS	
129B	2,3,7,8-tetrachlorodibenzo-p-dioxin	N.D.

*Less than 10 ug/l
(pesticides less than 0.1 ug/l)

Site Name: ACUREX

Sample No: LU19

EPM 807 527

Sample No: EU12-2

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc (ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
d_5-Phenol	Acid	33	78	42
d_4-2-Nitrophenol	Acid	21	64	33
d_5-Nitrobenzene	B/N	130	90	144
d_8-Naphthalene	B/N	90	84	107
d_{10}-Fluorene	B/N	111	90	123
d_{12}-Chrysene	B/N	14	92	15
d_6-Benzene	VOA	24	20	120
d_4-1,2-Dichloroethane	VOA	30	20	150
d_8-Toluene	VOA	23	20	115

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	Fraction	% Maximum Score Attained Mass Matching Routine: PURITY / FIT (specify)
1.		METHYL PHENOL	A	951 / 998
2.		ETHYL PHENOL	A	767 / 970
3.		PHTHALIC ACID	A	922 / 992
4.		BENZENEACETIC ACID	A	730 / 971
5.		4-METHYL-2-PENTANONE	V	862 / 933
6.		5 - UNIDENTIFIED PEAKS	V	
7.	*	1,4-DIMETHYL BENZENE	B/N	
8.	*	DIMETHYLBENZENE ISOMERS	B/N	
9.	*	2,2,4,4,-TETRAMETHYL-3-PENTANONE	B/N	629 / 921
10.	*	3,3,5-TRIMETHYLCYCLOPENTANONE	B/N	791 / 974
11.		~~3,5,5-TRIMETHYL-2-CYCLOPENTENONE~~	~~B/N~~	~~640 / 969~~ 83 6/17/82
12.				
13.	*	ALPHA,ALPHA,4-TRIMETHYL-		
14.		(S)-3-CYCLOHEXENE-1-METHANOL	B/N	689 / 917
15.		~~DIMETHYL PHTHALATE~~	~~B/N~~	~~472 / 939~~ 83 6/17/82
16.	*	3,3,5 TRIMETHYLCYCLO-		~~755~~ /
17.		HEXANONE	B/N	803 / 921
18.	*	ALPHA-METHOXY-METHYL		
19.		ESTER BENZENEACETIC		
20.		ACID	B/N	556 / 912

Lab Name: ACURREX

QC Report No: LV 17

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc. (ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
d_5-Phenol	Acid			
d_4-2-Nitrophenol	Acid			
d_5-Nitrobenzene				
d_8-Naphthalene				
d_{10}-Fluorene	B/N			
d_{12}-Chrysene	B/N			
d_6-Benzene	VOA			
d_4-1,2-Dichloroethane	VOA			
d_8-Toluene	VOA			

SEE PAGE 3

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	Fraction	% Maximum Score Attained Mass Matching Routine: (specify)
1.		7 UNIDENTIFIED		
2.		ACID PEAKS	A	
3.		~~4-METHYL-2-PENTANONE~~	~~V~~	BB 4/17/82
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

P.O. Box 818, Alexandria, VA 22313 - 703/683-0683

Sample Number

ORGANICS ANALYSIS DATA SHEET

LABORATORY NAME ACUREX

LAB SAMPLE ID NO. A82-04-027

QC REPORT NO. LU19

Chicago / US Scrap
Low Water

ACID COMPOUNDS		ug/l
21A	2,4,6- trichlorophenol	N.D.
22A	p-chloro-m-cresol	
24A	2- chlorophenol	
31A	2,4-dichlorophenol	
34A	2,4- dimethylphenol	
57A	2- nitrophenol	
58A	4- nitrophenol	
59A	2,4- dinitrophenol	
60A	4,6- dinitro-o-cresol	
64A	pentachlorophenol	
65A	phenol	42

BASE/NEUTRAL COMPOUNDS		ug/l
1B	acenaphthene	N.D.
5B	benzidine	
8B	1,2,4- trichlorobenzene	
9B	hexachlorobenzene	
12B	hexachloroethane	
18B	bis(2-chloroethyl)ether	
20B	2-chloronaphthalene	
25B	1,2-dichlorobenzene	
26B	1,3-dichlorobenzene	
27B	1,4-dichlorobenzene	
28B	3,3'-dichlorobenzidine	
35B	2,4- dinitrotoluene	
36B	2,6- dinitrotoluene	
37B	1,2- diphenylhydrazine (as azobenzene)	
39B	fluoranthene	
40B	4- chlorophenyl phenyl ether	

BASE/NEUTRAL COMPOUNDS		ug/l
41B	4-bromophenyl phenyl ether	N.D.
42B	bis (2-chloroisopropyl) ether	
43B	bis (2-chloroethoxy) methane	
52B	hexachlorobutadiene	
53B	hexachlorocyclopentadiene	
54B	isophorone	240
55B	naphthalene	13
56B	nitrobenzene	N.D.
61B	N-nitrosodimethylamine	
62B	N-nitrosodiphenylamine	
63B	N-nitrosodi-n-propylamine	
66B	bis (2-ethylhexyl) phthalate	25
67B	butyl benzyl phthalate	N.D.
68B	di-n-butyl phthalate	
69B	di-n-octyl phthalate	
70B	diethyl phthalate	
71B	dimethyl phthalate	
72B	benzo(a)anthracene	
73B	benzo(a)pyrene	
74B	3,4-benzofluoranthene	
75B	benzo(k)fluoranthene	
76B	chrysene	
77B	acenaphthylene	
78B	anthracene	
79B	benzo(ghi)perylene	
80B	fluorene	
81B	phenanthrene	
82B	dibenzo(a,h)anthracene	
83B	indeno(1,2,3-cd)pyrene	
84B	pyrene	

ORGANICS ANALYSIS DATA SHEET - Page 2

LABORATORY NAME Acurex Corporation

LAB SAMPLE ID NO. A82-04-027

QC REPORT NO. 6019

	VOLATILES	ug/l
2V	acrolein	N.D
3V	acrylonitrile	↓
4V	benzene	1700
6V	carbon tetrachloride	N.D.
7V	chlorobenzene	
10V	1,2-dichloroethane	
11V	1,1,1-trichloroethane	
13V	1,1-dichloroethane	
14V	1,1,2-trichloroethane	
15V	1,1,2,2-tetrachloroethane	
16V	chloroethane	
19V	2-chloroethylvinyl ether	
23V	chloroform	
29V	1,1-dichloroethylene	↓
30V	1,2-trans-dichloroethylene	1700
32V	1,2-dichloropropane	N.D.
33V	1,3-dichloropropylene	
38V	ethylbenzene	
44V	methylene chloride	
45V	methyl chloride	
46V	methyl bromide	
47V	bromoform	
48V	dichlorobromomethane	
49V	trichlorofluoromethane	
50V	dichlorodifluoromethane	
51V	chlorodibromomethane	
85V	tetrachloroethylene	↓
86V	toluene	5000
87V	trichloroethylene	N.D.
88V	vinyl chloride	↓

* Confirmation

	PESTICIDES	ug/l
89P	aldrin	1.2
90P.	dieldrin	ND
91P	chlordane	↓
92P	4,4'-DDT	
93P	4,4'-DDE	
94P	4,4'-DDD	↓
95P	α-endosulfan	500*
96P	β-endosulfan	ND
97P	endosulfan sulfate	
98P	endrin	
99P	endrin aldehyde	
100P	heptachlor	
101P	heptachlor epoxide	↓
102P	α-BHC	1.1
103P	β-BHC	ND
104P	γ-BHC	7.9*
105P	δ-BHC	3.3
106P	PCB-1242	ND
107P	PCB-1254	↓
108P	PCB-1221	
109P	PCB-1232	
110P	PCB-1248	
111P	PCB-1260	
112P	PCB-1016	
113P	toxaphene	↓

	DIOXINS	
129B	2,3,7,8-tetrachlorodibenzo-p-dioxin	ND

*Less than 10 ug/l
(pesticides less than 0.1 ug/l)

ORGANICS ANALYSIS DATA SHEET - PAGE 2

Lab Name: ACUREX

QC Report No: LU #19

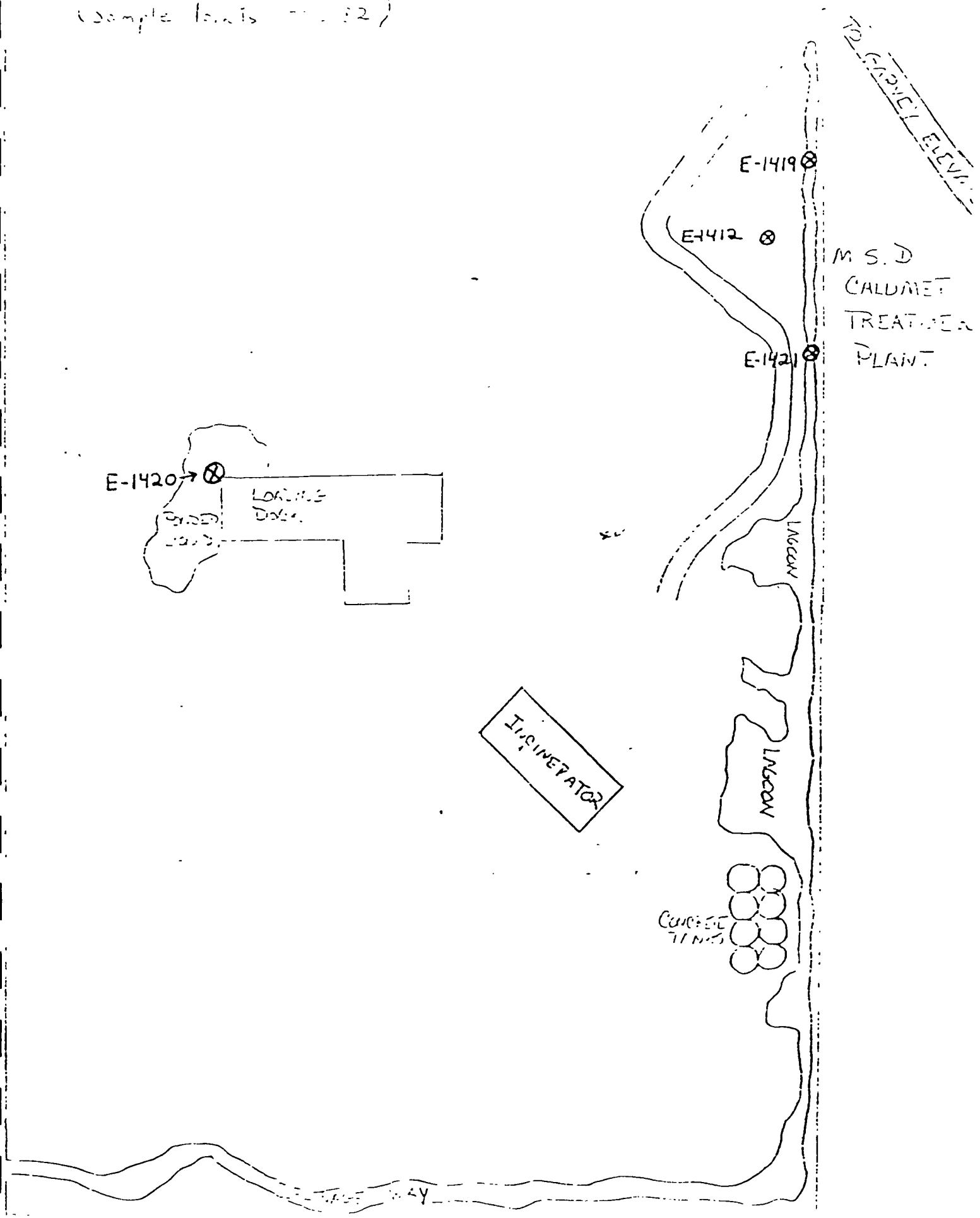
E1421

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc. (ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
d_5-Phenol	Acid	25	78	32
d_4-2-Nitrophenol	Acid	17	64	27
d_5-Nitrobenzene	B/N	72	90	80
d_8-Naphthalene	B/N	80	84	95
d_{10}-Fluorene	B/N	84	90	93
d_{12}-Chrysene	B/N	30	92	33
d_6-Benzene	VOA	20	20	100
d_4-1,2-Dichloroethane	VOA	24	20	120
d_8-Toluene	VOA	19	20	95

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	Fraction	% Maximum Score Attained Mass Matching Routine: (specify)
		3 UNIDENTIFIED		PURITY/FIT
2.		PEAKS	A	
3.		METHYL PHENOL	A	952/998
4.		BENZOIC ACID	A	378/904
5.		BENZENEPROPANOIC ACID	A	407/917
6.		4 UNIDENTIFIED PEAKS	V	
7.		3,3,5 TRIMETHYLCYCLOHEXANOL	B/N	750/898
8.		(2-METHYL PROPYL)CYCLOHEXANE	B/N	706/816
9.		~~ALPHA, ALPHA, 4-TRIMETHYL~~		
10.		~~-(S) 3 CYCLOHEXENE-~~		
11.		~~1 METHANOL~~	B/N	633/956 B 6/17/82
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				

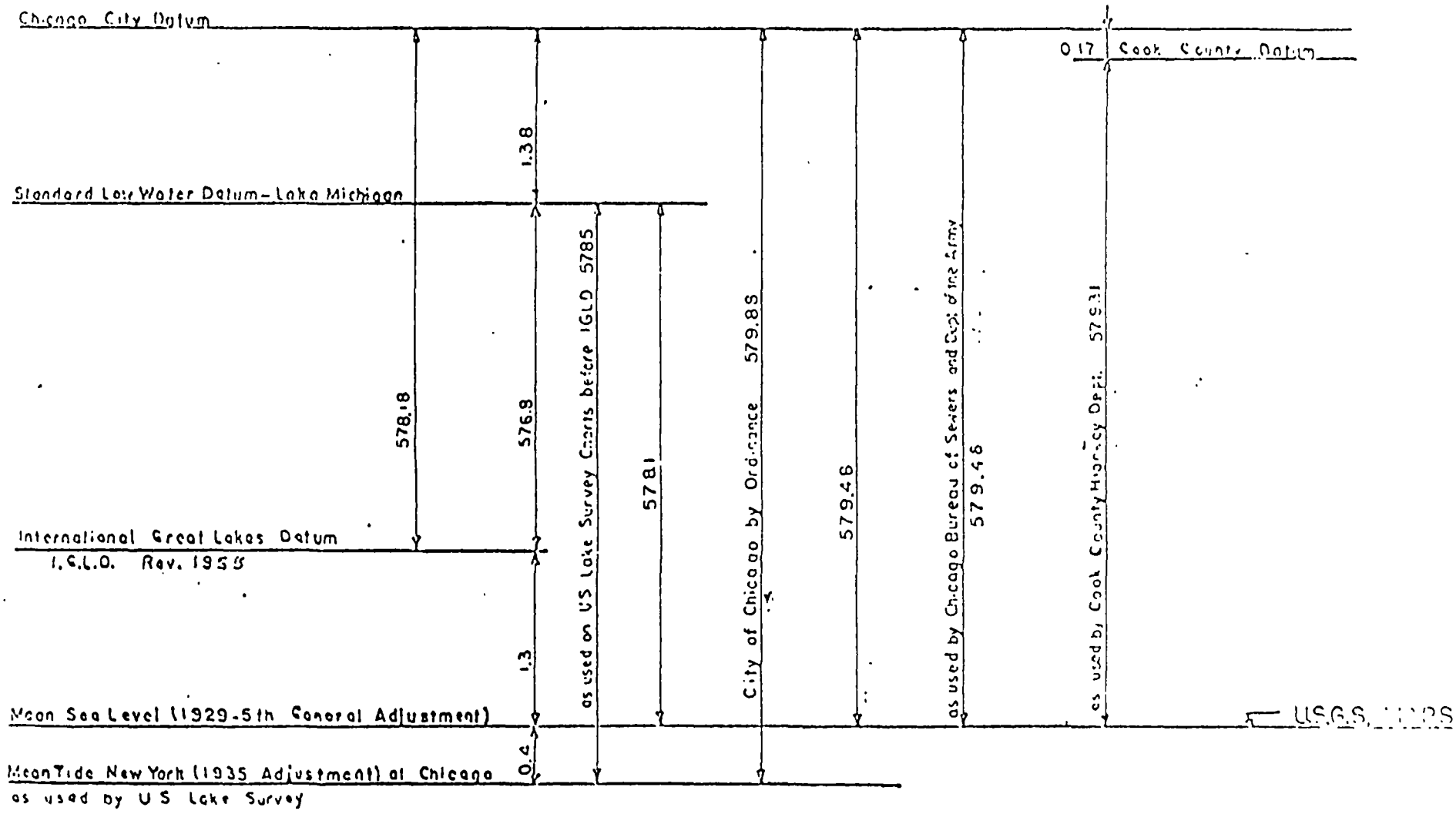


E-1419
E-1412
M.S.D
CALUMET
TREATMENT
PLANT
E-1421
E-1420
LAGOON
INCINERATOR
LAGOON

D

APPENDIX D

LOCATION OF METROPOLITAN SANITARY DISTRICT BENCHMARKS



RELATION OF VARIOUS DATUM PLANES USED IN CHICAGO AREA TO M.S.L., M.T.N.Y., AND I.G.L.D

DRESCHER

BIDWELL PARK, 28W240 NORTH AVENUE
WEST CHICAGO, ILLINOIS 60185

(43)

CONTROL DATA

C.S. 300

CALUMET SYSTEM-TUNNELS&SHAFTS

CONTRACT NO. 73-287-2H

Job: _____ State: Ill. - E. Zone County: Cook Bench Mark: _____

Nearest Town: Chicago Horizontal Station: C.S. 300

X Coordinates: 696 917.490 Companion Station: _____

Date of Survey: Jan. 1975 Y Coordinates: 1 822 137.668 Elevation: 24.271 CCD

Rev. 5-13-83 603.751 MSL

To Reach From: the intersection of 130th Street and Indiana Ave. in Chicago, go E. on 130th St. approx. ½ mile to the crossing of the C & WI RR, then go N. on a dirt road along the E. side of the tracks approx. 3000' to signal #118, 119 on the W. side of the tracks.

Reference:

A) Cut ⊥ on SW base bolt of signal #118, 119 11.93'

B) Dimple in SE corner of concrete base of control box 4.82'

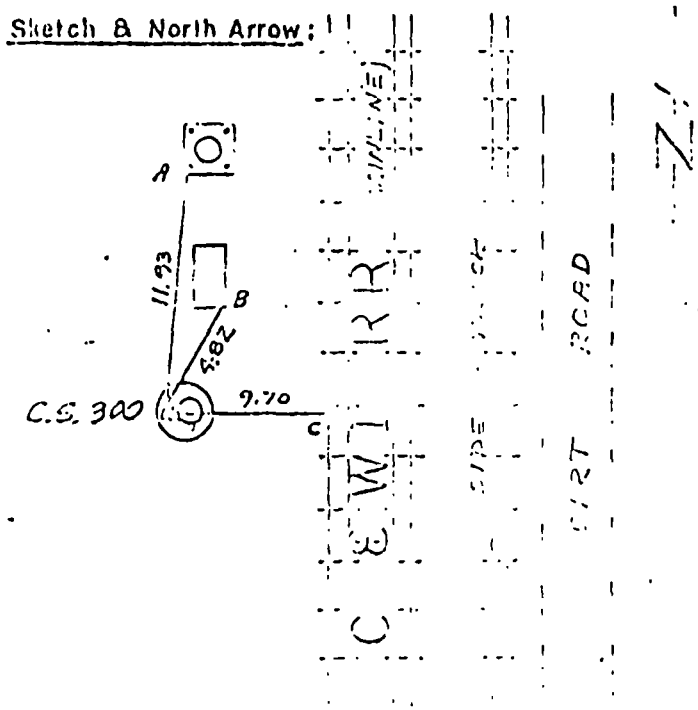
C) Gauge line of W. rail 9.70'

Grid azimuth to cap atop silver "Cargill" water t[illegible] approx. 3½ miles ENE = 25[illegible] 18' 12"

Type of Marker & How Set:

Station is a HSD disk set in the W. side of the concrete rim of a RR manhole.

Sketch & North Arrow:



Use This

SIDWELL COMPANY

SIDWELL PARK, 26W240 NORTH AVENUE
WEST CHICAGO, ILLINOIS 60185

(48)

CONTROL DATA

C.S. 301

CALUMET SYSTEM-TUNNELS&SHAFTS

CONTRACT NO. 73-287-2H

Job: _____ State: Ill. - E. Zone County: Cook Bench Mark: _____

Nearest Town: Chicago Horizontal Station: C.S. 301

X Coordinates: 696 954.964 Companion Station: _____

Date of Survey: Jan. 1975 Y Coordinates: 1 820 455.937 Elevation: 18.656 CCD

Rev. 5-15-PS 598.136 MSL

To Reach From: the intersection of 130th Street and Indiana Ave. in Chicago, go E. on 130th St. approx. ¼ mile to the crossing of the C & WI RR, then go N. on a dirt drive along the E. side of the tracks approx. ¼ mile to a concrete "W" post on the W. side of the tracks.

References:

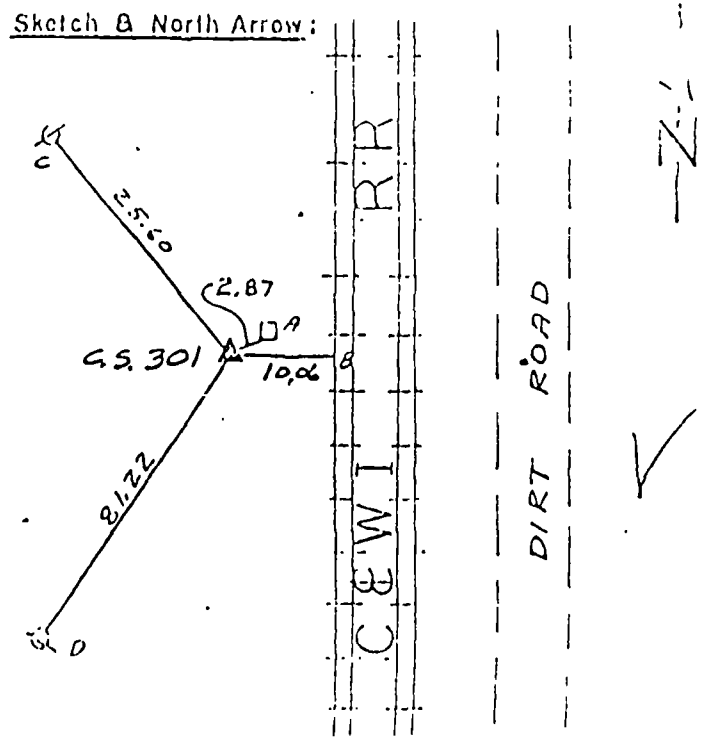
A)	Cut ⊥ on S. side of concrete "W" post	2.87'
B)	Gauge line of W. rail	10.06'
C)	Nail/cap in E. side of tel. pole to NW	25.60'
D)	Nail/cap in E. side of tel. pole to SW.	81.22'

Grid azimuth to cap atop blue "Seaport of Chicago" water tank approx. 1½ mile E. = ~~268° 14' 04"~~ 88°

Type of Marker & How Set:

Station is a concrete monument & MSD disk set flush on the W. side of the "W" post.

Sketch & North Arrow:



E

APPENDIX E

FIT BORING LOG DESCRIPTIONS AND WELL CONSTRUCTION DETAILS

Project Name U.S. Scrap
Project No. FT1305
FIL0102VA
ILD980679484
Date Prepared 2/19/88
Prepared by J.D. Carman

Depth (ft) Description

Boring/Well No. FIL0102-01
Location MSD
Owner U.S. EPA
Ground Elevation 600.40
Top of Inner Casing Elev. 602.05
Drilling Firm Fox Drilling
Geologist J.D. Carman
Start & Completion Dates 9/15-9/25, 1987
Type of Rig CME75

Method of Drilling HSA, rotary wash, rock coring, reaming.

WELL DATA

Boring Diam. 5.0 in. minimum
Boring Depth 89.0 ft.
Casing Diam. 2.0 in.
Screen Diam. 2.0 in.
Screen Interval 79.0 - 89.0 ft.
Screen Type stainless steel
Well Type stainless steel
Well Construction:
Filter Pack 76.0 - 89.0 ft.
Seal N/A
Grout 0.0 - 76.0 ft.
Lock No. 2429

TEST DATA

Static Water Elev. 566.55 Date 11/2/87
Static Water Elev. 565.84 Date 11/18/87
Hydraulic Conductivity Test Yes X No
Test Date 11/17/87

Results 1.301×10^{-6} ft/sec.
Comments Transmissivity of screened zone. Rising head test.

SAMPLES FOR CHEMICAL ANALYSIS

Soils Yes
No. of Samples 3
Date 9/17-9/18, 1987
Parameters CERCLA TCL/TAL

Sample Depths Composites of split spoon samples-SS01 (23.5-25), SS02 (28.5-30), SS03 (33.5-35)
Groundwater Yes
No. of Samples 2
Date 11/5/87, 5/18/88
Parameters CERCLA TCL/TAL

Split Samples Yes X No
Recipient MSD

Comments

REMARKS

Bentonite grout seal extends from top of filter pack to the surface.

Project Name U.S. Scrap
Project No. FT1305
FIL0102VA
ILD980679484
Date Prepared 2/19/88
Prepared by J.D. Carman

Depth (ft) Description

Boring/Well No. FIL0102-02
Location MSD
Owner U.S. EPA
Ground Elevation 600.41
Top of Inner Casing Elev. 602.69
Drilling Firm Fox Drilling
Geologist J.D. Carman
Start & Completion Dates 9/28/87
Type of Rig CME75

Method of Drilling HSA

WELL DATA

Boring Diam. 8.75 in.
Boring Depth 28.5 ft.
Casing Diam. 2.0 in.
Screen Diam. 2.0 in.
Screen Interval 18.5-28.5 ft.
Screen Type Stainless steel
Well Type Stainless steel
Well Construction:
Filter Pack 11-28.5 ft.
Seal N/A
Grout 0.0-11.0 ft.
Lock No. 2429

TEST DATA

Static Water Elev. 591.21 Date 11/2/87
Static Water Elev. 591.31 Date 11/17/87
Hydraulic
Conductivity Test Yes X No
Test Date
Results
Comments

SAMPLES FOR CHEMICAL ANALYSIS

Soils None
No. of Samples N/A
Date N/A
Parameters N/A

Sample Depths N/A

Groundwater Yes
No. of Samples 2
Date 11/4/87, 5/17/88, 5/18/88
Parameters CERCLA, TCL/TAL

Split Samples Yes X No
Recipient MSD

Comments

REMARKS

Bentonite grout seal extends from top of filter pack to surface.

Project Name U.S. Scrap
Project No. FT1305
FIL0102VA
ILD980679484
Date Prepared 2/19/88
Prepared by J.D. Carman

Depth (ft) Description

Boring/Well No. FIL0102-03
Location MSD
Owner U.S. EPA
Ground Elevation 592.42
Top of Inner Casing Elev. 594.55
Drilling Firm Fox Drilling
Geologist J.D. Carman
Start & Completion Dates 9/29-9/30, 1987
Type of Rig CME75

Method of Drilling HSA

WELL DATA

Boring Diam. 8.75 in.
Boring Depth 28.5 ft.
Casing Diam. 2.0 in.
Screen Diam. 2.0 in.
Screen Interval 18.5-28.5 ft.
Screen Type stainless steel
Well Type stainless steel
Well Construction:
Filter Pack 11-28.5 ft.
Seal N/A
Grout 0 ft.
Lock No. 2494

TEST DATA

Static Water Elev. 587.65 Date 11/2/87
Static Water Elev. 588.06 Date 11/17/87
Hydraulic
Conductivity Test Yes X No
Test Date 1/7/88

Results 3.195×10^{-7} ft./sec
Comments Falling head test.

SAMPLES FOR CHEMICAL ANALYSIS

Soils None
No. of Samples N/A
Date N/A
Parameters N/A

Sample Depths N/A

Groundwater Yes
No. of Samples 2
Date 11/4/87, 5/17/88-5/18/88
Parameters CERCLA TCL/TAL

Split Samples Yes X No
Recipient MSD

Comments

REMARKS

Bentonite grout seal extends from top of filter pack to the surface.

Project Name U.S. Scrap
Project No. FT1305
FIL0102VA
ILD980679484
Date Prepared 2/19/88
Prepared by J.D. Carman

Depth (ft) Description

Boring/Well No. FIL0102-04
Location MSD
Owner U.S. EPA
Ground Elevation 592.75
Top of Inner Casing Elev. 594.21
Drilling Firm Fox Drilling
Geologist J.D. Carman
Start & Completion Dates 9/30/87
Type of Rig CME75

Method of Drilling HSA

WELL DATA

Boring Diam. 8.75 in.
Boring Depth 185 ft.
Casing Diam. 2.0 in.
Screen Diam. 2.0 in.
Screen Interval 8.5-18.5 ft.
Screen Type stainless steel
Well Type stainless steel
Well Construction:
Filter Pack 6.0-20.0 feet
Seal N/A
Grout 0.0 ft.-6.0 ft.
Lock No. 2429

TEST DATA

Static Water Elev. 590.66 Date 11/2/87
Static Water Elev. 590.15 Date 11/17/87
Hydraulic
Conductivity Test Yes X No
Test Date
Results
Comments

SAMPLES FOR CHEMICAL ANALYSIS

Soils Yes
No. of Samples 1
Date 9/30/87
Parameters CERCLA TCL/TAL

Sample Depths Composite of split spoon samples - SS04 (0.0-20.0 ft.)

Groundwater Yes
No. of Samples 2
Date 11/4/87, 5/17/88
Parameters CERCLA TCL/TAL

Split Samples Yes X No
Recipient MSD

Comments

REMARKS

Bentonite grout seal extends from top of filter pack to the surface.

Project Name U.S. Scrap
Project No. FT1305
FIL0102VA
ILD980679484
Date Prepared 2/19/88
Prepared by J.D. Carman

Depth (ft) Description

Boring/Well No. FIL0102-05
Location MSD
Owner U.S. EPA
Ground Elevation 591.62
Top of Inner Casing Elev. 593.32
Drilling Firm Fox Drilling
Geologist J.D. Carman
Start & Completion Dates 10/01-10/6, 1987
Type of Rig CME75

Method of Drilling HSA, rotary wash, rock coring, reaming

WELL DATA

Boring Diam. 5.0 in. minimum
Boring Depth 85.0 ft.
Casing Diam. 2.0 in.
Screen Diam. 2.0 in.
Screen Interval 69.5-79.5 ft.
Screen Type stainless steel
Well Type stainless steel
Well Construction:
Filter Pack 67.0-85.0 ft.
Seal N/A
Grout 0.0-67.0 ft.
Lock No. 2429

TEST DATA

Static Water Elev. 514.13 Date 11/5/87
Static Water Elev. 516.98 Date 11/17/87
Hydraulic
Conductivity Test Yes X No
Test Date

Results
Comments

SAMPLES FOR CHEMICAL ANALYSIS

Soils Yes
No. of Samples 2
Date 10/1/87
Parameters CERCLA TCL/TAL

Sample Depths Composite of split spoon samples-SS05 (0.0-30.0 ft.), SS06 (33.5-55.0 ft.)
Groundwater Yes
No. of Samples 2
Date 12/1/87, 5/18/88
Parameters CERCLA TCL/TAL

Split Samples Yes X No
Recipient MSD

Comments

REMARKS

Bentonite grout seal extends from top of filter pack to the surface.

Project Name U.S. Scrap
Project No. FT1305
FIL0102VA
ILD980679484
Date Prepared 2/19/88
Prepared by J.D. Carman

Depth (ft) Description

Boring/Well No. FIL0102-06
Location MSD
Owner U.S. EPA
Ground Elevation 591.44
Top of Inner Casing Elev. 592.90
Drilling Firm Fox Drilling
Geologist J.D. Carman
Start & Completion Dates 10/6/87
Type of Rig CME75

Method of Drilling HSA

WELL DATA

Boring Diam. 8.75 in.
Boring Depth 18.5
Casing Diam. 2.0 in.
Screen Diam. 2.0 in.
Screen Interval 8.5-18.5 ft.
Screen Type stainless steel
Well Type stainless steel
Well Construction:
Filter Pack 6.0-18.5 ft.
Seal N/A
Grout 0.0-6.0 ft.
Lock No. 2429

TEST DATA

Static Water Elev. 587.54 Date 11/5/87
Static Water Elev. 587.67 Date 11/17/87
Hydraulic
Conductivity Test Yes X No
Test Date 1/7/88

Results 8.474×10^{-7} ft./sec.
Comments Falling head test.

SAMPLES FOR CHEMICAL ANALYSIS

Soils None
No. of Samples N/A
Date N/A
Parameters N/A

Sample Depths N/A

Groundwater Yes
No. of Samples 2
Date 11/4/87, 5/17-5/18/88
Parameters CERCLA TCL/TAL

Split Samples Yes X No
Recipient MSD

Comments

REMARKS

Bentonite grout seal extends from top of filter pack to the surface.

Project Name U.S. Scrap
Project No. FT1305
FIL0102VA
ILD980679484
Date Prepared 2/19/88
Prepared by J.D. Carman

Depth (ft) Description

Boring/Well No. FIL0102-07
Location MSD
Owner U.S. EPA
Ground Elevation 590.57
Top of Inner Casing Elev. 592.12
Drilling Firm Fox Drilling
Geologist J.D. Carman
Start & Completion Dates 10/07-10/12, 87
Type of Rig CME75

Method of Drilling HSA, rotary wash, rock coring, reaming

WELL DATA

Boring Diam. 5.0 in. minimum
Boring Depth 84 ft.
Casing Diam. 2.0 in.
Screen Diam. 2.0 in.
Screen Interval 69.5-79.5 ft.
Screen Type stainless steel
Well Type stainless steel
Well Construction:
Filter Pack 65.0-84.0 ft.
Seal N/A
Grout 0.0-65.0 ft.
Lock No. 2429

TEST DATA

Static Water Elev. 551.92 Date 11/3/87
Static Water Elev. 592.16 Date 11/18/87
Hydraulic Conductivity Test Yes X No
Test Date 11/18/87

Results 1.278×10^{-5} ft./sec.
Comments Transmissivity of screened zone. Falling head test.

SAMPLES FOR CHEMICAL ANALYSIS

Soils Yes
No. of Samples 2
Date 10/7 & 10/8/87
Parameters CERCLA TCL/TAL

Sample Depths Composite of split spoon samples-SS07 (0.0-30.0 ft.), SS08 (33.5-55.0 ft.)
Groundwater Yes
No. of Samples 2
Date 11/4/87, 5/17/88
Parameters CERCLA TCL/TAL

Split Samples Yes X No
Recipient MSD

Comments

REMARKS

Bentonite grout seal extends from top of the filter pack to the surface.

Project Name U.S. Scrap
Project No. FT1305
FIL0102VA
ILD980679484
Date Prepared 2/19/88
Prepared by J.D. Carman

Depth (ft) Description

Boring/Well No. FIL0102-08
Location MSD
Owner U.S. EPA
Ground Elevation 590.57
Top of Inner Casing Elev. 592.25
Drilling Firm Fox Drilling
Geologist J.D. Carman
Start & Completion Dates 10/13/87
Type of Rig CME75

Method of Drilling HSA

WELL DATA

Boring Diam. 8.75 in.
Boring Depth 28.5 ft.
Casing Diam. 2.0 in.
Screen Diam. 2.0 in.
Screen Interval 18.5-28.5 ft.
Screen Type stainless steel
Well Type stainless steel
Well Construction:
Filter Pack 15.0-28.5 ft.
Seal N/A
Grout 0.0-15.0 ft.
Lock No. 2429

TEST DATA

Static Water Elev. 562.33 Date 11/5/87
Static Water Elev. 564.83 Date 11/17/87
Hydraulic
Conductivity Test Yes X No
Test Date
Results
Comments

SAMPLES FOR CHEMICAL ANALYSIS

Soils None
No. of Samples N/A
Date N/A
Parameters N/A

Sample Depths N/A

Groundwater Yes
No. of Samples 2
Date 11/30/87, 5/17-5/18/88
Parameters CERCLA TCL/TAL

Split Samples Yes X No
Recipient MSD

Comments

REMARKS

Bentonite grout seal extends from top of filter pack to the surface.

Project Name U.S. Scrap
Project No. FT1305
FIL0102VA
ILD980679484
Date Prepared 2/19/88
Prepared by J.D. Carman

Depth (ft) Description

Boring/Well No. FIL0102-09
Location MSD
Owner U.S. EPA
Ground Elevation 586.01
Top of Inner Casing Elev. 587.21
Drilling Firm Fox Drilling
Geologist J.D. Carman
Start & Completion Dates 10/14/87
Type of Rig CME75

Method of Drilling HSA

WELL DATA

Boring Diam. 8.75 in.
Boring Depth 28.5 ft.
Casing Diam. 2.0 in.
Screen Diam. 2.0 in.
Screen Interval 18.5 ft.-28.5 ft.
Screen Type stainless steel
Well Type stainless steel
Well Construction:
Filter Pack 18.5-28.5 ft.
Seal N/A
Grout 0.0-18.5 ft.
Lock No. 2429

TEST DATA

Static Water Elev. 558.52 Date 11/5/87
Static Water Elev. 560.79 Date 11/17/87
Hydraulic
Conductivity Test Yes X No
Test Date 1/7/88

Results 6.491×10^{-6} ft./sec.
Comments Falling head test.

SAMPLES FOR CHEMICAL ANALYSIS

Soils Yes
No. of Samples 1
Date 10/14/87
Parameters CERCLA TCL/TAL

Sample Depths Composite of split spoon samples-SS11 (0.0-30.0 ft.)

Groundwater Yes
No. of Samples 2
Date 11/30/87, 5/17-5/18/88
Parameters CERCLA TCL/TAL

Split Samples Yes X No
Recipient MSD

Comments

REMARKS

Bentonite grout seal extends from top of filter pack to the surface.

Project Name U.S. Scrap
Project No. FT1305
FIL0102VA
ILD980679484
Date Prepared 2/19/88
Prepared by J.D. Carman

Depth (ft) Description

Boring/Well No. FIL0102-10
Location MSD
Owner U.S. EPA
Ground Elevation 586.13
Top of Inner Casing Elev. 587.44
Drilling Firm Fox Drilling
Geologist J.D. Carman
Start & Completion Dates 10/15-10/21,1987
Type of Rig CME75

Method of Drilling HSA, rotary wash, rock coring, reaming

WELL DATA

Boring Diam. 5.0 in. minimum
Boring Depth 81 ft.
Casing Diam. 2.0 in.
Screen Diam. 2.0 in.
Screen Interval 71.0-81.0 ft.
Screen Type stainless steel
Well Type stainless steel
Well Construction:
Filter Pack 65.0-81.0 ft.
Seal N/A
Grout 0.0-65.0 ft.
Lock No. 2429

TEST DATA

Static Water Elev. 563.19 Date 11/5/87
Static Water Elev. 564.17 Date 11/17/87
Hydraulic Conductivity Test Yes X No
Test Date 1/7/88

Results 3.796×10^{-6} ft./sec.
Comments Falling head test.

SAMPLES FOR CHEMICAL ANALYSIS

Soils Yes
No. of Samples 1
Date 10/15/87
Parameters CERCLA TCL/TAL

Sample Depths Composite of split spoon samples-SS12 (33.5-53.5 ft.)

Groundwater Yes
No. of Samples 2
Date 11/5/87, 5/17/88
Parameters CERCLA TCL/TAL

Split Samples Yes X No
Recipient MSD

Comments

REMARKS

Bentonite grout seal extends from the top of the filter pack to the surface.

Project Name U.S. Scrap
Project No. FT1305
FIL0102VA
ILD980679484
Date Prepared 2/19/88
Prepared by J.D. Carman

Depth (ft) Description

Boring/Well No. FIL0102-11
Location MSD
Owner U.S. EPA
Ground Elevation 589.57
Top of Inner Casing Elev. 591.01
Drilling Firm Fox Drilling
Geologist J.D. Carman
Start & Completion Dates 10/21/87
Type of Rig CME75

Method of Drilling HSA

WELL DATA

Boring Diam. 8.75 in.
Boring Depth 28.5 ft.
Casing Diam. 2.0 in.
Screen Diam. 2.0 in.
Screen Interval 18.5-28.5 ft.
Screen Type stainless steel
Well Type stainless steel
Well Construction:
Filter Pack 15.0-28.5 ft.
Seal N/A
Grout 0.0-15.0 ft.
Lock No. 2429

TEST DATA

Static Water Elev. 562.85 Date 11/5/87
Static Water Elev. 565.12 Date 11/17/87
Hydraulic
Conductivity Test Yes X No
Test Date
Results
Comments

SAMPLES FOR CHEMICAL ANALYSIS

Soils Yes
No. of Samples 1
Date 10/21/87
Parameters CERCLA TCL/TAL

Sample Depths Composite of split spoon samples-SS11 (0.0'-30.0').

Groundwater Yes
No. of Samples 2
Date 11/30/87, 5/17-5/18, 1988
Parameters CERCLA TCL/TAL

Split Samples Yes X No
Recipient MSD

Comments

REMARKS

Bentonite grout seal extends from the top of the filter pack to the surface.

Project Name U.S. Scrap
Project No. FT1305
FIL0102VA
ILD980679484
Date Prepared 2/19/88
Prepared by J.D. Carman

Depth (ft) Description

Boring/Well No. FIL0102-12
Location ~150 ft. N of site
Owner U.S. EPA
Ground Elevation 594.08
Top of Inner Casing Elev. 595.90
Drilling Firm Fox Drilling
Geologist J.D. Carman
Start & Completion Dates
Type of Rig CME75

Method of Drilling HSA

WELL DATA

Boring Diam. 8.75 in.
Boring Depth 18.5 ft.
Casing Diam. 2.0 in.
Screen Diam. 2.0 in.
Screen Interval 8.5-18.5 ft.
Screen Type stainless steel
Well Type stainless steel
Well Construction:
Filter Pack 5.0-18.5 ft.
Seal N/A
Grout 0.0-5.0 ft.
Lock No. 2429

TEST DATA

Static Water Elev. 589.62 Date 11/5/87
Static Water Elev. 589.54 Date 11/17/87
Hydraulic
Conductivity Test Yes X No
Test Date 11/17/88

Results 4.793×10^{-6} ft./sec.
Comments Falling head test.

SAMPLES FOR CHEMICAL ANALYSIS

Soils None
No. of Samples N/A
Date N/A
Parameters N/A

Sample Depths N/A

Groundwater Yes
No. of Samples 2
Date 11/4/87, 5/17/88
Parameters CERCLA TCL/TAL

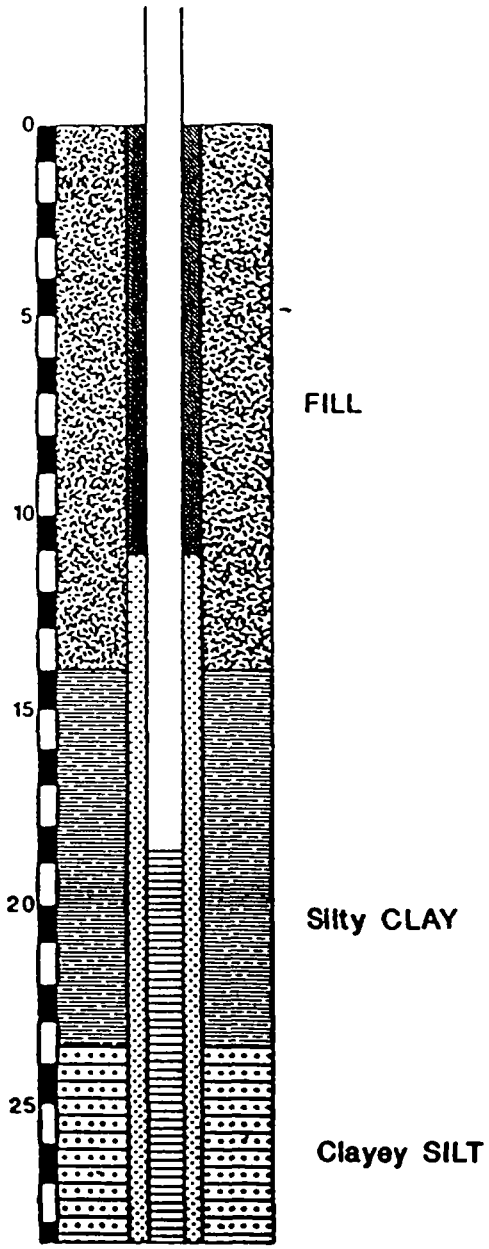
Split Samples Yes No X
Recipient

Comments

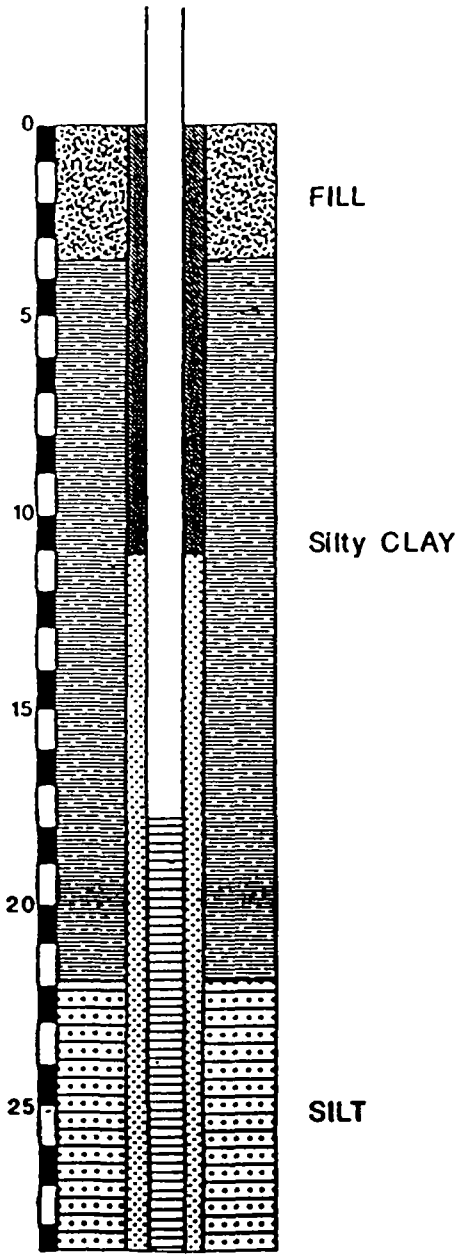
REMARKS

Bentonite grout extends from the top of the filter pack to the surface.

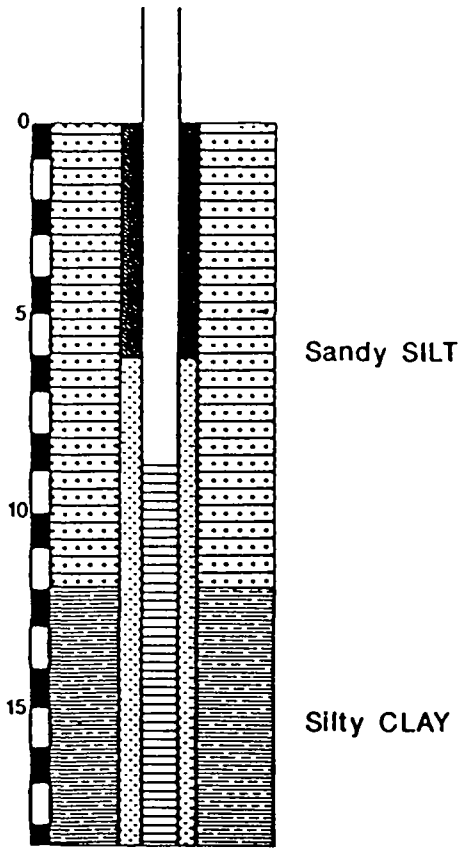
02



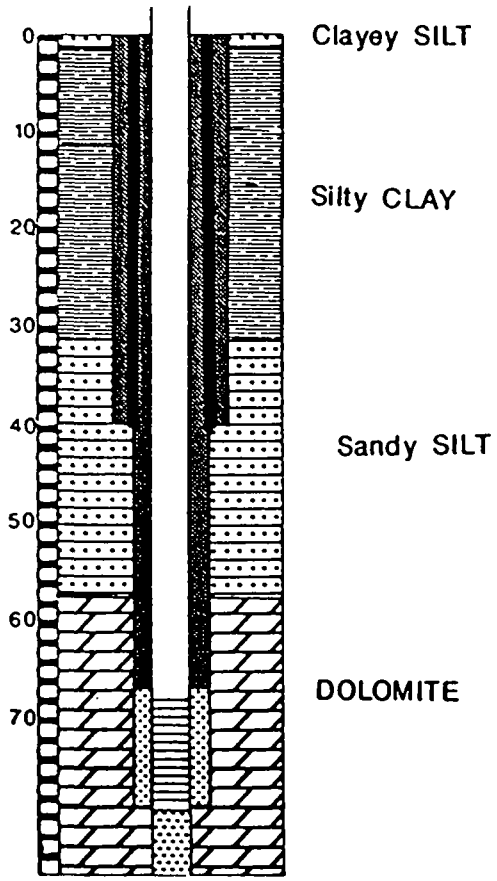
03



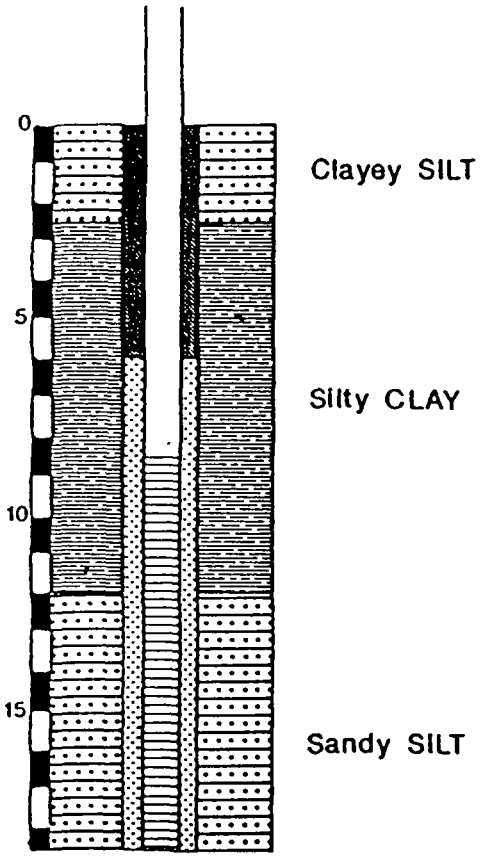
U04

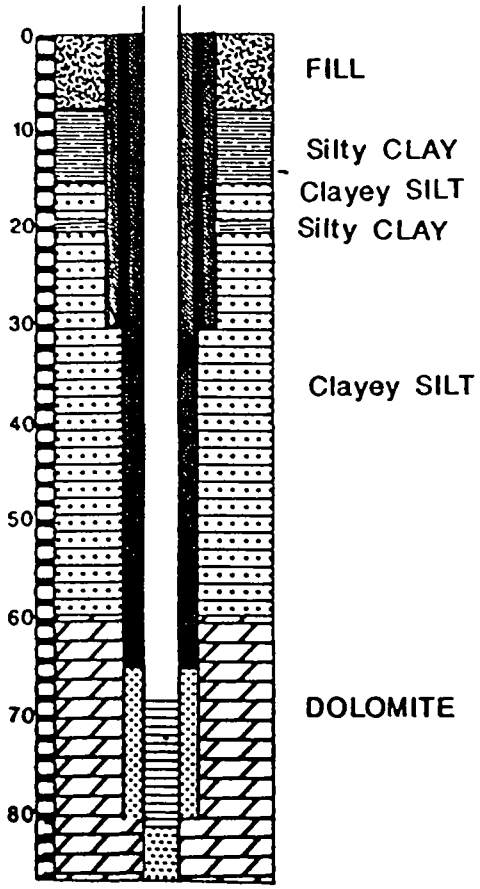


05

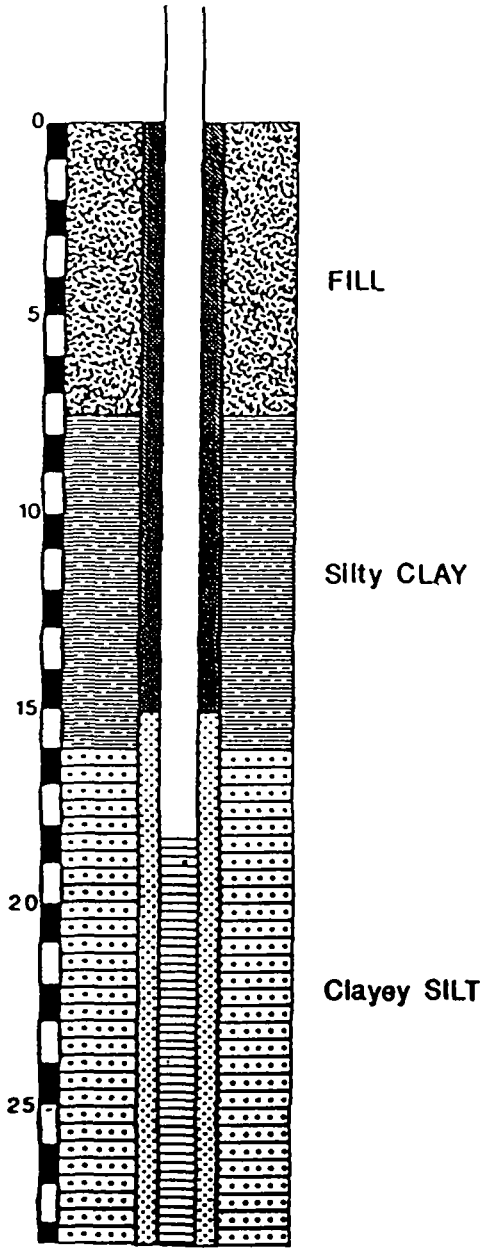

0
10
20
30
40
50
60
70
Clayey SILT
Silty CLAY
Sandy SILT
DOLOMITE

06

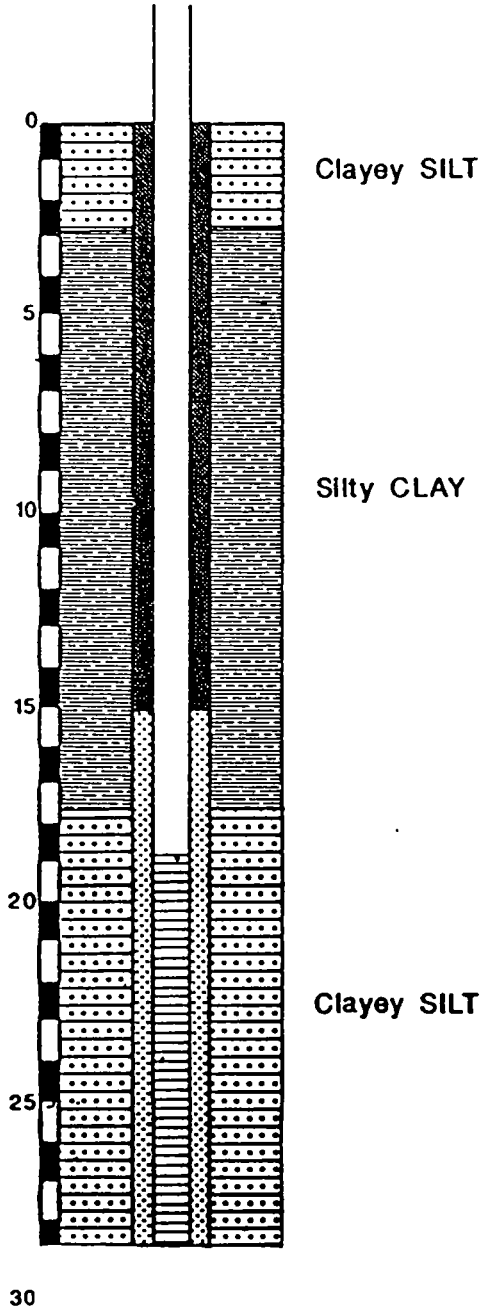



0
10
20
30
40
50
60
70
80
FILL
Silty CLAY
Clayey SILT
Silty CLAY
Clayey SILT
DOLOMITE

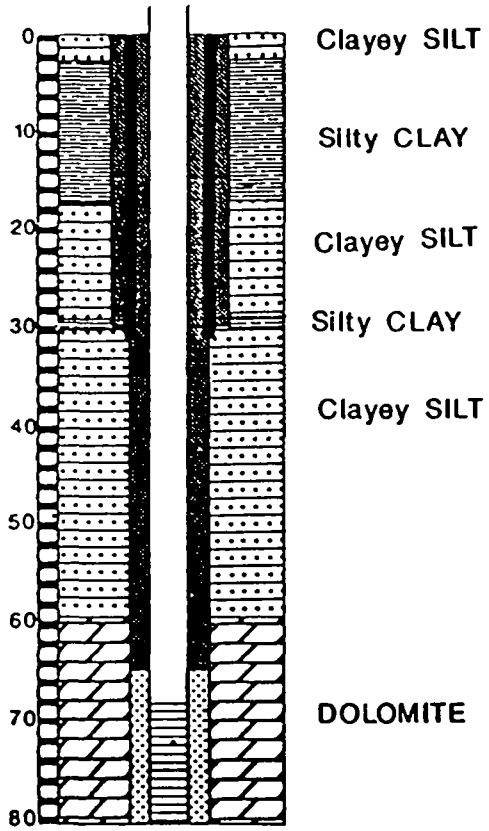
U08

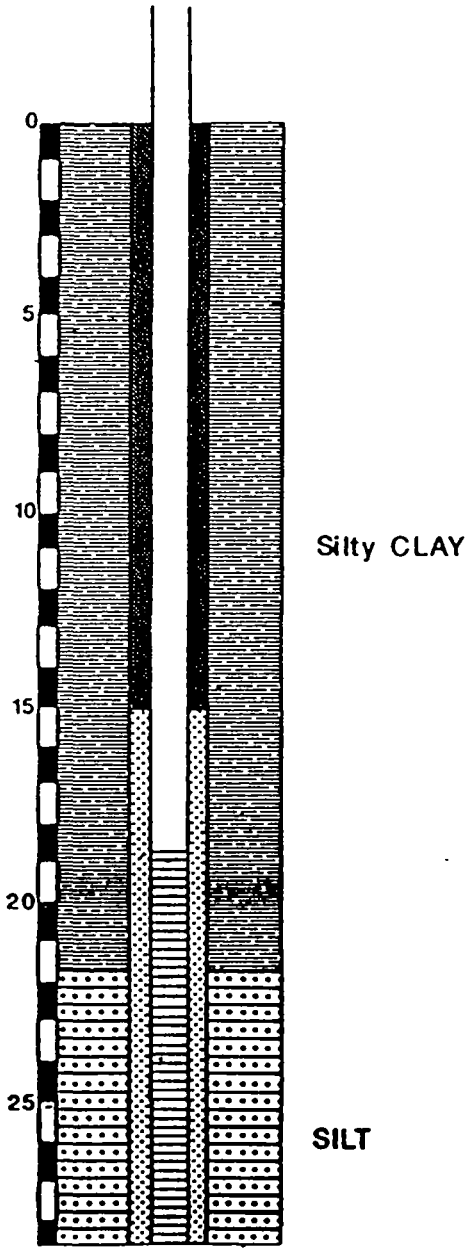


09

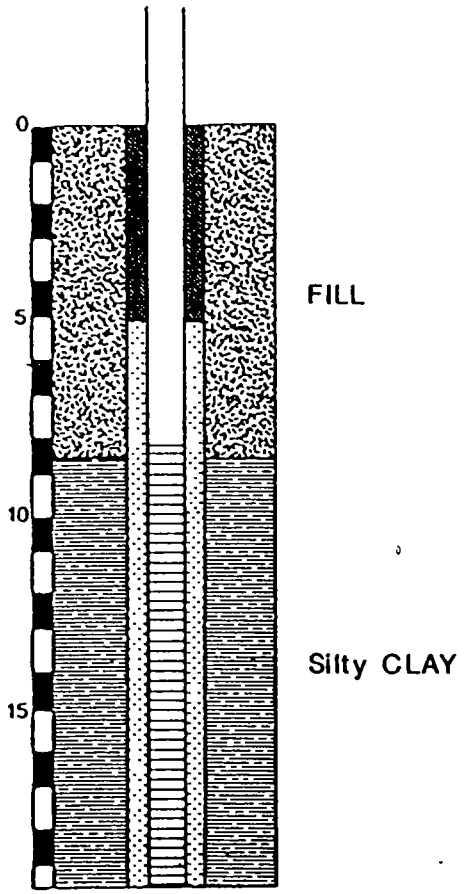


U10


0
10
20
30
40
50
60
70
80
Clayey SILT
Silty CLAY
Clayey SILT
Silty CLAY
Clayey SILT
DOLOMITE


0
5
10
15
20
25
Silty CLAY
SILT

U2



Project Name U. S. Scrap Boring Well No. FIL0102-01

Sample Depth (ft.)	Blow Count	Description
3.5-5.0	5-7-9	Moist, very dark grayish brown (2.5Y 3/2) FILL with roots.
8.5-10.0	2-2-2	Moist, black (10YR 2/2) FILL.
13.5-15.0	4-5-7	Wet, very dark grayish brown (2.5Y 3/2), coarse granular FILL with clay and silt.
		@ 15.5' Moist, grayish brown (2.5Y 5/2) CLAY with sand, pebbles, roots and organic material. CL
18.5-20.0	10-11-16	Wet, grayish brown (2.5Y 5/2), silty CLAY with sand and pebbles. CL
28.5-25.0	6-10-11	Same as above. Moist
28.5-30.0	12-14-14	Same as above. Moist
33.5-35.0	9-24-12	Same as above. Moist
38.5-40.0		Moist, dark gray (10YR 4/1), clayey SILT with sand and pebbles - blocky. ML
43.5-45.0	12-14-22	Same as above.
48.5-50.0	13-15-19	Same as above.
53.5-55.0	35-32-47	Same as above. Hard.
58.5-65.0	119/6"	Same as above. Very hard.
63.5-65.0	100/5"	Same as above. Very hard.
68.5-70.0		Moist, dark gray (10YR 4/1), clayey SILT. ML
73.5-74.0	100/4"	Very hard, moist, dark gray (10YR 4/1), clayey SILT over argillaceous dolomite. ML
74.5-88.5	Cored	Light - dark gray, medium bedded DOLOMITE. Bioturbated, laminated, slightly fossiliferous, fractured.

Project Name U. S. Scrap Boring Well No. FIL0102-04

Sample Depth (ft.)	Blow Count	Description
0.0-1.5	6-6-8	Very dark gray (10Y 3/1) SILT with pebbles. OVA = 4.5 ppm, H20 @ 3.0. OL
3.5-5.0	2-2-2	Wet, black (2.5Y 2/0), sandy SILT with clay. OL
		@ 4.5' wet, dark grayish brown (2.5Y 4/2) CLAY with silt, sand, and pebbles. CL
8.5-10.0	9-16-12	Moist, dark grayish brown (2.5 Y 4/2), clayey SILT with sand and pebbles. Diagenetic selenite in fractures. OVA = 2 ppm. ML
13.5-15.0	7-8-11	Moist, dark gray (10YR 4/1), silty CLAY with sand and pebbles, massive. OVA = 5-7 ppm. CL
18.5-20.0	10-12-19	Same as above. OVA = 3 ppm.
		End of boring.

Project Name U. S. Scrap Boring Well No. FIL0102-05

Sample Depth (ft.)	Blow Count	Description
0.0-1.5	6-7-7	Dark grayish brown (2.5Y 4/2), clayey SILT with sand and pebbles, and roots. ML
3.5-5.0	2-7-8	Damp, olive brown (2.5Y 4/4), silty CLAY with sand and pebbles. CL
8.5-10.0	7-9-12	Damp, dark grayish brown (2.5Y 4/2), silty CLAY with sand and pebbles, fractured. CL
13.5-15.0	6-12-12	Damp, gray (5Y 4/1), silty CLAY, sand, and pebbles. CL
18.5-20.0	12-14-17	Same as above.
23.5-25.0	9-15-16	Damp, olive gray (5Y 4/2), silty CLAY, sand, and pebbles. CL
28.5-30.0	11-22-23	Dry, dark gray (5Y 4/1), pebbly, sandy, silty CLAY, fractured. CL
33.5-35.0	9-26-30	Dry, dark gray (5Y 4/1), pebbly, sandy SILT with clay. ML
38.5-40.0	21-29-24	Same as above.
43.5-.0	11-33-42	Dry, dark gray (5Y 4/1), pebbly, sandy, clayey SILT, dolomite fragments. ML
48.5-50.0	50-76	Same as above.
53.5-55.0	50-75	Dry, dark gray (5Y 4/1) SILT with sand and pebbles, dolomite fragments. ML
58.5-60.0	100/3"	Weathered bedrock, DOLOMITE and silt.
62.0		Bedrock contact at 62.0.
62.0-65.5		Light gray, fractured, coarse grained, calcareous DOLOMITE breccia.
65.5-85.0		Light gray green, medium-bedded, fine-grained, calcareous DOLOMITE. Fine - very fine-grained, occassionally fractured, minor bioturbation and sparsely fossiliferous, slickenside fractures at 79.5 and 81.70.
		End of boring.

Project Name U. S. Scrap Boring Well No. FIL0102-07

Sample Depth (ft.)	Blow Count	Description
0.0-1.5	8-8-12	FILL, black (2.5Y 2/0), organic, silty. OL
3.5-5.0	3-4-6	Saturated, FILL, black (2.5Y 2/0), organic, silty. 30% recovery, H2O @ 4.5'. OL
8.5-10.0	6-8-10	Damp, dark grayish brown (2.5Y 4/2), mottled, silty CLAY with some sand. CL
13.5-15.0	6-6-9	Damp, dark gray (10Y 4/1), fractured, silty CLAY with sand and pebbles. CL
19.5-20.0	13-24-13	Damp, dark gray (10YR 4/1), clayey SILT with pebbles, massive. ML
23.5-25.0	15-15-14	Same as above.
28.5-30	8-25-30	Same as above.
33.5-35.0	17-20-23	Same as above.
38.5-40.0	24-36-38	Same as above.
43.5-55.0	52-100	Same as above. 60% recovery.
48.5-50.0	100/6"	Same as above. 30% recovery.
53.0-55.0	100/3"	Same as above. 15% recovery, obstruction by dolomite fragments.
58.5-60.0	50/100	Same as above. Obstruction by dolomite fragments.
59.5		Bedrock contact at 59.5
61.0-75.75		Gray, medium-bedded, fine - medium-grained, calcareous DOLOMITE, bioturbated, fractured, slightly fossiliferous.
75.75-85.50		Same as above.
		End of boring.

Project Name U. S. Scrap Boring Well No. FIL0102-09

Sample Depth (ft.)	Blow Count	Description
0.0-1.5	10-14-21	Hard, grayish brown - light olive brown (2.5Y 5/2 - 5/4), clayey SILT with sand and pebbles, fractured. ML
3.5-5.0	3-4-5	Damp, dark grayish brown (2.Y 4/2), silty CLAY with sand and small pebbles. CL
8.5-10.0	4-6-6	Damp, dark grayish brown (2.5Y 4/2), silty CLAY with sand and small pebbles, fractured. CL
13.5-15.0	8-14-15	Damp, dark grayish brown (2.5Y 4/2), silty CLAY with sand and small pebbles. CL
18.5-20.0	8-13-15	Damp, olive gray (5Y 4/2) clayey SILT with sand and small pebbles. ML
23.5-25.0		No recovery due to obstruction.
28.5-30.0	10-9-12	Damp, dark grayish brown (10YR 4/2), silty CLAY with sand and pebbles fractured. CL
		End of boring.

Project Name U. S. Scrap Boring Well No. FIL0102-10

Sample Depth (ft.)	Blow Count	Description
0.0-1.5	10-14-21	Hard, grayish brown - light olive brown (2.5Y 5/2 - 5/4), clayey SILT with sand and pebbles, fractured. ML
3.5-5.0	3-4-5	Damp, dark grayish brown (2.5Y 4/2), silty CLAY with sand and small pebbles. CL
8.5-10.0	4-6-6	Damp, dark grayish brown (2.5Y 4/2), silty CLAY with sand and small pebbles, fractured. CL
13.5-15.0	8-14-15	Damp, dark grayish brown (2.5Y 4/2), silty CLAY with sand and small pebbles. CL
18.5-20.0	8-13-18	Damp, olive gray, (5Y 4/2), clayey SILT with sand and small pebbles. ML
23.5-25.0		No recovery due to obstruction.
28.5-30.0	10-9-12	Damp, dark grayish brown (10YR 4/2), clayey SILT with sand and pebbles, fractured. ML
33.5-35.0	20-32-21	Damp, dark olive gray (5Y 3/2) SILT with clay, sand and pebbles. ML
38.5-40.0	20-41-42	Hard, damp, dark gray (5Y 3/2) SILT with clay, sand, and small pebbles. ML
43.5-45.0	20-40-75	Same as above.
48.5-50.0	100/4"	Same as above. Limited recovery due to obstruction.
53.5-55.0	100/6"	No recovery due to obstruction.
59.5		Bedrock contact at 59.5.
59.5-80.8		Light greenish grey - light gray, thin - medium-bedded, fine-grained, calcareous DOLOMITE. Recrystallized and bioturbated with the upper portion composed primarily of microcrystalline dolomite and lower portions more heavily bioturbated with organic laminations. Occasionally fossiliferous and vuggy, minor fractures and clay filled partings.

Project Name U. S. Scrap Boring Well No. FIL0102-11

Sample Depth (ft.)	Blow Count	Description
0.0-1.5	7-8-8	FILL, silty with clay and 0.75 crushed carbonate road aggregate.
3.5-5.0	5-4-7	Damp, mottled dark grayish brown - dark yellowish brown (10YR 4/1 - 4/4), silty CLAY with sand and pebbles. CL
8.5-10.0		Damp, mottled, dark gray - dark yellowish brown (10YR 4/1 - 4/4), silty CLAY with sand and pebbles. CL
13.5-15.0	4-8-9	Moist, dark gray (10YR 4/1) CLAY with silt, sand, and pebbles, fractured. CL
18.5-20.0	5-11-11	Damp, dark gray (10YR 4/1) CLAY with silt, occasionally fine sand seams (1-3 mm), and pebbles. CL
23.5-25.0	6-9-11	Damp, dark gray (10YR 4/1), clayey SILT, sand and pebbles. ML
28.5-30.0	5-15-21	Damp, dark gray (10YR 4/1), clayey SILT, sand and pebbles. ML
		End of boring.

Project Name U. S. Scrap Boring Well No. FIL0102-12

Sample Depth (ft.)	Blow Count	Description
0-1.5		Black - dark brown, silty, sandy organic FILL.
3.5-5.0		Same as above.
8.5-10.0	8-10-10	Damp, dark grayish brown (10YR 4/2), silty CLAY with pebbles. Mottled, fractured. CL
13.5-15.0	5-9-10	Same as above.
18.5-20.0		Damp, dark gray (10YR 4/1), silty CLAY with small pebbles. CL
		End of boring @ 20.0'.

F

APPENDIX F

FIT-COLLECTED MAGNETOMETRY SURVEY DATA

Magnetic Data

[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	55735.199219	1
-50	50	54634.699219	
100	50	53849.101563	2
-150	50	53524.5	3
-200	50	53274	4
-50	100	59982.5	5
-100	100	56455.601563	6
-150	100	56049.300781	7
-200	100	58612	8
50	50	57715.300781	9
50	100	57764.898438	10
50	150	58702.101563	11
50	200	56535.300781	12
100	200	56685.800781	13
100	150	56440.300781	14
100	100	56553.398438	15
100	50	59272.300781	16
150	50	57433	17
150	100	58170.5	18
150	150	58217.398438	19
150	200	58662.300781	20
200	50	55928	21
200	100	58504.199219	24
200	150	57452.601563	25
200	200	58612.199219	26
250	200	58904.800781	27
250	150	58211.199219	28
250	100	57148.699219	29
250	50	58698.5	30
300	50	56555.699219	31
300	100	57997.398438	32
300	150	59413.300781	33
300	200	58491.800781	34
350	200	60269.101563	35
350	150	57780.300781	36
350	100	55444.300781	37
350	50	56952.5	38
400	50	58491.199219	39
400	100	58721	40
400	150	60253.800781	41
400	200	57317.898438	42
450	200	57606.601563	43
450	150	57326	44
450	100	58337.699219	45
450	50	58977.300781	46

[illegible]			
X	Y	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
550	50	[illegible]	54
600	50	56735.398438	55
100	100	[illegible]	[illegible]
[illegible]	150	[illegible]	[illegible]
[illegible]	200	[illegible]	[illegible]
650	200	[illegible]	[illegible]
650	150	[illegible]	60
650	100	[illegible]	[illegible]
650	50	[illegible]	62
[illegible]	200	[illegible]	[illegible]
[illegible]	150	[illegible]	[illegible]
[illegible]	100	[illegible]	[illegible]
[illegible]	50	[illegible]	[illegible]
750	50	[illegible]	[illegible]
[illegible]	100	[illegible]	[illegible]
[illegible]	150	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
800	[illegible]	[illegible]	[illegible]
800	150	[illegible]	[illegible]
800	50	[illegible]	74
850	50	[illegible]	[illegible]
850	100	57673	73
850	150	57147.800781	77
850	200	56795.898438	78
900	150	57535.199219	79
900	50	57164.800781	80
950	50	56945.101563	81
950	100	57595.898438	82
950	150	56743.800781	83
1000	150	56738	84
1000	100	58749.601563	85
1000	50	56476.398438	86
1650	50	57562.398438	121
1650	100	56563.699219	122
1650	150	57143.300781	123
1650	200	57330.898438	124
1600	200	56610.398438	125
1600	150	57218	126
1600	100	57338.101563	127
1600	50	57141.101563	128
1550	50	57548	129
1550	100	57611.601563	130

Coordinates X	Y	Cal.	Status
1350	150	[illegible]	[illegible]
[illegible]	200	[illegible]	[illegible]
[illegible]	200	[illegible]	132
[illegible]	150	[illegible]	134
[illegible]	100	[illegible]	135
[illegible]	50	[illegible]	136
1450	50	56955.[illegible]	137
1450	100	[illegible]	138
1450	150	59136.[illegible]	139
1450	200	56937.[illegible]	140
1400	200	56461.[illegible]	141
1400	150	56601.5	142
1400	100	57914.5	143
1400	50	56822.[illegible]	144
1350	50	56673.[illegible]	145
1350	100	56143.[illegible]	146
1350	150	57333.[illegible]	147
1150	50	55363.[illegible]	1
1150	150	57327.[illegible]	2
1100	200	56707.[illegible]	3
1100	150	58183.[illegible]	4
1100	100	57909.[illegible]	5
1100	50	57243.[illegible]	6
1150	50	57787.[illegible]	7
1150	100	58056.[illegible]	8
1150	150	57058.5	9
1150	200	56934.[illegible]	10
1200	200	58022	11
1200	150	56815.[illegible]	12
1200	100	57394.[illegible]	13
1200	50	56842.[illegible]	14
1250	50	57848.300781	15
1250	100	57259.300781	16
1250	150	57066.601563	17
1300	150	57230.398438	18
1300	100	56834.601563	19
1300	50	56791.5	20

G

APPENDIX G

FIT TEST PIT LOGS

TEST PIT LOGS

TP01

0-5′	Fill: Coarse sand - fine gravel with clay matrix
5-7′	Fill: Crushed drums; fine to medium gravelly clay
7.5-8′	Fill: Same as above, large chunks of rubble
9-10′	Fill: Construction debris (too large to move with track hoe).

TP02

0-3.5′	Fill: Drum fragments
3.5-5′	Fill: Greenish liquid, bricks, scrap metal, cloth
7-10′	Fill: Sandy gray oil material, paint residue, plastic scrap, brick
10-12′	Greenish-gray clay

TP03

0-2′	Fill: Concrete scrap, Rebar, fill (demolition debris)
3-4′	Fill: Dark organic
5′	Fill: Uncovered drums (intact)
6′	Fill: Charred drums and drum fragments
8-10′	Coarse, oil-coated gravel with sand and clay

TP04

0-5′	Fill material (Wood, bricks, etc.)
5-10′	Fill: Crushed drums, fill debris
10-15′	Fill: Crushed drums to 15′, water in excavation
15-20′	Fill: Drums, bottom of hole

TP05

0-1′	Fill: Brick, concrete, old clothing
3′	Fill: Liquid, organics, wood, and sawdust
5.5-6′	Fill: Organics, liquid
12′	Clay layer
15′	Greenish clay

H

APPENDIX H

LOGS OF ABANDONED PRODUCTION WELLS

TOWN Lansing TOWNSHIP Map 23

COMPANY Amer. Malting Co. (W. H. Purcell) No. R. 14E

FARM No. T. Sec.

AUTHORITY J.P.Miller Art.Well 37 27

ELEVATION N NW

COLLECTOR CBA DATE DRILLED

CONFIDENTIAL 1893

No.	STRATA	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Sand, gravel, etc.			67	10
	Limestone			965	
	Sandstone	154		1119	
	Limestone			?	
	Shale, sandy	321		1440	
	Sand, hard, sharp	do.		1562	
	Sand, softer	do.		1597	
	Sand, softer	do.		1615	
	Sand, softer	do.		1656	

NO ENVELOPE

~~ORIGINAL MAP~~

County Cook Index No. 2327

T.—DRILL RECORD

John C. Moore Corporation, Rochester, N.Y. Binder and holes in leaves each Patented 1908

SHEET -2- T 37N R 14E S 27

COMPANY American Malting Co. HOLE No.

No.	STRATA	Depth Feet	Depth In.	Thickness Feet	Thickness In.
138-152	Cambrian System Potsdam Series (Ulrich; bottom seems in Jordan SS) Sandstone, well-rounded colorless	153		1648	

Drillings studied by C.E. Anderson
Interpretation by Prof. Savage & C.E. Anderson

See Sample Study and description of insoluble residues by C.E. Needham in file.

County Cook SS 61 Index No. 2327

T.—DRILL RECORD. 27-37N-14E

John C. Moore Corporation, Rochester, N.Y. Binder and holes in leaves each Patented 1908

(6)

TOWN Kensington TOWNSHIP MAP No. 23

FARM NW¼ R 14E

COMPANY American Malting Co. T. 37N S 27

AUTHORITY C.B. Anderson

ELEVATION 590 HOLE No.

COLLECTOR DATE DRILLED 1951

No.	STRATA	Thickness Feet	Thickness In.	Depth Feet	Depth In.
	Quarternary System Pleistocene Deposits Surface material, sand, clay, & pebbles	68		68	
	Silurian System Niagaran limestone Dolomite, gray, crystalline	427		495	
	Ordovician System Maquoketa shale Shale, gray	120		616	
	Galena-Trenton limestone Dolomite, light gray to brownish-gray crystalline	330		945	
	St. Peter sandstone Quartz sand, colorless, well-rounded grains	120		1065	
	Lower Magnesian limestone or Prairie du Chien " Dolomite, gray to grayish-brown, crystalline	330		1395	
	Sandstone, angular, colorless, rather fine sand cemented with a dolomitic cement	30		1425	
	Dolomite, gray, crystalline, contains specks of a black material, glauconite	70		1495	

County Cook SS 61 Index No. 2327

T.—DRILL RECORD. 27-37N-14E

APPENDIX I

ANALYTICAL RESULTS OF FIT-COLLECTED SAMPLES
1987-1988

COMPOSITE SOIL SAMPLE CROSS-REFERENCE

Sample Designation	CLP Organic Traffic Report Number (Report Volume)	CLP Inorganic Traffic Report Number (Report Volume)	Case Number	Date of Collection
CS01	EN419(2)	MEP094(2)	7581	7/7/87
CS02	EN420(2)	MEP095(2)	7581	7/7/87
CS03	EN421(2)	MEP096(2)	7581	7/7/87
CS04	EN422(2)	MEP097(2)	7581	7/7/87
CS05	ET584(2)	MEU086(2)	7878	8/12/87
CS06	ET585(2)	MEU087(2)	7878	8/12/87
CS07	ET586(2)	MEU088(2)	7878	8/12/87
CS08	ET587(2)	MEU089(2)	7878	8/12/87
CS09	ET588(2)	MEU090(2)	7878	8/12/87
CS10	ET589(2)	MEU091(2)	7878	8/12/87
CS11	ET590(2)	MEU092(2)	7878	8/12/87
CS12	ET591(2)	MEU093(2)	7878	8/12/87
CS13	ET592(2)	MEU094(2)	7878	8/12/87
CS14	ET593(2)	MEU095(2)	7878	8/12/87
CS15	ET594(2)	MEU096(2)	7878	8/12/87
CS16	ET595(2)	MEU097(2)	7878	8/12/87
CS17	EJ491(3)	ME3647(3)	7924	8/18/87
CS18	EJ492(3)	MEU721(3)	7924	8/18/87
CS19	EJ493(3)	MEU722(3)	7924	8/18/87
CS20	EJ494(3)	MEU723(3)	7924	8/18/87
CS21	EL337(3)	MEU724(3)	7924	8/18/87
CS22	EL338(3)	MEU725(3)	7924	8/18/87
CS23	EH436(3)	MEU726(3)	7924	8/18/87
CS24	EH437(3)	MEU727(3)	7924	8/18/87
CS25	EH438(3)	MEU728(3)	7924	8/19/87
CS26	E4786(3)	MEU729(3)	7924	8/19/87
CS27	ET104(3)	MEU730(3)	7924	8/19/87

DISCRETE SOIL SAMPLE CROSS-REFERENCE

Sample Designation	CLP Organic Traffic Report Number (Report Volume)	CLP Inorganic Traffic Report Number (Report Volume)	Case/SAS Number	Date of Collection
DS01	EN424(2)	MEP099(2)	7581/NA	7/7/87
DS02	EN425(2)	MEP100(2)	7581/NA	7/7/87
DS03	EN426(2)	MEP101(2)	7581/NA	7/7/87
DS04	EN427(2)	MEP102(2)	7581/NA	7/7/87
DS05	EN018(3)	MEP396(3)	7795/NA	8/5/87
DS06	EN080(3)	MEP007(3)	7795/NA	8/5/87
DS07	EN081(3)	MEP008(3)	7795/NA	8/5/87
DS08	EN082(3)	MEP009(3)	7795/NA	8/5/87
DS09	EN083(3)	MEP010(3)	7795/NA	8/5/87
DS10	EN084(3)	MEP011(3)	7795/NA	8/5/87
DS11	EN085(3)	MEP012(3)	7795/NA	8/5/87
DS12	ET434(3)	MEU475(3)	7795/NA	8/5/87
DS13	EQ771(4)	MEQ970(5)	8635/NA	12/1/87
DS14	ES001(4)	MEQ975(5)	8635/NA	12/1/87
DS15	ES002(4)	MEQ976(5)	8635/NA	12/1/87
DS16	EN788(3)	MER417(4)	8254/NA	10/15/87
DS17	EX129(6)	MEX232(5)	9614/3871E	5/19/88
DS18	EX130(6)	MEX685(5)	9614/NA	5/19/88

NA Not applicable.

SUBSURFACE SOIL SAMPLE CROSS-REFERENCE

Sample Designation	CLP Organic Traffic Report Number [SAS Number] (Report Volume)	CLP Inorganic Traffic Report Number [SAS Number] (Report Volume)	Case Number	Date of Collection	Sample Location
SS01	EP486(3)	MEP514(3)	8055	9/17/87	FIL0102-01
SS02	EP487(3)	MEP515(3)	8055	9/18/87	FIL0102-01
SS03	EP488(3)	MEP516(3)	8055	9/18/87	FIL0102-01
SS04	EN538(3)	MEP761(3)	8167	9/30/87	FIL0102-04
SS05	EN539(3)	MEP762(3)	8167	10/1/87	FIL0102-05
SS06	EN540(3)	MEP763(3)	8167	10/1/87	FIL0102-05
SS07	EN541(3)	MEP625(3)	8167	10/7/87	FIL0102-07
SS08	EN542(3)	MEP626(3)	8167	10/8/87	FIL0102-07
SS09	EP989(4)	MER571(4)	8288	10/21/87	FIL0102-11
SS10	EJ490(3)	MEL039(3)	7924	8/17/87	Abandoned Well
SS11	EN786(3)	MER415(4)	8254	10/14/87	FIL0102-09
SS12	EN787(3)	MER416(4)	8254	10/15/87	FIL0102-10
SS13	[3155I-01](4)	[3249I-01](4)	NA	10/22/87	FIL0102-12A
SS14	EQ372(4)	MEQ007(4)	8288	10/26/87	FIL0102-12
SS15	EQ373(4)	MEQ008(4)	8288	10/26/87	FIL0102-12

NA Not applicable.

DIOXIN SOIL SAMPLE CROSS-REFERENCE

Sample Designation	SAS Number (Report Volume)	Date of Collection
DSD01	3119E02(5)	7/7/87
DSD02	3254E01(5)	8/5/87
DSD03	3254E02(5)	8/5/87
CSD01	3119E01(5)	7/7/87
CSD02	3254E03(5)	8/18/87
CSD03	3254E04(5)	8/18/87

GROUNDWATER SAMPLE CROSS-REFERENCE
ROUND 1

Sample Designation	CLP Organic Traffic Report Number (Report Volume)	CLP Inorganic Traffic Report Number (Report Volume)	CAS Number	Date of Collection	Sample Location
GW01	EQ410(5)	MEQ044(6)	8404	11/5/87	FIL0102-01
GW02	EQ407(5)	MEQ041(6)	8404	11/4/87	FIL0102-02
GW03	EQ408(5)	MEQ042(6)	8404	11/4/87	FIL0102-03
GW04	EQ404(5)	MEQ038(6)	8404	11/4/87	FIL0102-04
BLANK	EQ400(5)	MEQ034(6)	8404	11/5/87	NA
GW05	EQ757(4)	MEQ963(5)	8635	12/1/88	FIL0102-05
GW06	EQ409(5)	MEQ043(6)	8404	11/4/87	FIL0102-06
GW07	EQ403(5)	MEQ037(6)	8404	11/4/87	FIL0102-07
GW07A	EQ758(4)	MEQ964(5)	8635	11/30/87	FIL0102-07
GW08	EQ759(4)	MEQ965(5)	8635	11/30/87	FIL0102-08
GW09	EQ760(4)	MEQ966(5)	8635	11/30/87	FIL0102-09
GW10	EQ411(5)	MEQ045(6)	8404	11/5/87	FIL0102-10
GW11	EQ761(4)	MEQ967(5)	8635	11/30/87	FIL0102-11
GW12	EQ397(5)	MEQ031(6)	8404	11/4/87	FIL0102-12
GW12DUP	EQ398(5)	MEQ032(6)	8404	11/4/87	FIL0102-12
GW13	EQ405(5)	MEQ039(6)	8404	11/5/87	G-104
GW14	EQ412(5)	MEQ046(6)	8404	11/5/87	G-105
GW15	EQ413(5)	MEQ047(6)	8404	11/5/87	G-101
AW01	EQ414(5)	MEQ048(6)	8404	11/5/87	Abandoned Well
MSD01	EQ762(4)	NA	8635	11/30/87	LC1
MSD02	EQ763(4)	NA	8635	11/30/87	LC2
MSD03	EQ764(4)	NA	8635	11/30/87	LC3
BLANK	EQ765(4)	MEQ971(5)	8635	11/30/87	NA

NA Not applicable.

GROUNDWATER SAMPLE CROSS-REFERENCE
ROUND 2

Sample Designation	CLP Organic Traffic Report Number (Report Volume)	CLP Inorganic Traffic Report Number (Report Volume)	Case/SAS Number	Date of Collection	Sample Location
GW16	EX166(6)	MEX723(6)	9614/3871	5/18/88	FIL0102-01
GW17	EX167(6)	MEX724(6)	9614/3871	5/17-18/88	FIL0102-02
GW18	EX168(6)	MEX725(6)	9614/3871	5/17-18/88	FIL0102-03
GW19	EX169(6)	MEX325(6)	9614/3871	5/17/88	FIL0102-04
GW19DUP	EX172(6)	MEX328(6)	9614/3871	5/17/88	FIL0102-04
GW20	EX170(6)	MEX326(NAN)	9614/3871	5/18/88	FIL0102-05
GW21	EX171(6)	MEX327(6)	9614/3871	5/17-18/88	FIL0102-06
GW22	EX173(6)	MEX329(6)	9614/3871	5/17/88	FIL0102-07
GW23	EX174(6)	MEX330(6)	9614/3871	5/17-18/88	FIL0102-08
GW24	EX175(6)	MEX331(5)	9614/3871	5/17-18/88	FIL0102-09
GW25	EX176(6)	MEX332(6)	9614/3871	5/17/88	FIL0102-10
GW26	EX177(6)	MEX333(6)	9614/3871	5/17-18/88	FIL0102-11
GW27	EX178(6)	MEX334(6)	9614/3871	5/17/88	FIL0102-12
BLANK	EX179(6)	MEX335(6)	9614/3871	5/17/88	NA
GW28	EX180(6)	MEX336(5)	9614/3871	5/18/88	G-101
GW29	EX181(6)	MEX337(5)	9614/3871	5/18/88	G-102
GW30	EX182(6)	MEX338(5)	9614/3871	5/18/88	G-103
GW31	EX183(6)	MEX339(5)	9614/3871	5/18/88	G-104
GW31DUP	EX185(6)	MEX682(5)	9614/3871	5/18/88	G-104
GW32	EX184(6)	MEX340(5)	9614/3871	5/18/88	G-105
BLANK	EX127(6)	MEX683(6)	9614/3871	5/18/88	NA
MSD04	EX128(6)	MEX684(5)	9614/3871	5/19/88	DRAW-OFF BOX, MSD-WEST
BLANK	EX028(6)	MEX860(5)	9614/3871	5/19/88	NA

NA Not applicable.
NAN Not analyzed.

SURFACE WATER SAMPLE CROSS-REFERENCE

Sample Designation	CLP Organic Traffic Report Number (Report Volume)	CLP Inorganic Traffic Report Number (Report Volume)	CRL Log Number (Report Volume)	Case Number	Date of Collection	Sample Location
SW01	EP479(5)	NA	87FC17S67(5)	8027	9/9/87	MSD N. POND
SW01DUP	EP484(5)	NA	87FC17D67(5)	8027	9/9/87	MSD N. POND
SW02	EP480(5)	NA	87FC17S68(5)	8027	9/9/87	MSD N. POND
SW03	EP481(5)	NA	87FC17S69(5)	8027	9/9/87	MSD N. POND
SW04	EP482(5)	NA	87FC17S70(5)	8027	9/9/87	MSD N. POND
BLANK	EP483(5)	NA	87FC17R06(5)	8027	9/9/87	NA
SW05	EQ399(5)	MEQ033(6)	NA	8404	11/4/87	MSD S. POND
SW06	EQ395(5)	MEQ029(6)	NA	8404	11/4/87	MSD S. POND
SW07	EQ401(5)	MEQ035(6)	NA	8404	11/4/87	MSD S. POND
SW08	EQ394(5)	MEQ028(6)	NA	8404	11/4/87	MSD S. POND
BLANK	EQ396(5)	MEQ030(6)	NA	8404	11/4/87	NA
SW09	EQ766(4)	MEQ972(5)	NA	8635	11/30/87	ON-SITE LAGOON
SW10	EQ767(4)	MEQ973(5)	NA	8635	11/30/87	LOADING DOCK
SW10DUP	EQ769(4)	MEQ974(5)	NA	8635	11/30/87	LOADING DOCK
BLANK	EQ770(4)	MEQ969(5)	NA	8635	11/30/87	NA

NA Not applicable.

SEDIMENT SAMPLE CROSS-REFERENCE

Sample Designation	CLP Organic Traffic Report Number (Report Volume)	CLP Inorganic Traffic Report Number (Report Volume)	Case Number	Date of Collection	Sample Location
WS01	EP405(5)	MEP450(5)	8027	9/9/87	MSD N. POND
WS02	EP099(5)	MEP493(5)	8027	9/9/87	MSD N. POND
WS03	EP098(5)	MEP494(5)	8027	9/9/87	MSD N. POND
WS04	EP404(5)	MEP495(5)	8027	9/9/87	MSD N. POND

EXCAVATION SOIL SAMPLE CROSS-REFERENCE

Sample Designation	CLP Organic Traffic Report Number (Report Volume)	CLP Inorganic Traffic Report Number (Report Volume)	Case/SAS Number	Date of Collection	Sample Location
XS01	ES003(4)	MEQ977(5)	NA/3625	12/3/87	TP05
XS02	ES004(4)	MEQ502(5)	NA/3635	12/3/87	TP05
XS03	ES006(4)	MEQ503(4)	8688/NA	12/3/87	TP05
XS04	ES007(4)	MEQ504(4)	8688/NA	12/3/87	TP05
XS05	ES008(4)	MEQ505(4)	8688/NA	12/3/87	TP05
XS06	ES009(4)	MEQ506(4)	8688/NA	12/3/87	TP05
XS07	ES010(4)	MEQ507(4)	8688/NA	12/4/87	TP02
XS08	ES011(4)	MEQ508(4)	8688/NA	12/4/87	TP02
XS09	ES012(4)	MEQ509(4)	8688/NA	12/4/87	TP02
XS10	ES013(4)	MEQ510(4)	8688/NA	12/4/87	TP02
XS11	ES014(4)	MEQ511(4)	8688/NA	12/7/87	TP03
XS12	ES015(4)	MEQ512(4)	8688/NA	12/7/87	TP03
XS13	ES367(4)	MEQ513(4)	8688/NA	12/7/87	TP03
XS14	ES368(4)	MEQ514(4)	8688/NA	12/7/87	TP03
XS15	ES369(4)	MEQ515(4)	8688/NA	12/8/87	TP03
XS16	ES370(4)	MEQ458(4)	8688/NA	12/8/87	TP04
XS17	ES371(4)	MEQ459(4)	8688/NA	12/8/87	TP04
XS18	ES428(5)	MEQ460(4)	8736/NA	12/8/87	TP04
XS19	ES429(5)	MEQ461(4)	8736/NA	12/8/87	TP04
XS20	ES430(5)	MEQ462(4)	8736/NA	12/8/87	TP04
XS21	ES431(5)	MEQ463(4)	8736/NA	12/8/87	TP04
XS22	ES432(5)	MEQ464(4)	8736/NA	12/10/87	TP01
XS23	ES433(5)	MEQ465(4)	8736/NA	12/10/87	TP01
XS24	ES434(5)	MES022(4)	8736/NA	12/10/87	TP01
XS25	ES435(5)	MES023(4)	8736/NA	12/10/87	TP01

NA Not applicable.

COMPOUND	SAMPLE DET. LIMIT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
dimethyl phthalate									
acenapthylene							[illegible]	[illegible]	[illegible]
3-nitroaniline									
acenaphthene								[illegible]	
2,4-dinitrophenol									
4-nitrophenol									
dibenzofuran								[illegible]	[illegible]
2,4-dinitrotoluene									
2,6-dinitrotoluene									
diethylphthalate									
4-chlorophenyl-phenylether									
fluorene								[illegible]	
4-nitroaniline									
4,6-dinitro-2-methylphenol									
N-nitrosodiphenylamine									
4-bromophenyl-phenylether									
hexachlorobenzene									
pentachlorophenol									
phenanthrene		11,000	32,000	6700	11,000	3300	596	850	1600
anthracene			13,000	13,000			113	130	160
di-n-butylphthalate								490	
fluoranthene		12,000	37,000	13,000		6300	930	1000	1300
benzidine									
pyrene		23,000	64,000	15,000			1145	1400	2000
butylbenzylphthalate							819	140	
3,3'-dichlorobenzidine									
benzo(a)anthracene		[illegible]	14,000	6700	13,000		519	810	1900
bis(2-ethylhexyl)phthalate					5000	16,000	1409	2200	240
chrysene					14,000	2700	810	350	1600
di-n-octylphthalate								130	
benzo(b&k)fluoranthene					55,000		1759	1100	2300/130
benzo(a)pyrene					18000		650	820	750
indeno(1,2,3-cd)pyrene							1230	790	1000
dibenzo(a,h)anthracene							346		
benzo(g,h,i)perylene							913	450	600
alpha-BHC									
beta-BHC									
delta-BHC									
gamma-BHC(lindane)									
heptachlor									
aldrin									
heptachlor epoxide									
endosulfan I									
dieldrin									
4,4'-DDE									[illegible]
endrin		[illegible]							
endosulfan II									
4,4'-DDD									
endrin aldehyde									
endosulfan sulfate									
4,4'-DDT									[illegible]
methoxychlor									
endrin ketone		[illegible]	[illegible]						
chlordane		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
toxaphene									
Aroclor-1016									
Aroclor-1221									
Aroclor-1232									
Aroclor-1242									
Aroclor-1248						[illegible]			
Aroclor-1254						[illegible]	[illegible]		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 11/87

SUBJECT: Review of Region V CLP Data Received for Review on AUGUST 24, 1987

FROM: Curtis Ross, Director (5SCRL) Patrick J. Chvalle for
Central Regional Laboratory

TO: Data User: FIT

NOV 19 1987

We have reviewed the data for the following case(s).

SITE NAME: US SCRAP SMO Case No. 7581

EPA Data Set No. SF 4180 No. of Samples: 8 D.U./Activity Numbers V905/C72100

CRL No. 87FC11529 - 536

SMO Traffic No. EN419 - EN427

CLP Laboratory: ENCOTEC Hrs. Required for Review: 3 hrs

Following are our findings:

This review covers 8 soil samples for RAS organics. Five of the 8 were analyzed by medium level method for semivolatiles & pesticide/PCB fraction.

The data qualifier/calibration outlier sheets which follow indicate further qualification of the fraction.

Kevin B. Bolger 11-16-87

( ) Data are acceptable for use.
(✓) Data are acceptable for use with qualifications referenced above.
See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
( ) Data are preliminary - pending verification by Contractor Laboratory.
See Case Summary above.
( ) Data are unacceptable.

cc: Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

DATA QUALIFIERS

Contractor: ENCOTEC

Case 7581

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

1. SAMPLE HOLDING TIMES. All sample holding times were met for all fractions.

2. GC/MS TUNING + GC INSTRUMENT PERFORMANCE. All BFB and DFTPP tunes met criteria for volatile + semivolatile analyses. No outliers for GC performance were noted which affected pesticide/PCB data.

3. CALIBRATION. Calibration outliers for initial/continuing calibrations for volatile and semivolatile parameters are noted on the outlier sheets which follow. No pesticide/PCB calibration outliers were noted.

4. METHOD BLANKS. Volatile method blanks had minor methylene chloride contamination. All levels in real samples were < 10 times blank level and therefore are flagged UJ (estimated DL) at level indicated. Semivolatile blanks had unknown compounds which did not reappear. No pesticide contaminant were noted.

5. SURROGATE RECOVERIES No surrogate outliers were noted.

6. Matrix Spike/MSD RECOVERIES. Matrix spike/duplicates (MS/MSD) analyzed for both low and medium level soil matrices. Outliers for each fraction are noted as follows:

Reviewed by: Kevin B Bolger

Phone: (312) 353-4676

DATA QUALIFIERS

Contractor: ENCOTEL

Case 7581

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

6. (continued) LOW SOIL

[illegible] (semivolatiles) 1,2,4-trichlorobenzene (low MS/MSD%)
pyrene (low MSD%, high RPD)
N-nitroso-n-propylamine (low MSD%)
4-chloro-3-methylphenol (low MS%, high RPD)

[illegible] (pesticides) Dieldrin (MSD% high)
Endrin (high MS%)
4,4'-DDT (high MS%, MSD%)

MEDIUM SOIL

[illegible] (semivolatiles) N-nitroso-n-propylamine (low MS/MSD%)

All [illegible] above fractions are flagged UJ for the listed [illegible] the natural unspiked sample.

Reviewed by: Kevin B Bolger

Phone: (312) 353-4676

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/~~SAS~~ # 7581 CONTRACTOR ENCOTEC

Instrument # 002	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7/17/87														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane	.70	35	J												
Bromomethane	.85	37	J												
Vinyl Chloride															
Chloroethane	.47	38	J												
Methylene Chloride	1.5	39	J												
Acetone	.69	45	J												
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone	.21	51	J												
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene	.88	32	J												
cis-1,3-Dichloropropene															
2-Chloroethylvinylether	.101	31	J												
Bromoform															
4-Methyl-2-Pentanone	.46	36	J												
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

METH BLK
EN419
420
421
422
424
425
426
427
422 MS
422 MSD

Reviewer's Initials/Date: KBB 11-16-87

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 7581 CONTRACTOR ENCOTEC

Instrument # 001	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7/29/87														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid															
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

LOW METH BLK
MED METH BLK
EN419
420
421
422
424
425
426
427
424MS
424MSD

Reviewer Initials/Date: KBB 11-16-87

* These flags should be applied to the analytes on the sample data sheets.

8/87

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 7581 CONTRACTOR ENCOTEC

Instrument # 001	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	7/29/87														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline															
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate	.46	.35	J												
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate	.35	42	J												
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene	1.6	33	J												
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene	.46	39	J												
Dibenz(a,h)Anthracene	.49	35	J												
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: KBB 11-16-87

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 7581 CONTRACTOR ENCOTEC

Instrument # 001	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	~~8/29/87~~ 8/31/87														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid	.047	44	R												
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene	.098	43	J												
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol	.079	57	J												
4-Nitrophenol	.089	44	J												
Dibenzofuran															

AFFECTED SAMPLES:
EN426MS
↓ 426MSD
EN425
426
↓ 427

Reviewer Initials/Date: KBB 11-16-87

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 7581 CONTRACTOR ENCOTEC

Instrument # 001	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	8/7/87														
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline															
4,6-Dinitro-2-Methylphenol	.067	35	J												
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene	.62	33	J												
Dibenz(a,h)Anthracene	.57	42	J												
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: KBB 11-16-87

Case: 7581

Contractor: ENCOTEC

TENTATIVELY IDENTIFIED COMPOUNDS
WATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

Reviewer's Initials/Date: KBB 11-16-87

NARRATIVE

CASE 7581

Case 7581 was received on July 08, 1987 and consisted of eight (8) low soil samples for organic HSL analysis. A pair of duplicate matrix spikes due to mixed levels brought the total samples under our Contract 68-01-7275 to twelve (12).

The volatile fraction was analyzed without any major difficulties. No volatile HSL compounds were detected. Samples were analyzed well within respected holding times and QA/QC was very good.

The semivolatiles fraction was performed based on screening results. All samples were extracted as per low level protocols on July 10, 1987. After screening results were reviewed (as per section D - pages 23-24 of our contract) the following samples were extracted medium level on July 17, 1987:

EN 419
EN 420
EN 421
EN 422
EN 424
EN 424 BNA Matrix Spike & Duplicate

The samples were then analyzed based on extraction schemes described above. The samples mostly contained PNA (Polynuclear aromatic hydrocarbons) at levels not significantly above detection limits. Several samples also contain various hydrocarbons and PNA Tentitively Identified Compounds at significant levels.

GC/MS also made an attempt to confirm pesticide positive hits that had previously been confirm by two dissimilar GC columns during pesticide analysis. GC/MS confirmations were made on the original BNA analysis. Most of the confirmed positive hits for pesticides were at or below detection limits (i.e. 10-15 ng/ul for each component compound). However the confirmation spectra are enclosed for compounds that GC/MS was able to confirm.

In general QA/QC was good. All surrogates were within contract required limits. The low level matrix spike and matrix spike duplicate had severe hydrocarbon background, thus causing a matrix interference with recovery of matrix spike compounds. The medium level spike duplicate did contain many of the HSL compounds found in the original and spike sample (generally estimated values below CRDL) but at levels below 1 ng. Therefore spectra are not good and the compounds reported.

All soil samples for pesticide/PCB analysis were extracted per low level soil protocol. After screening, five (5) soils were re-extracted per medium level soil protocol. These re-extractions were performed on July 14, 1987. Because the original sample EN419 chosen for the initial low level matrix spike screened medium a new sample EN 426 was selected for low level MS/MSD work. These samples were extracted on July 17, 1987. Thus there are three (3) pesticide method blanks for this case, initial low level blank (7/10/87), a medium level blank (7/14/87), and a second low level blank (7/17/87). It was necesary to raise the contract required detection limit (CRDL) for d-BHC and Aldrin in sample EN420 due to interfering peaks. Sample EN419 was positive for Endrin, Tech. Chlordane, and Endrin Ketone. Sample EN420 was positive for Tech. Chlordane, Endrin, and Endrin Ketone. Samples EN421 and EN422 were

postive for both A 1260 and Tech. Chlordane. EN424 was positive for Tech. Chlordane, A 1248 and A 1254. EN425 was positive for Tech. Chlordane, A 1254 and A 1260. EN427 was positive for DDE and DDT. In samples EN419, 420, 421, 422, 424, and 425 false positives for Heptachlor and Heptachlor Exoxide were noted. These false positives were due to the Tech. Chlordane in these samples.

Quantitation for PCB's was done using as many peaks as possible. Numerous peaks were not used due to interferences and overlapping PCB's. Identification and quantitation on the packed column was in good agreement with the capillary column, where more peaks could be resolved for each Aroclor. In samples, EN425 and EN426, A 1254 and A 1260 were found in each. There were no satisfactory peaks that had sole contribution from only one of these PCB's, so the best peaks (those with the majority of contribution from only one PCB), were used and contribution from the other PCB was subtracted out. This method gave good agreement with calculations from the confirmation run.

The presence of Chloradane in the samples required second quantitation and confirmation runs as the first runs did not have continuing calibration (linearity check) for Chloradane in the sequence. Thus for samples containing Chloradane there are two sets of quantitation runs and two sets of confirmation runs. The first run is for all of the compounds except Chloradane (with appropriate dilutions where needed) and the second run is for Chloradane quantification and confirmation.

All DBC surrogate recoveries were within advisory limits. Four out of twelve MS/MSD recoveries were out of QC limits on the low level spikes due to the presence of A 1254 and A 1260 making calculations of spike recoveries

difficult. The recovery of Endrin in the medium level MS/MSD was not calculated due to the high concentration of Endrin found in the sample. All other MS/MSD results were within QC limits. All method blanks were clean of HSL compounds.

One special note for the pesticide results should be mentioned. We have implemented a Nelson computer to help produce more clearly reportable data. This system, however, labels the time on the chromatogram and tables based on the time the data was stored, <u>not</u> when the run was performed. Therefore, we have needed to write the actual analysis time on the sheets.

Case No. 7581 Contract Laboratory ENCOTEC Contract No. 68-01-7275

Low ✓ Medium

	VOLATILE				SEMI-VOLATILE							PESTICIDE
Lab Sample No.	TOLUENE-D8 (81-117)	BFB (74-121)	1,2 DICHLORO ETHANE-D4 (70-121)	NITRO-BENZENE-D5 (23-120)	2-FLUORO-BIPHENYL (30-115)	TERPHENYL-D14 (18-137)			PHENOL-D5 (24-113)	2-FLUORO-PHENOL (25-121)	2,4,6 TRIBROMO PHENOL (19-122)	DIBUTYL-CHLORENDATE** (20-150)
3419	101	104	96	NR	NR	NR			NR	NR	NR	NR
3420	103	109	94	NR	NR	NR			NR	NR	NR	NR
3421	112	99	99	NR	NR	NR			NR	NR	NR	NR
3422	112	92	104	NR	NR	NR			NR	NR	NR	NR
3424	115	100	105	NR	NR	NR			NR	NR	NR	NR
3425	103	96	96	48	53	58			81	29	19	110°
3426	111	92	98	57	55	80			92	60	28	87°
3427	113	87	101	50	34	88			83	70	35	94°
TH.BLK	102	100	92	NR	NR	NR			NR	NR	NR	20
TH BLK	NR	NR	NR	88	78	111			91	84	92	91
422(MS)	110	98	94	NR	NR	NR			NR	NR	NR	NR
422(MSD)	110	93	103	NR	NR	NR			NR	NR	NR	NR
426(MS)	NR	NR	NR	57	52	72			92	71	45	100°
426(MSD)	NR	NR	NR	48	44	29			76	60	34	110°

VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

ADVISORY LIMITS ONLY

Volatiles: ∅ out of 33 ; outside of QC limits

Semi-Volatiles: ∅ out of 36 ; outside of QC limits

Pesticides: ∅ out of 7 ; outside of QC limits

7/85

Comments: ° RECOVERY BASED ON DB-5 CONFIRMATION RUN DUE TO INTERFERENCE

FORM II

Case No. 7581 Contract Laboratory ENCOTEC Contract No. 68-01-7275

Low _____ Medium ✓

	VOLATILE			SEMI-VOLATILE								PESTICIDE**
SMO Traffic No.	Toluene-D8 (81-117)	B/B (74-121)	1,2 Dichloro-Ethane-D4 (70-121)	Nitro-Benzene-D5 (23-120)	2-Fluoro-Biphenyl (30-115)	Terphenyl-D14 (18-137)			Phenol-D5 (24-113)	2-Fluoro-Phenol (25-121)	2,4,6 Tribromo Phenol (19-122)	Dibutyl-Chlorendate (20-150)
N419	NR	NR	NR	39	44	66			55	35	47	120
N420	NR	NR	NR	35	49	77			47	36	37	130
N421	NR	NR	NR	43	54	71			60	47	43	81
N422	NR	NR	NR	42	51	52			57	46	56	95
N424	NR	NR	NR	43	47	44			48	35	43	85
N424 (MS)	NR	NR	NR	47	52	44			63	53	61	NR
N424 (MSD)	NR	NR	NR	41	54	43			59	50	53	NR
N430 (MS)	NR	NR	NR	NR	NR	NR			NR	NR	NR	130*
N430 (MSD)	NR	NR	NR	NR	NR	NR			NR	NR	NR	130*
5TH BLK	NR	NR	NR	37	50	56			50	42	35	NR
10TH BLK	NR	NR	NR	NR	NR	NR			NR	NR	NR	91

VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

*ADVISORY LIMITS ONLY

Volatiles: NR out of NR ; outside of QC limits

Semi-Volatiles: Ø out of 48 ; outside of QC limits

Pesticides: 0 out of 8 ; outside of QC limits

7/85

Comments: *RECOVERY BASED ON DB-5 CONFIRMATION RUN, DUE TO INTERFERENCE

FORM II

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 7581 Contractor ENCOTEC Contract No. 68-01-7275

Low Level X Medium Level _____

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. EN422	1,1-Dicholorethene	57	6u	61	106	67	116	9	22	59-172
	Trichloroethene	57	6u	66	114	67	116	2	24	62-137
	Chlorobenzene	57	6u	72	126	74	128	2	21	60-133
	Toluene	57	6u	78	136	78	136	0	21	59-139
	Benzene	57	6u	74	128	76	132	3	21	66-142
B/N SMO SAMPLE NO. EN426	1,2,4 Trichlorobenzene	3730	370u	1396	37*	1180	32*	14	23	38-107
	Acenaphthene	3730	370u	1693	45	1488	40	12	19	31-137
	2,4 Dinitrotoluene	3730	370u	1485	40	1083	29	32	47	28-89
	Pyrene	3730	1400	4001	70	1541	41*	178*	36	35-142
	N-Nitrosodi-n-Propylamine	3730	370u	1701	46	1388	37*	22	38	41-126
	1,4 Dichlorobenzene	3730	370u	1503	40	1260	34	16	27	28-104
ACID SMO SAMPLE NO. EN426	Pentachlorophenol	7460	1900u	2157	29	1805	24	19	47	17-109
	Phenol	7460	370u	5222	70	4429	59	20	35	26-90
	2-Chlorophenol	7460	370u	4331	58	3845	52	11	50	25-102
	4-Chloro-3-Methylphenol	7460	370u	1818	24*	4506	60	86*	33	26-103
	4-Nitrophenol	7460	1700u	5656	76	3776	51	39	50	11-114
PEST SMO SAMPLE NO. EN426	Lindane	30.3	9.0 U	31.8	105	33.1	109	4.0	50	46-127
	Heptachlor	30.3	9.0 U	31.6	104	34.8	115	9.6	31	35-130
	Aldrin	30.3	9.0 U	26.3	87	27.1	89	3.0	43	34-132
	Dieldrin	75.7	18. U	101	133	102	*135	1.0	38	31-134
	Endrin	75.7	18. U	106	*140	104	137	1.9	45	42-139
	4,4'-DDT	75.7	18. U	131	*173	132	*174	0.8	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOA: 0 out of 5; outside QC limits
B/N 1 out of 6; outside QC limits
ACID 1 out of 5; outside QC limits
PEST 0 out of 6; outside QC limits

RECOVERY: VOA: 0 out of 10; outside QC limits
B/N 4 out of 12; outside QC limits
ACID 1 out of 10; outside QC limits
PEST ~~2~~ 4 (1N) out of 12; outside QC limits

Comments:

FORM III

7/85

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 7581 Contractor ENCOTEC Contract No. 68-01-7375

Low Level _____ Medium Level ✓

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS RPD	QC LIMITS * RECOVERY
VOA SMO SAMPLE NO.	1,1 Dichloroethene	NA	NA	NA	NA	NA	NA	NA	22	59-172
	Trichloroethene	NA	NA	NA	NA	NA	NA	NA	24	62-137
	Chlorobenzene	NA	NA	NA	NA	NA	NA	NA	21	60-133
	Toluene	NA	NA	NA	NA	NA	NA	NA	21	59-139
	Benzene	NA	NA	NA	NA	NA	NA	NA	21	66-142
B/N SMO SAMPLE NO.	1,2,4 Trichlorobenzene	230,000	23,000u	96,600	42	92,000	40	5	23	38-107
	Acenaphthene	230,000	23,000u	85,100	37	87,400	38	3	19	31-137
	2,4 Dinitrotoluene	230,000	23,000u	94,300	41	89,700	39	5	47	28-89
	Pyrene	230,000	23,000u	92,000	40	92,000	40	Ø	30	35-142
	N Nitrosodi n Propylamine	230,000	23,000u	85,100	37*	75,900	33*	11	30	41-126
EN424	1,4 Dichlorobenzene	230,000	23,000u	101,200	44	103,500	45	2	27	28-104
ACID SMO SAMPLE NO.	Pentachlorophenol	460,000	117,000u	78,200	17	82,800	18	6	47	17-109
	Phenol	460,000	23,000u	198,500	43	180,300	39	10	35	26-90
	2 Chlorophenol	460,000	23,000u	202,400	44	204,700	45	2	50	25-102
	4-Chloro-3 Methylphenol	460,000	23,000u	271,400	59	211,600	46	24	33	26-103
EN424	4 Nitrophenol	460,000	117,000u	253,000	55	259,900	57	4	50	11-114
PEST SMO SAMPLE NO.	Lindane	2220	130u	1710	77	1710	77	Ø	60	46-127
	Heptachlor	2220	130u	2190	99	2610	118	17	31	35-130
	Aldrin	2220	280u	2060	93	2030	91	2	43	34-132
	Dieldrin	5560	260u	4420	79	4540	82	3	30	31-134
	Endrin	5560	14000	8980	DL	16300	DL	DL	45	42-139
EN420	4,4' DDT	5560	260u	4940	89	5260	95	6	50	27-133

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOA: — out of 5; outside QC limits
B/N: Ø out of 6; outside QC limits
ACID: Ø out of 5; outside QC limits
PEST: Ø out of 6; outside QC limits

RECOVERY: VOA: — out of 10; outside QC limits
B/N: 2 out of 12; outside QC limits
ACID: Ø out of 10; outside QC limits
PEST: Ø out of 10; outside QC limits

Comments: DL - Not Reportable Due to High Sample Results
Spike Diluted out 1:30

FORM III

7/85

METHOD BLANK SUMMARY

Case No. 7581 Region V Contractor ENCOTEC Contract No. 68-01-7275

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (USE, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
70CLP 14	7/20/87	Pest	Soil	med	3700-3	N/A	None Found			
70CLP 30	7/21/87	Pest	Soil	low	3700-3	N/A	None Found			
70CLP 31	7/21/87	Pest.	Soil	low	3700-3	N/A	None Found			
VOA0K0717	7/17/87	VOA	Soil	Low	002	75-09-02	METHYLENE CHLORIDE	9 (B)	ug/kg	5ug/kg
MB0710B	7/29/87	BNA	Soil	Low	001	NA	UNKNOWN	900	ug/kg	NA
MB0717B	7/29/87	BNA	Soil	Med	001	NA	UNKNOWN	40,000	ug/kg	NA

Comments:

Sample Number
EN419

87FC11S29

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENCOTEC
Case No: 7581
Lab Sample ID No: EN419V
QC Report No: NA
Sample Matrix: Soil
Contract No: 68-01-7275
Date Release Authorized By: C.M. Oc
Date Sample Received: 7/08/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 7/17/87
Date Analyzed: 7/17/87
Conc/Dil Factor: 1 pH: 7
Percent Moisture: (Not Decanted) ~~10~~ 12%

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	11u
74-83-9	Bromomethane	11u
75-01-4	Vinyl Chloride	11u
75-00-3	Chloroethane	11u
75-09-2	Methylene Chloride	6a 1508
67-64-1	Acetone	11u
75-15-0	Carbon Disulfide	6u
75-35-4	1,1-Dichloroethene	6u
75-34-3	1,1-Dichloroethane	6u
156-60-5	Trans-1,2-Dichloroethene	6u
67-66-3	Chloroform	6u
107-06-2	1,2-Dichloroethane	6u
78-93-3	2-Butanone	11u
71-55-6	1,1,1-Trichloroethane	6u
56-23-5	Carbon Tetrachloride	6u
108-05-4	Vinyl Acetate	11u
75-27-4	Bromodichloromethane	6u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	6u
10061-02-6	Trans-1,3-Dichloropropene	6u
79-01-6	Trichloroethene	6u
124-48-1	Dibromochloromethane	6u
79-00-5	1,1,2-Trichloroethane	6u
71-43-2	Benzene	6u
10061-01-5	Cis-1,3-Dichloropropene	6u
110-75-8	2-Chloroethylvinylether	11u
75-25-2	Bromoform	6u
108-10-1	4-Methyl-2-Pentanone	11u
591-78-6	2-Hexanone	11u
127-18-4	Tetrachloroethene	6u
79-34-5	1,1,2,2-Tetrachloroethane	6u
108-88-3	Toluene	6u
108-90-7	Chlorobenzene	6u
100-41-4	Ethylbenzene	6u
100-42-5	Styrene	6u
	Total Xylenes	6u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged, however, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.)* The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name ENCOTEC

Case No 7581

Sample Number EN-419

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 7/17/87

Date Analyzed 7/29/87

Conc/Dil Factor 1

Percent Moisture (Decanted) 12%

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	23,000u
111-44-4	bis(2-Chloroethyl)Ether	23,000u
95-57-8	2-Chlorophenol	23,000u
541-73-1	1,3-Dichlorobenzene	23,000u
106-46-7	1,4-Dichlorobenzene	23,000u
100-51-6	Benzyl Alcohol	23,000u
95-50-1	1,2-Dichlorobenzene	23,000u
95-48-7	2-Methylphenol	23,000u
39638-32-9	bis(2-chloroisopropyl)Ether	23,000u
106-44-5	4-Methylphenol	23,000u
621-64-7	N-Nitroso-Di-n-Propylamine	23,000u
67-72-1	Hexachloroethane	23,000u
98-95-3	Nitrobenzene	23,000u
78-59-1	Isophorone	23,000u
88-75-5	2-Nitrophenol	23,000u
105-67-9	2,4-Dimethylphenol	23,000u
65-85-0	Benzoic Acid	110,000u
111-91-1	bis(2-Chloroethoxyl)Methane	23,000u
120-83-2	2,4-Dichlorophenol	23,000u
120-82-1	1,2,4-Trichlorobenzene	23,000u
91-20-3	Naphthalene	23,000u
106-47-8	4-Chloroaniline	23,000u
87-68-3	Hexachlorobutadiene	23,000u
59-50-7	4-Chloro-3-Methylphenol	23,000u
91-57-6	2-Methylnaphthalene	23,000u
77-47-4	Hexachlorocyclopentadiene	23,000u
88-06-2	2,4,6-Trichlorophenol	23,000u
95-95-4	2,4,5-Trichlorophenol	110,000u
91-58-7	2-Chloronaphthalene	23,000u
88-74-4	2-Nitroaniline	110,000u
131-11-3	Dimethyl Phthalate	23,000u
208-96-8	Acenaphthylene	23,000u
99-09-2	3-Nitroaniline	110,000u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	23,000u
51-28-5	2,4-Dinitrophenol	110,000u
100-02-7	4-Nitrophenol	110,000u
132-64-9	Dibenzofuran	23,000u
121-14-2	2,4-Dinitrotoluene	23,000u
606-20-2	2,6-Dinitrotoluene	23,000u
84-66-2	Diethylphthalate	23,000u
7005-72-3	4-Chlorophenyl-phenylether	23,000u
86-73-7	Fluorene	23,000u
100-01-6	4-Nitroaniline	110,000u
534-52-1	4,6-Dinitro-2-Methylphenol	110,000u
86-30-6	N-Nitrosodiphenylamine (1)	23,000u
101-55-3	4-Bromophenyl-phenylether	23,000u
118-74-1	Hexachlorobenzene	23,000u
87-86-5	Pentachlorophenol	110,000u
85-01-8	Phenanthrene	~~23,000u~~ 11,000J
120-12-7	Anthracene	23,000u
84-74-2	Di-n-Butylphthalate	23,000u
206-44-0	Fluoranthene	~~23,000u~~ 20,000J
129-00-0	Pyrene	~~23,000u~~ 23,000J
85-68-7	Butylbenzylphthalate	23,000u
91-94-1	3,3'-Dichlorobenzidine	46,000u
56-55-3	Benzo(a)Anthracene	~~23,000u~~ 8,300J
117-81-7	bis(2-Ethylhexyl)Phthalate	23,000u
218-01-9	Chrysene	23,000u
117-84-0	Di-n-Octyl Phthalate	23,000u
205-99-2	Benzo(b)Fluoranthene	23,000u
207-08-9	Benzo(k)Fluoranthene	23,000u
50-32-8	Benzo(a)Pyrene	23,000u
193-39-5	Indeno(1,2,3-cd)Pyrene	23,000u
53-70-3	Dibenz(a,h)Anthracene	23,000u
191-24-2	Benzo(g,h,i)Perylene	23,000u

(1)-Cannot be separated from diphenylamine

Laboratory Name: ENCOTEC

Case No: 7581

Sample Number: EN419

87FC11S29

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 7-14-1987

Date Analyzed: 7-21-1987

Conc/Dil Factor: 3, 30

Percent Moisture (decanted): 12

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	140 U
319-85-7	Beta-BHC	140 U
319-86-8	Delta-BHC	140 U
58-89-9	Gamma-BHC (Lindane)	140 U
76-44-8	Heptachlor	140 U
309-00-2	Aldrin	140 U
1024-57-3	Heptachlor Epoxide	140 U
959-98-8	Endosulfan I	140 U
60-57-1	Dieldrin	280 U
72-55-9	4, 4'-DDE	280 U
72-20-8	Endrin	20000
33213-65-9	Endosulfan II	280 U
72-54-8	4, 4'-DDD	280 U
1031-07-8	Endosulfan Sulfate	280 U
50-29-3	4, 4'-DDT	280 U
72-43-5	Methoxychlor	1400 U
53494-70-5	Endrin Ketone	2600
57-74-9	Chlordane	~~27,000 TR~~ 26,000
8001-35-2	Toxaphene	2800 U
12674-11-2	Aroclor-1016	1400 U
11104-28-2	Aroclor-1221	1400 U
11141-16-5	Aroclor-1232	1400 U
53469-21-9	Aroclor-1242	1400 U
12672-29-6	Aroclor-1248	1400 U
11097-69-1	Aroclor-1254	2800 U
11096-82-5	Aroclor-1260	2800 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s — or W_s 1.04 V_t 10,000 V_i 2.0

Laboratory Name ENCOTEC

Case No. 7581

Sample Number
EN 419

87FC11S29

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. NA ~~693-07-7~~	~~trimethylsilanol~~ UNKNOWN	VOA	299	9 (J)
2. 16747-26-5	2,2,4-trimethylhexane	VOA	581	35 (J)
3. NA	UNKNOWN	BNA	1415	115,000 (J)
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Sample Number
EN420

87FC11S30

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENCOTEC

Case No: 7581

Lab Sample ID No: EN420V

QC Report No: NA

Sample Matrix: Soil

Contract No: 68-01-7275

Data Release Authorized By: C. M. Oc

Date Sample Received: 7/08/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7/17/87

Date Analyzed: 7/17/87

Conc/(Dil Factor): 1 pH: 8

Percent Moisture: (Not Decanted) ~~10-13%~~ 10% SK

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	11u
74-83-9	Bromomethane	11u
75-01-4	Vinyl Chloride	11u
75-00-3	Chloroethane	11u
75-09-2	Methylene Chloride	~~6u~~ 12B
67-64-1	Acetone	11u
75-15-0	Carbon Disulfide	6u
75-35-4	1,1-Dichloroethene	6u
75-34-3	1,1-Dichloroethane	6u
156-60-5	Trans-1,2-Dichloroethene	6u
67-66-3	Chloroform	6u
107-06-2	1,2-Dichloroethane	6u
78-93-3	2-Butanone	11u
71-55-6	1,1,1-Trichloroethane	6u
56-23-5	Carbon Tetrachloride	6u
108-05-4	Vinyl Acetate	11u
75-27-4	Bromodichloromethane	6u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1,2-Dichloropropane	6u
10061-02-6	Trans-1,3-Dichloropropene	6u
79-01-6	Trichloroethene	6u
124-48-1	Dibromochloromethane	6u
79-00-5	1,1,2-Trichloroethane	6u
71-43-2	Benzene	6u
10061-01-5	Cis-1,3-Dichloropropene	6u
110-75-8	2-Chloroethylvinylether	11u
75-25-2	Bromoform	6u
108-10-1	4-Methyl-2-Pentanone	11u
591-78-6	2-Hexanone	11u
127-18-4	Tetrachloroethene	6u
79-34-5	1,1,2,2-Tetrachloroethane	6u
108-88-3	Toluene	6u
108-90-7	Chlorobenzene	6u
100-41-4	Ethylbenzene	6u
100-42-5	Styrene	6u
	Total Xylenes	6u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

11/85

Laboratory Name ENCOTEC

Case No 7581

Sample Number EN420

87FC11S30

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 7/17/87

Date Analyzed: 7/29/87

Conc/Dil Factor 1

Percent Moisture (Decanted) 10%

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	33,000u
111-44-4	bis(2-Chloroethyl)Ether	33,000u
95-57-8	2-Chlorophenol	33,000u
541-73-1	1,3-Dichlorobenzene	33,000u
106-46-7	1,4-Dichlorobenzene	33,000u
100-51-6	Benzyl Alcohol	33,000u
95-50-1	1,2-Dichlorobenzene	33,000u
95-48-7	2-Methylphenol	33,000u
39638-32-9	bis(2-chloroisopropyl)Ether	33,000u
106-44-5	4-Methylphenol	33,000u
621-64-7	N-Nitroso-Di-n-Propylamine	33,000u
67-72-1	Hexachloroethane	33,000u
98-95-3	Nitrobenzene	33,000u
78-59-1	Isophorone	33,000u
88-75-5	2-Nitrophenol	33,000u
105-67-9	2,4-Dimethylphenol	33,000u
65-85-0	Benzoic Acid	110,000u
111-91-1	bis(2-Chloroethoxy)Methane	33,000u
120-83-2	2,4-Dichlorophenol	33,000u
120-82-1	1,2,4-Trichlorobenzene	33,000u
91-20-3	Naphthalene	33,000u
106-47-8	4-Chloroaniline	33,000u
87-68-3	Hexachlorobutadiene	33,000u
59-50-7	4-Chloro-3-Methylphenol	33,000u
91-57-6	2-Methylnaphthalene	~~33,000u~~ 34,000 J K 8/20/87
77-47-4	Hexachlorocyclopentadiene	33,000u
88-06-2	2,4,6-Trichlorophenol	33,000u
95-95-4	2,4,5-Trichlorophenol	110,000u
91-58-7	2-Chloronaphthalene	33,000u
88-74-4	2-Nitroaniline	110,000u
131-11-3	Dimethyl Phthalate	33,000u
208-96-8	Acenaphthylene	33,000u
99-09-2	3-Nitroaniline	110,000u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	33,000u
51-28-5	2,4-Dinitrophenol	110,000u
100-02-7	4-Nitrophenol	110,000u
132-64-9	Dibenzofuran	33,000u
121-14-2	2,4-Dinitrotoluene	33,000u
606-20-2	2,6-Dinitrotoluene	33,000u
84-66-2	Diethylphthalate	33,000u
7005-72-3	4-Chlorophenyl-phenylether	33,000u
86-73-7	Fluorene	33,000u
100-01-6	4-Nitroaniline	110,000u
534-52-1	4,6-Dinitro-2-Methylphenol	110,000u
86-30-6	N-Nitrosodiphenylamine (1)	33,000u
101-55-3	4-Bromophenyl-phenylether	33,000u
118-74-1	Hexachlorobenzene	33,000u
87-86-5	Pentachlorophenol	110,000u
85-01-8	Phenanthrene	~~33,000u~~ 33,000 J K 8/20/87
120-12-7	Anthracene	~~33,000u~~ 37,000 J
84-74-2	Di-n-Butylphthalate	33,000u
206-44-0	Fluoranthene	~~33,000u~~ 37,000 J K 8/20/87
129-00-0	Pyrene	~~33,000u~~ 64,000 J
85-68-7	Butylbenzylphthalate	33,000u
91-94-1	3,3'-Dichlorobenzidine	44,000u
56-55-3	Benzo(a)Anthracene	~~33,000u~~ 14,000 J K 8/20/87
117-81-7	bis(2-Ethylhexyl)Phthalate	33,000u
218-01-9	Chrysene	33,000u
117-84-0	Di-n-Octyl Phthalate	33,000u
205-99-2	Benzo(b)Fluoranthene	33,000u
207-08-9	Benzo(k)Fluoranthene	33,000u
50-32-8	Benzo(a)Pyrene	33,000u
193-39-5	Indeno(1,2,3-cd)Pyrene	33,000u
53-70-3	Dibenz(a,h)Anthracene	33,000u
191-24-2	Benzo(g,h,i)Perylene	33,000u

(1)-Cannot be separated from diphenylamine

Laboratory Name ENCOTEC

Case No 7581

Sample Number EN420

87FC11S30

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared: 7-14-1987

Date Analyzed: 7-21-1987

Conc/Dil Factor: 3, 30

Percent Moisture (decanted) 10

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	130U
319-85-7	Beta-BHC	130U
319-86-8	Delta-BHC	1400U
58-89-9	Gamma-BHC (Lindane)	130U
76-44-8	Heptachlor	130U
309-00-2	Aldrin	280U
1024-57-3	Heptachlor Epoxide	130U
959-98-8	Endosulfan I	130U
60-57-1	Dieldrin	260U
72-55-9	4,4'-DDE	260U
72-20-8	Endrin	14000
33213-65-9	Endosulfan II	260U
72-54-8	4,4'-DDD	260U
1031-07-8	Endosulfan Sulfate	260U
50-29-3	4,4'-DDT	260U
72-43-5	Methoxychlor	1300U
53494-70-5	Endrin Ketone	~~2700~~
57-74-9	Chlordane	(70,000)
8001-35-2	Toxaphene	2600U
12674-11-2	Aroclor-1016	1300U
11104-28-2	Aroclor-1221	1300U
11141-16-5	Aroclor-1232	1300U
53469-21-9	Aroclor-1242	1300U
12672-29-6	Aroclor-1248	1300U
11097-69-1	Aroclor-1254	2600U
11096-82-5	Aroclor-1260	2600U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s — or W_s 1.02 V_t 10000 V_i 2.0

Laboratory Name ENCOTEC

Case No. 7581

Sample Number

EN480

87FC11S30

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. NA	UNKNOWN	VOA	219	41
2. NA	UNKNOWN	VOA	564	7
3. NA	UNKNOWN	VOA	658	14
4. NA-1	UNKNOWN	BNA	1414	67,000
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Sample Number

EN42T

87FC11531

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSOTECH

Case No: 7581

Lab Sample ID No: EN42IV

QC Report No: NA

Sample Matrix: SOIL

Contract No: 68-01-7275

Data Release Authorized By: C. M. Gc

Date Sample Received: 7/08/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7/17/87

Date Analyzed: 7/17/87

Conc/(Dil Factor): 1 pH 8

Percent Moisture: (Not Decanted) 15%

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	12u
74-83-9	Bromomethane	12u
75-01-4	Vinyl Chloride	12u
75-00-3	Chloroethane	12u
75-09-2	Methylene Chloride	~~6u~~ 12 JK 7/29/87
67-64-1	Acetone	12u UJ
75-15-0	Carbon Disulfide	6u Kag 7/29/87
75-35-4	1, 1-Dichloroethene	6u
75-34-3	1, 1-Dichloroethane	6u
156-60-5	Trans-1, 2-Dichloroethene	6u
67-66-3	Chloroform	6u
107-06-2	1, 2-Dichloroethane	6u
78-93-3	2-Butanone	12u
71-55-6	1, 1, 1-Trichloroethane	6u
56-23-5	Carbon Tetrachloride	6u
108-05-4	Vinyl Acetate	12u
75-27-4	Bromodichloromethane	6u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	6u
10061-02-6	Trans-1, 3-Dichloropropene	6u
79-01-6	Trichloroethene	6u
124-48-1	Dibromochloromethane	6u
79-00-5	1, 1, 2-Trichloroethane	6u
71-43-2	Benzene	6u
10061-01-5	cis-1, 3-Dichloropropene	6u
110-75-8	2-Chloroethylvinylether	12u
75-25-2	Bromoform	6u
108-10-1	4-Methyl-2-Pentanone	12u
591-78-6	2-Hexanone	12u
127-18-4	Tetrachloroethene	6u
79-34-5	1, 1, 2, 2-Tetrachloroethane	6u
108-88-3	Toluene	6u
108-90-7	Chlorobenzene	6u
100-41-4	Ethylbenzene	6u
100-42-5	Styrene	6u
	Total Xylenes	6u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged, however, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name: ENCOTEC

Case No: 7581

Sample Number
EN421

87FC11531

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared: 7/17/87

Date Analyzed: 7/24/87

Conc/Dil Factor: 1

Percent Moisture (Decanted): 15%

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
108-95-2	Phenol	24,000u
111-44-4	bis(2-Chloroethyl)Ether	24000u
95-57-8	2-Chlorophenol	24000u
541-73-1	1,3-Dichlorobenzene	24000u
106-46-7	1,4-Dichlorobenzene	24000u
100-51-6	Benzyl Alcohol	24000u
95-50-1	1,2-Dichlorobenzene	24000u
95-48-7	2-Methylphenol	24000u
39638-32-9	bis(2-chloroisopropyl)Ether	24000u
106-44-5	4-Methylphenol	24000u
621-64-7	N-Nitroso-Di-n-Propylamine	24000u
67-72-1	Hexachloroethane	24000u
98-95-3	Nitrobenzene	24000u
78-59-1	Isophorone	24000u
88-75-5	2-Nitrophenol	24000u
105-67-9	2,4-Dimethylphenol	24000u
65-85-0	Benzoic Acid	120,000u
111-91-1	bis(2-Chloroethoxy)Methane	24000u
120-83-2	2,4-Dichlorophenol	24000u
120-82-1	1,2,4-Trichlorobenzene	24000u
91-20-3	Naphthalene	24000u
106-47-8	4-Chloroaniline	24000u
87-68-3	Hexachlorobutadiene	24000u
59-50-7	4-Chloro-3-Methylphenol	24000u
91-57-6	2-Methylnaphthalene	24000u
77-47-4	Hexachlorocyclopentadiene	24000u
88-06-2	2,4,6-Trichlorophenol	24000u
95-95-4	2,4,5-Trichlorophenol	120,000u
91-58-7	2-Chloronaphthalene	24000u
88-74-4	2-Nitroaniline	120000u
131-11-3	Dimethyl Phthalate	24000u
208-96-8	Acenaphthylene	24000u
99-09-2	3-Nitroaniline	120000u

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	24000u
51-28-5	2,4-Dinitrophenol	120,000u
100-02-7	4-Nitrophenol	120,000u
132-64-9	Dibenzofuran	24000u
121-14-2	2,4-Dinitrotoluene	24000u
606-20-2	2,6-Dinitrotoluene	24000u
84-66-2	Diethylphthalate	24000u
7005-72-3	4-Chlorophenyl-phenylether	24000u
86-73-7	Fluorene	24000u
100-01-6	4-Nitroaniline	120,000u
534-52-1	4,6-Dinitro-2-Methylphenol	120,000u
86-30-6	N-Nitrosodiphenylamine (1)	24000u
101-55-3	4-Bromophenyl-phenylether	24000u
118-74-1	Hexachlorobenzene	24000u
87-86-5	Pentachlorophenol	120,000u
85-01-8	Phenanthrene	~~24000u~~ 6,600J JK 8/06/87
120-12-7	Anthracene	24000u
84-74-2	Di-n-Butylphthalate	24000u
206-44-0	Fluoranthene	~~24000u~~ 13,000J JK 8/06/87
129-00-0	Pyrene	~~24000u~~ 18,000J
85-68-7	Butylbenzylphthalate	24000u
91-94-1	3,3'-Dichlorobenzidine	48,000u
56-55-3	Benzo(a)Anthracene	~~24000~~ 6,700J JK 8/06/87
117-81-7	bis(2-Ethylhexyl)Phthalate	24000u
218-01-9	Chrysene	24000u
117-84-0	Di-n-Octyl Phthalate	24000u
205-99-2	Benzo(b)Fluoranthene	24000u
207-08-9	Benzo(k)Fluoranthene	24000u
50-32-8	Benzo(a)Pyrene	24000u
193-39-5	Indeno(1,2,3-cd)Pyrene	24000u
53-70-3	Dibenz(a,h)Anthracene	24000u
191-24-2	Benzo(g,h,i)Perylene	24000u

(1)-Cannot be separated from diphenylamine

Laboratory Name ENCOTEC

Case No 7581

Sample Number
EN421

87FC11531

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration. Low (Medium) (Circle One)

Date Extracted/Prepared: 7-14-1987

Date Analyzed: 7-20-1987 ~~7-22-1987~~ JB

Conc/(Dil Factor): 3

Percent Moisture (decanted) 15

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)	
319-84-6	Alpha-BHC	140	U
319-85-7	Beta-BHC	140	U
319-86-8	Delta-BHC	140	U
58-89-9	Gamma-BHC (Lindane)	140	U
76-44-8	Heptachlor	140	U
309-00-2	Aldrin	140	U
1024-57-3	Heptachlor Epoxide	140	U
959-98-8	Endosulfan I	140	U
60-57-1	Dieldrin	280	U
72-55-9	4, 4'-DDE	280	U
72-20-8	Endrin	280	U
33213-65-9	Endosulfan II	280	U
72-54-8	4, 4'-DDD	280	U
1031-07-8	Endosulfan Sulfate	280	U
50-29-3	4, 4'-DDT	280	U
72-43-5	Methoxychlor	1400	U
53494-70-5	Endrin Ketone	280	U
57-74-9	Chlordane	~~1400~~ ~~U~~ 8-13-87	5,900
8001-35-2	Toxaphene	2800	U
12674-11-2	Aroclor-1016	1400	U
11104-28-2	Aroclor-1221	1400	U
11141-16-5	Aroclor-1232	1400	U
53469-21-9	Aroclor-1242	1400	U
12672-29-6	Aroclor-1248	1400	U
11097-69-1	Aroclor-1254	2800	U
11096-82-5	Aroclor-1260	2800	

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 1.13 V_t 10000 V_i 2.0

Laboratory Name ENCOTEC

Case No. 7501

Sample Number

EN421

87FC11531

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. NA	UNKNOWN	VOA	222	12 J
2. NA	UNKNOWN	BNA	1414	56,000 J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Sample Number
EN422

87FC11S32

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENCOTEC
Case No: 7581
Lab Sample ID No: EN422V
QC Report No: NA
Sample Matrix: Soil
Contract No: 68-01-7275
Data Release Authorized By: C. M. [illegible]
Date Sample Received: 7/08/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 7/17/87
Date Analyzed: 7/17/87
Conc/Dil Factor: 1 pH: 8
Percent Moisture: (Not Decanted) ~~10-13%~~ 13%

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	11u
74-83-9	Bromomethane	11u
75-01-4	Vinyl Chloride	11u
75-00-3	Chloroethane	11u
75-09-2	Methylene Chloride	6u 13(B)
67-64-1	Acetone	11u
75-15-0	Carbon Disulfide	6u
75-35-4	1,1-Dichloroethene	6u
75-34-3	1,1-Dichloroethane	6u
156-60-5	Trans-1,2-Dichloroethene	6u
67-66-3	Chloroform	6u
107-06-2	1,2-Dichloroethane	6u
78-93-3	2-Butanone	11u
71-55-6	1,1,1-Trichloroethane	6u
56-23-5	Carbon Tetrachloride	6u
108-05-4	Vinyl Acetate	11u
75-27-4	Bromodichloromethane	6u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1,2-Dichloropropane	6u
10061-02-6	Trans-1,3-Dichloropropene	6u
79-01-6	Trichloroethene	6u
124-48-1	Dibromochloromethane	6u
79-00-5	1,1,2-Trichloroethane	6u
71-43-2	Benzene	6u
10061-01-5	cis-1,3-Dichloropropene	6u
110-75-8	2-Chloroethylvinylether	11u
75-25-2	Bromoform	6u
108-10-1	4-Methyl-2-Pentanone	11u
591-78-6	2-Hexanone	11u
127-18-4	Tetrachloroethene	6u
79-34-5	1,1,2,2-Tetrachloroethane	6u
108-88-3	Toluene	6u
108-90-7	Chlorobenzene	6u
100-41-4	Ethylbenzene	6u
100-42-5	Styrene	6u
	Total Xylenes	6u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged, however, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

11/85

Laboratory Name: ENCOTEC

Case No: 7581

Sample Number: MEN581-422

87FC11S32

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 7/14/87

Date Analyzed: 7/29/87

Conc/Dil Factor: 1

Percent Moisture (Decanted): 13%

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	23,000u
111-44-4	bis(-2-Chloroethyl)Ether	23,000u
95-57-8	2-Chlorophenol	23,000u
541-73-1	1 3-Dichlorobenzene	23,000u
106-46-7	1 4-Dichlorobenzene	23,000u
100-51-6	Benzyl Alcohol	23,000u
95-50-1	1, 2-Dichlorobenzene	23,000u
95-48-7	2-Methylphenol	23,000u
39638-32-9	bis(2-chloroisopropyl)Ether	23,000u
106-44-5	4-Methylphenol	23,000u
621-64-7	N-Nitroso-Di-n-Propylamine	23,000u
67-72-1	Hexachloroethane	23,000u
98-95-3	Nitrobenzene	23,000u
78-59-1	Isophorone	23,000u
88-75-5	2-Nitrophenol	23,000u
105-67-9	2, 4-Dimethylphenol	23,000u
65-85-0	Benzoic Acid	113,000u
111-91-1	bis(-2-Chloroethoxy)Methane	23,000u
120-83-2	2, 4-Dichlorophenol	23,000u
120-82-1	1, 2, 4-Trichlorobenzene	23,000u
91-20-3	Naphthalene	23,000u
106-47-8	4-Chloroaniline	23,000u
87-68-3	Hexachlorobutadiene	23,000u
59-50-7	4-Chloro-3-Methylphenol	23,000u
91-57-6	2-Methylnaphthalene	23,000u
77-47-4	Hexachlorocyclopentadiene	23,000u
88-06-2	2 4, 6 Trichlorophenol	23,000u
95-95-4	2, 4, 5-Trichlorophenol	113,000u
91-58-7	2-Chloronaphthalene	23,000u
88-74-4	2-Nitroaniline	113,000u
131-11-3	Dimethyl Phthalate	23,000u
208-96-8	Acenaphthylene	23,000u
99-09-2	3-Nitroaniline	113,000u

CAS Number		ug/l or ug/Kg (Circle One)	
83-32-9	Acenaphthene	23,000u	
51-28-5	2, 4-Dinitrophenol	113,000u	
100-02-7	4-Nitrophenol	113,000u	
132-64-9	Dibenzofuran	23,000u	
121-14-2	2, 4-Dinitrotoluene	23,000u	
606-20-2	2, 6-Dinitrotoluene	23,000u	
84-66-2	Diethylphthalate	23,000u	
7005-72-3	4-Chlorophenyl-phenylether	23,000u	
86-73-7	Fluorene	23,000u	
100-01-6	4-Nitroaniline	113,000u	
534-52-1	4, 6-Dinitro-2-Methylphenol	113,000u	
86-30-6	N-Nitrosodiphenylamine (1)	23,000u	
101-55-3	4-Bromophenyl-phenylether	23,000u	
118-74-1	Hexachlorobenzene	23,000u	
87-86-5	Pentachlorophenol	113,000u	
85-01-8	Phenanthrene	11,000 (J)	JK 8/04/87
120-12-7	Anthracene	23,000u	
84-74-2	Di-n-Butylphthalate	23,000u	
206-44-0	Fluoranthene	31,000	JK 8/04/87
129-00-0	Pyrene	23,000	
85-68-7	Butylbenzylphthalate	23,000u	
91-94-1	3, 3'-Dichlorobenzidine	23,000u	
56-55-3	Benzo(a)Anthracene	13,000 (J)	JK 8/04/87
117-81-7	bis(2-Ethylhexyl)Phthalate	5,000 (J)	
218-01-9	Chrysene	14,000 (J)	
117-84-0	Di-n-Octyl Phthalate	23,000u	
205-99-2	Benzo(b)Fluoranthene	55,000	JK 8/04/87
207-08-9	Benzo(k)Fluoranthene	23,000u	
50-32-8	Benzo(a)Pyrene	18,000 (J)	JK 8/04/87
193-39-5	Indeno(1, 2, 3-cd)Pyrene	23,000u	
53-70-3	Dibenz(a, h)Anthracene	23,000u	
191-24-2	Benzo(g, h, i)Perylene	23,000u	

(1)-Cannot be separated from diphenylamine

Laboratory Name ENCOTEC

Case No 7581

Sample Number EN4ZZ

87FC11532

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration Low (Medium) (Circle One)

Date Extracted/Prepared: 7-14-1987

Date Analyzed 7-20-1987

Conc/(Dil Factor) 3

Percent Moisture (decanted) 13

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)	
319-84-6	Alpha-BHC	140	U
319-85-7	Beta-BHC	140	U
319-86-8	Delta-BHC	140	U
58-89-9	Gamma-BHC (Lindane)	140	U
76-44-8	Heptachlor	140	U
309-00-2	Aldrin	140	U
1024-57-3	Heptachlor Epoxide	140	U
959-98-8	Endosulfan I	140	U
60-57-1	Dieldrin	280	U
72-55-9	4,4'-DDE	280	U
72-20-8	Endrin	280	U
33213-65-9	Endosulfan II	280	U
72-54-8	4,4'-DDD	280	U
1031-07-8	Endosulfan Sulfate	280	U
50-29-3	4,4'-DDT	280	U
72-43-5	Methoxychlor	1400	U
53494-70-5	Endrin Ketone	280	U
57-74-9	Chlordane	~~1400~~	~~U~~ 4,800
8001-35-2	Toxaphene	2800	U
12674-11-2	Aroclor-1016	1400	U
11104-28-2	Aroclor-1221	1400	U
11141-16-5	Aroclor-1232	1400	U
53469-21-9	Aroclor-1242	1400	U
12672-29-6	Aroclor-1248	1400	U
11097-69-1	Aroclor-1254	~~2800~~	U
11096-82-5	Aroclor-1260	2900	

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 1.07 V_t 10000 V_i 2.0

Laboratory Name: ENCOTEC

Case No: 7581

Sample Number: EN 422

87FC11S32

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. NA	NO VOLATILES FOUND	VOA	NA	NA
2. NA	NO SEMI-VOLATILES FOUND	BNA	NA	NA
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Sample Number

EN424

87FC11533

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENCOTEC

Case No: 7581

Lab Sample ID No: EN424V

QC Report No: NA

Sample Matrix: SOIL

Contract No: 68-01-7275

Data Release Authorized By: C. M. OC

Date Sample Received: 7/08/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7/17/87

Date Analyzed: 7/17/87

Conc/(Dil Factor) 1 pH 8

Percent Moisture: (Not Decanted) 14%

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	12u
74-83-9	Bromomethane	12u
75-01-4	Vinyl Chloride	12u
75-00-3	Chloroethane	12u
75-09-2	Methylene Chloride	~~6u~~ 13(B)
67-64-1	Acetone	12u
75-15-0	Carbon Disulfide	6u
75-35-4	1, 1-Dichloroethene	6u
75-34-3	1, 1-Dichloroethane	6u
156-60-5	Trans-1, 2-Dichloroethene	6u
67-66-3	Chloroform	6u
107-06-2	1, 2-Dichloroethane	6u
78-93-3	2-Butanone	12u
71-55-6	1, 1, 1-Trichloroethane	6u
56-23-5	Carbon Tetrachloride	6u
108-05-4	Vinyl Acetate	12u
75-27-4	Bromodichloromethane	6u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1, 2-Dichloropropane	6u
10061-02-6	Trans-1, 3-Dichloropropene	6u
79-01-6	Trichloroethene	6u
124-48-1	Dibromochloromethane	6u
79-00-5	1, 1, 2-Trichloroethane	6u
71-43-2	Benzene	6u
10061-01-5	cis-1, 3-Dichloropropene	6u
110-75-8	2-Chloroethylvinylether	12u
75-25-2	Bromoform	6u
108-10-1	4-Methyl-2-Pentanone	12u
591-78-6	2-Hexanone	12u
127-18-4	Tetrachloroethene	6u
79-34-5	1, 1, 2, 2-Tetrachloroethane	6u
108-88-3	Toluene	6u
108-90-7	Chlorobenzene	6u
100-41-4	Ethylbenzene	6u
100-42-5	Styrene	6u
	Total Xylenes	6u

BK 7/21/87

KJS

KAB 11/14/87

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged, however, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report

183

Laboratory Name: ENCOTEC

Case No: 7581

Sample Number: BN454

87FC11S33

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 7/01/87

Date Analyzed: 7/30/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 13%

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	23,000u
111-44-4	bis(-2-Chloroethyl)Ether	23,000u
95-57-8	2-Chlorophenol	23,000u
541-73-1	1, 3-Dichlorobenzene	23,000u
106-46-7	1, 4-Dichlorobenzene	23,000u
100-51-6	Benzyl Alcohol	23,000u
95-50-1	1, 2-Dichlorobenzene	23,000u
95-48-7	2-Methylphenol	23,000u
39638-32-9	bis(2-chloroisopropyl)Ether	23,000u
106-44-5	4-Methylphenol	23,000u
621-64-7	N-Nitroso-Di-n-Propylamine	23,000u
67-72-1	Hexachloroethane	23,000u
98-95-3	Nitrobenzene	23,000u
78-59-1	Isophorone	23,000u
88-75-5	2-Nitrophenol	23,000u
105-67-9	2, 4-Dimethylphenol	23,000u
65-85-0	Benzoic Acid	113,000u
111-91-1	bis(-2-Chloroethoxy)Methane	23,000u
120-83-2	2, 4-Dichlorophenol	23,000u
120-82-1	1, 2, 4-Trichlorobenzene	23,000u
91-20-3	Naphthalene	23,000u
106-47-8	4-Chloroaniline	23,000u
87-68-3	Hexachlorobutadiene	23,000u
59-50-7	4-Chloro-3-Methylphenol	23,000u
91-57-6	2-Methylnaphthalene	23,000u
77-47-4	Hexachlorocyclopentadiene	23,000u
88-06-2	2, 4, 6-Trichlorophenol	23,000u
95-95-4	2, 4, 5-Trichlorophenol	113,000u
91-58-7	2-Chloronaphthalene	23,000u
88-74-4	2-Nitroaniline	113,000u
131-11-3	Dimethyl Phthalate	23,000u
208-96-8	Acenaphthylene	23,000u
99-09-2	3-Nitroaniline	113,000u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	23,000u
51-28-5	2, 4-Dinitrophenol	113,000u
100-02-7	4-Nitrophenol	113,000u
132-64-9	Dibenzofuran	23,000u
121-14-2	2, 4-Dinitrotoluene	23,000u
606-20-2	2, 6-Dinitrotoluene	23,000u
84-66-2	Diethylphthalate	23,000u
7005-72-3	4-Chlorophenyl-phenylether	23,000u
86-73-7	Fluorene	23,000u
100-01-6	4-Nitroaniline	113,000u
534-52-1	4, 6-Dinitro-2-Methylphenol	113,000u
86-30-6	N-Nitrosodiphenylamine (1)	23,000u
101-55-3	4-Bromophenyl-phenylether	23,000u
118-74-1	Hexachlorobenzene	23,000u
87-86-5	Pentachlorophenol	113,000u
85-01-8	Phenanthrene	23000 (J) JK 8/04/87
120-12-7	Anthracene	23,000u
84-74-2	Di-n-Butylphthalate	23,000u
206-44-0	Fluoranthene	63000 (J) JK 8/04/87
129-00-0	Pyrene	23,000u
85-68-7	Butylbenzylphthalate	23,000u
91-94-1	3, 3'-Dichlorobenzidine	46,000u
56-55-3	Benzo(a)Anthracene	23,000u
117-81-7	bis(2-Ethylhexyl)Phthalate	16,000 (J) JK 8/04/8
218-01-9	Chrysene	18700 (J)
117-84-0	Di-n-Octyl Phthalate	23,000u
205-99-2	Benzo(b)Fluoranthene	23,000u
207-08-9	Benzo(k)Fluoranthene	23,000u
50-32-8	Benzo(a)Pyrene	23,000u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	23,000u
53-70-3	Dibenz(a, h)Anthracene	23,000u
191-24-2	Benzo(g, h, i)Perylene	23,000u

(1)-Cannot be separated from diphenylamine

Laboratory Name ENCOTEC

Case No 7581

Sample Number EN4Z4

87FC11S33

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low (Medium) (Circle One)

Date Extracted/Prepared: 7-14-1987

Date Analyzed: 7-20-1987

Conc/(Dil Factor): 3

Percent Moisture (decanted) 13

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)	
319-84-6	Alpha-BHC	140	U
319-85-7	Beta-BHC	140	U
319-86-8	Delta-BHC	140	U
58-89-9	Gamma-BHC (Lindane)	140	U
76-44-8	Heptachlor	140	U
309-00-2	Aldrin	140	U
1024-57-3	Heptachlor Epoxide	140	U
959-98-8	Endosulfan I	140	U
60-57-1	Dieldrin	280	U
72-55-9	4,4'-DDE	280	U
72-20-8	Endrin	280	U
33213-65-9	Endosulfan II	280	U
72-54-8	4,4'-DDD	280	U
1031-07-8	Endosulfan Sulfate	280	U
50-29-3	4,4'-DDT	280	U
72-43-5	Methoxychlor	1400	U
53494-70-5	Endrin Ketone	280	U
57-74-9	Chlordane	~~1400~~	~~U~~
8001-35-2	Toxaphene	2800	U
12674-11-2	Aroclor-1016	1400	U
11104-28-2	Aroclor-1221	1400	U
11141-16-5	Aroclor-1232	1400	U
53469-21-9	Aroclor-1242	1400	U
12672-29-6	Aroclor-1248	36000	
11097-69-1	Aroclor-1254	50000	
11096-82-5	Aroclor-1260	2800	U

8-13-87 16,000

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 1.02 V_t 10000 V_i 2.0

Laboratory Name: ENCOTEC

Case No: 7581

Sample Number
EN 424

87FC11S33

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. NA	NO VOLATILES FOUND.	VOA	NA	NA
2. NA	NO SEMI-VOLATILES FOUND	BNA	NA	NA
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Sample Number
EN425

87FC11S34 sg

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENCOTEC

Case No: 7581

Lab Sample ID No: EN425V

QC Report No: NA

Sample Matrix: Soil

Contract No: 68-01-7275

Data Release Authorized By: C. M. [illegible]

Date Sample Received: 7/08/87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 7/17/87

Date Analyzed: 7/17/87

Conc/Dil Factor: 1 pH 8

Percent Moisture: (Not Decanted) ~~5.9%~~ 6%

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	11u
74-83-9	Bromomethane	11u
75-01-4	Vinyl Chloride	11u
75-00-3	Chloroethane	11u
75-09-2	Methylene Chloride	5u 10 [illegible]
67-64-1	Acetone	11u
75-15-0	Carbon Disulfide	5u
75-35-4	1, 1-Dichloroethene	5u
75-34-3	1, 1-Dichloroethane	5u
156-60-5	Trans-1, 2-Dichloroethene	5u
67-66-3	Chloroform	5u
107-06-2	1, 2-Dichloroethane	5u
78-93-3	2-Butanone	11u
71-55-6	1, 1, 1-Trichloroethane	5u
56-23-5	Carbon Tetrachloride	5u
108-05-4	Vinyl Acetate	11u
75-27-4	Bromodichloromethane	5u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5u
10061-02-6	Trans-1, 3-Dichloropropene	5u
79-01-6	Trichloroethene	5u
124-48-1	Dibromochloromethane	5u
79-00-5	1, 1, 2-Trichloroethane	5u
71-43-2	Benzene	5u
10061-01-5	cis-1, 3-Dichloropropene	5u
110-75-8	2-Chloroethylvinylether	11u
75-25-2	Bromoform	5u
108-10-1	4-Methyl-2-Pentanone	11u
591-78-6	2-Hexanone	11u
127-18-4	Tetrachloroethene	5u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5u
108-88-3	Toluene	5u
108-90-7	Chlorobenzene	5u
100-41-4	Ethylbenzene	5u
100-42-5	Styrene	5u
	Total Xylenes	5u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 5 µg/l is calculated, report as 5J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ml in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

211

Laboratory Name ENCOTEC

Case No 7581

Sample Number
EN425

87FC11S3 ay

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 7/10/87

Date Analyzed 8/07/87

Conc/Dil Factor: 1

Percent Moisture (Decanted) 6%

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	350u
111-44-4	bis(2-Chloroethyl)Ether	350u
95-57-8	2-Chlorophenol	350u
541-73-1	1,3-Dichlorobenzene	350u
106-46-7	1,4-Dichlorobenzene	350u
100-51-6	Benzyl Alcohol	350u
95-50-1	1,2-Dichlorobenzene	350u
95-48-7	2-Methylphenol	350u
39638-32-9	bis(2-chloroisopropyl)Ether	350u
106-44-5	4-Methylphenol	350u
621-64-7	N-Nitroso-Di-n-Propylamine	350u
67-72-1	Hexachloroethane	350u
98-95-3	Nitrobenzene	350u
78-59-1	Isophorone	350u 1935 JK blank
88-75-5	2-Nitrophenol	350u
105-67-9	2,4-Dimethylphenol	350u
65-85-0	Benzoic Acid	1800u
111-91-1	bis(2-Chloroethoxy)Methane	350u
120-83-2	2,4-Dichlorophenol	350u
120-82-1	1,2,4-Trichlorobenzene	350u
91-20-3	Naphthalene	350u 630 JK blank
106-47-8	4-Chloroaniline	350u
87-68-3	Hexachlorobutadiene	350u
59-50-7	4-Chloro-3-Methylphenol	350u
91-57-6	2-Methylnaphthalene	350u 645 JK blank
77-47-4	Hexachlorocyclopentadiene	350u
88-06-2	2,4,6-Trichlorophenol	350u
95-95-4	2,4,5-Trichlorophenol	1800u
91-58-7	2-Chloronaphthalene	350u
88-74-4	2-Nitroaniline	1800u
131-11-3	Dimethyl Phthalate	350u
208-96-8	Acenaphthylene	350u 1235 JK blank
99-09-2	3-Nitroaniline	1800u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	350u
51-28-5	2,4-Dinitrophenol	1800u
100-02-7	4-Nitrophenol	1800u
132-64-9	Dibenzofuran	350u
121-14-2	2,4-Dinitrotoluene	350u
606-20-2	2,6-Dinitrotoluene	350u
84-66-2	Diethylphthalate	350u
7005-72-3	4-Chlorophenyl-phenylether	350u
86-73-7	Fluorene	350u
100-01-6	4-Nitroaniline	1800u
534-52-1	4,6-Dinitro-2-Methylphenol	1800u
86-30-6	N-Nitrosodiphenylamine (1)	350u
101-55-3	4-Bromophenyl-phenylether	350u
118-74-1	Hexachlorobenzene	350u
87-86-5	Pentachlorophenol	1800u
85-01-8	Phenanthrene	350u 596 JK blank
120-12-7	Anthracene	350u 1130 JK blank
84-74-2	Di-n-Butylphthalate	350u
206-44-0	Fluoranthene	350u 930 JK blank
129-00-0	Pyrene	350u 1145 JK blank
85-68-7	Butylbenzylphthalate	350u 817 JK blank
91-94-1	3,3'-Dichlorobenzidine	700u
56-55-3	Benzo(a)Anthracene	350u 519 JK blank
117-81-7	bis(2-Ethylhexyl)Phthalate	350u 1408 JK blank
218-01-9	Chrysene	350u 810 JK blank
117-84-0	Di-n-Octyl Phthalate	350u
205-99-2	Benzo(b)Fluoranthene	350u 1759 JK blank
207-08-9	Benzo(k)Fluoranthene	350u
50-32-8	Benzo(a)Pyrene	350u 1852 JK blank
193-39-5	Indeno(1,2,3-cd)Pyrene	350u 1235 JK blank
53-70-3	Dibenzo(a,h)Anthracene	350u 346 JK blank
191-24-2	Benzo(g,h,i)Perylene	350u 913 JK blank

(1)-Cannot be separated from diphenylamine

Laboratory Name ENCOTEC

Case No 7581

Sample Number
EN425

87FC11S34 of

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 7-10-1987

Date Analyzed: 7-21-1987

Conc/(Dil Factor) 3

Percent Moisture (decanted) 6

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	9.0 U
319-85-7	Beta-BHC	9.0 U
319-86-8	Delta-BHC	9.0 U
58-89-9	Gamma-BHC (Lindane)	9.0 U
76-44-8	Heptachlor	9.0 U
309-00-2	Aldrin	9.0 U
1024-57-3	Heptachlor Epoxide	9.0 U
959-98-8	Endosulfan I	9.0 U
60-57-1	Dieldrin	18 U
72-55-9	4, 4'-DDE	18 U
72-20-8	Endrin	18 U
33213-65-9	Endosulfan II	18 U
72-54-8	4, 4'-DDD	18 U
1031-07-8	Endosulfan Sulfate	18 U
50-29-3	4, 4'-DDT	18 U
72-43-5	Methoxychlor	90 U
53494-70-5	Endrin Ketone	18 U
57-74-9	Chlordane	~~90 TAU~~ 8-13-87 ~~1,200~~ 8-15-87 620
8001-35-2	Toxaphene	180 U
12674-11-2	Aroclor-1016	90 U
11104-28-2	Aroclor-1221	90 U
11141-16-5	Aroclor-1232	90 U
53469-21-9	Aroclor-1242	90 U
12672-29-6	Aroclor-1248	90 U
11097-69-1	Aroclor-1254	800
11096-82-5	Aroclor-1260	300

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 32.6 V_t 20000 V_i 2.0

Laboratory Name ENCOTEC

Case No: 7581

Sample Number
EN 425

87FC11533 pg

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. NA	NO VOLATILES FOUND	VOA	NA	NA
2. NA	UNKNOWN	BNA	342	390
3. NA	UNKNOWN	BNA	362	250
4. NA	UNKNOWN	BNA	618	700
5. NA	UNKNOWN	BNA	928	180
6. NA	UNKNOWN	BNA	1028	320
7. NA	UNKNOWN	BNA	1123	350
8. NA	UNKNOWN	BNA	1167	420
9. NA	UNKNOWN	BNA	1213	560
10. NA	UNKNOWN	BNA	1218	800
11. NA	UNKNOWN	BNA	1306	600
12. NA	UNKNOWN	BNA	1819	810
13. NA	UNKNOWN	BNA	1995	1100
14. 205-82-3	BENZO[J] FLUORANTHENE	BNA	2007	1300
15. 192-97-2	BENZO[E] PYRENE	BNA	2029	1400
16. NA	UNKNOWN	BNA	2126	1300
17. NA	UNKNOWN	BNA	2175	1800
18. NA	UNKNOWN	BNA	2230	950
19. NA	UNKNOWN	BNA	2237	600
20. NA	UNKNOWN	BNA	1374	1100
21. NA	UNKNOWN	BNA	1380	210
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Sample Number
EN426

87FC11535

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENCOTEC

Case No: 7581

Lab Sample ID No: EN426

QC Report No: NA

Sample Matrix: Soil

Contract No: 68-01-7275

Data Release Authorized By: C. M. [illegible]

Date Sample Received: 7/08/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7/17/87

Date Analyzed: 7/17/87

Conc/(Dil Factor) 1 pH 8

Percent Moisture: (Not Decanted) ~~10-13%~~ 12%

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	11u
74-83-9	Bromomethane	11u
75-01-4	Vinyl Chloride	11u
75-00-3	Chloroethane	11u
75-09-2	Methylene Chloride	~~6u~~ 10B
67-64-1	Acetone	11u
75-15-0	Carbon Disulfide	6u
75-35-4	1,1-Dichloroethene	6u
75-34-3	1,1-Dichloroethane	6u
156-60-5	Trans-1,2-Dichloroethene	6u
67-66-3	Chloroform	6u
107-06-2	1,2-Dichloroethane	6u
78-93-3	2-Butanone	11u
71-55-6	1,1,1-Trichloroethane	6u
56-23-5	Carbon Tetrachloride	6u
108-05-4	Vinyl Acetate	11u
75-27-4	Bromodichloromethane	6u

CAS Number		ug/l or (ug/Kg) (Circle One)
78-87-5	1,2-Dichloropropane	6u
10061-02-6	Trans-1,3-Dichloropropene	6u
79-01-6	Trichloroethene	6u
124-48-1	Dibromochloromethane	6u
79-00-5	1,1,2-Trichloroethane	6u
71-43-2	Benzene	6u
10061-01-5	cis-1,3-Dichloropropene	6u
110-75-8	2-Chloroethylvinylether	11u
75-25-2	Bromoform	6u
108-10-1	4-Methyl-2-Pentanone	11u
591-78-6	2-Hexanone	11u
127-18-4	Tetrachloroethene	6u
79-34-5	1,1,2,2-Tetrachloroethane	6u
108-88-3	Toluene	6u
108-90-7	Chlorobenzene	6u
100-41-4	Ethylbenzene	6u
100-42-5	Styrene	6u
	Total Xylenes	6u

JK 7/24/87

KJJ

KJJ 11/4/87

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged, however, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

11/85

Laboratory Name: ENCOTEC

Case No: 7581

Sample Number: EN4Z6

87FC11535

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7/10/87

Date Analyzed: 8/08/87

Conc/(Dil Factor): 1

Percent Moisture (Decanted): 128

GPC Cleanup ☐Yes ☐No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
108-95-2	Phenol	370u
111-44-4	bis(-2-Chloroethyl)Ether	370u
95-57-8	2-Chlorophenol	370u
541-73-1	1 3-Dichlorobenzene	370u
106-46-7	1, 4-Dichlorobenzene	370u
100-51-6	Benzyl Alcohol	370u
95-50-1	1, 2-Dichlorobenzene	370u
95-48-7	2-Methylphenol	370u
39638-32-9	bis(2-chloroisopropyl)Ether	370u
106-44-5	4-Methylphenol	370u
621-64-7	N-Nitroso-Di-n-Propylamine	370u
67-72-1	Hexachloroethane	370u
98-95-3	Nitrobenzene	370u
78-59-1	Isophorone	370u
88-75-5	2-Nitrophenol	370u
105-67-9	2, 4-Dimethylphenol	~~1900u~~ 370u
65-85-0	Benzoic Acid	1900u
111-91-1	bis(-2-Chloroethoxy)Methane	370u
120-83-2	2, 4-Dichlorophenol	370u
120-82-1	1, 2, 4-Trichlorobenzene	370u
91-20-3	Naphthalene	~~370u~~ 635 8/18/87 JS
106-47-8	4-Chloroaniline	370u
87-68-3	Hexachlorobutadiene	370u
59-50-7	4-Chloro-3-Methylphenol	370u
91-57-6	2-Methylnaphthalene	~~370u~~ 820 8/18/87 JS
77-47-4	Hexachlorocyclopentadiene	370u
88-06-2	2, 4 6-Trichlorophenol	370u
95-95-4	2, 4 5-Trichlorophenol	1900u
91-58-7	2-Chloronaphthalene	370u
88-74-4	2-Nitroaniline	1900u
131-11-3	Dimethyl Phthalate	370u
208-96-8	Acenaphthylene	~~370u~~ 385 8/18/87 JS
99-09-2	3-Nitroaniline	1900u

CAS Number		ug/l or (ug/Kg) (Circle One)
83-32-9	Acenaphthene	~~370u~~ 565 8/18/87 JS
51-28-5	2, 4-Dinitrophenol	1900u
100-02-7	4-Nitrophenol	1900u
132-64-9	Dibenzofuran	~~370u~~ 440 8/18/87 JS
121-14-2	2, 4-Dinitrotoluene	370u
606-20-2	2, 6-Dinitrotoluene	370u
84-66-2	Diethylphthalate	370u
7005-72-3	4-Chlorophenyl-phenylether	370u
86-73-7	Fluorene	~~370u~~ 565 8/18/87 JS
100-01-6	4-Nitroaniline	1900u
534-52-1	4, 6-Dinitro-2-Methylphenol	1900u
86-30-6	N-Nitrosodiphenylamine (1)	370u
101-55-3	4-Bromophenyl-phenylether	370u
118-74-1	Hexachlorobenzene	370u
87-86-5	Pentachlorophenol	1900u
85-01-8	Phenanthrene	~~370u~~ 850 8/18/87 JS
120-12-7	Anthracene	~~370u~~ 1300 8/18/87 JS
84-74-2	Di-n-Butylphthalate	~~370u~~ 490
206-44-0	Fluoranthene	~~370u~~ 1000 8/18/87 JS
129-00-0	Pyrene	~~370u~~ 1400 8/18/87 JS
85-68-7	Butylbenzylphthalate	~~370u~~ 1400 8/18/87 JS
91-94-1	3, 3'-Dichlorobenzidine	750u
56-55-3	Benzo(a)Anthracene	~~370u~~ 810 8/18/87 JS
117-81-7	bis(2-Ethylhexyl)Phthalate	~~370u~~ 2200 8/18/87 JS
218-01-9	Chrysene	~~370u~~ 850 8/18/87 JS
117-84-0	Di-n-Octyl Phthalate	~~370u~~ 1300 8/18/87 JS
205-99-2	Benzo(b)Fluoranthene	370u
207-08-9	Benzo(k)Fluoranthene	~~370u~~ 1100 8/18/87 JS
50-32-8	Benzo(a)Pyrene	~~370u~~ 820 8/18/87 JS
193-39-5	Indeno(1, 2, 3-cd)Pyrene	~~370u~~ 790 8/18/87 JS
53-70-3	Dibenz(a h)Anthracene	370u
191-24-2	Benzo(g, h, i)Perylene	~~370u~~ 480 8/18/87 JS

(1)-Cannot be separated from diphenylamine

Laboratory Name ENCOTEC

Case No 7581

Sample Number EN426

87FC11535

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7-10-1987

Date Analyzed: 7-21-1987

Conc/(Dil Factor) 3

Percent Moisture (decanted) 12

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)	
319-84-6	Alpha-BHC	9.0	U
319-85-7	Beta-BHC	9.0	U
319-86-8	Delta-BHC	9.0	U
58-89-9	Gamma-BHC (Lindane)	9.0	U
76-44-8	Heptachlor	9.0	U
309-00-2	Aldrin	9.0	U
1024-57-3	Heptachlor Epoxide	9.0	U
959-98-8	Endosulfan I	9.0	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	18	U
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	18	U
72-54-8	4,4'-DDD	18	U
1031-07-8	Endosulfan Sulfate	18	U
50-29-3	4,4'-DDT	18	U
72-43-5	Methoxychlor	90	U
53494-70-5	Endrin Ketone	18	U
57-74-9	Chlordane	90	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	90	U
11104-28-2	Aroclor-1221	90	U
11141-16-5	Aroclor-1232	90	U
53469-21-9	Aroclor-1242	90	U
12672-29-6	Aroclor-1248	90	U
11097-69-1	Aroclor-1254	1000	
11096-82-5	Aroclor-1260	200	

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30.3 V_t 20000 V_i 2.0

Laboratory Name ENCOTEC

Case No: 7581

Sample Number
EN 426

87FC11535

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. NA	NO VOLATILES FOUND	VOA	NA	NA
2. NA	UNKNOWN	BNA	334	530
3. NA	UNKNOWN	BNA	382	560
4. NA	UNKNOWN	BNA	446	640
5. NA	UNKNOWN	BNA	1183	340
6. NA	UNKNOWN	BNA	1212	490
7. NA	UNKNOWN	BNA	1346	450
8. NA	UNKNOWN	BNA	1425	1300
9. NA	UNKNOWN	BNA	1465	380
10. NA	UNKNOWN	BNA	1496	380
11. NA	UNKNOWN	BNA	1555	830
12. NA	UNKNOWN	BNA	1573	710
13. NA	UNKNOWN	BNA	1996	6000
14. NA	UNKNOWN	BNA	2037	5500
15. NA	UNKNOWN	BNA	2150	2400
16. NA	UNKNOWN	BNA	2222	3400
17. NA	UNKNOWN	BNA	2268	3500
18. NA	UNKNOWN	BNA	2285	1400
19. NA	UNKNOWN	BNA	2293	1200
20. NA	UNKNOWN	BNA	2309	3900
21. NA	UNKNOWN	BNA	2381	2200
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Sample Number

EN427

87FC11S36

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENCOTEC

Case No: 7581

Lab Sample ID No: EN427V

QC Report No: NA

Sample Matrix: SOIL

Contract No: 68-01-7275

Data Release Authorized By: C. M. [illegible]

Date Sample Received: 7/08/87

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 7/17/87

Date Analyzed: 7/17/87

Conc/Dil Factor 1 pH 6

Percent Moisture: (Not Decanted) 18%

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	12u
74-83-9	Bromomethane	12u
75-01-4	Vinyl Chloride	12u
75-00-3	Chloroethane	12u
75-09-2	Methylene Chloride	~~6u~~ 16B
67-64-1	Acetone	12u
75-15-0	Carbon Disulfide	6u
75-35-4	1, 1-Dichloroethene	6u
75-34-3	1, 1-Dichloroethane	6u
156-60-5	Trans-1, 2-Dichloroethene	6u
67-66-3	Chloroform	6u
107-06-2	1, 2-Dichloroethane	6u
78-93-3	2-Butanone	12u
71-55-6	1, 1, 1-Trichloroethane	6u
56-23-5	Carbon Tetrachloride	6u
108-05-4	Vinyl Acetate	12u
75-27-4	Bromodichloromethane	6u

UJ JK 7/29/87 KBB 9/14/87

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	6u
10061-02-6	Trans-1, 3-Dichloropropene	6u
79-01-6	Trichloroethene	6u
124-48-1	Dibromochloromethane	6u
79-00-5	1, 1, 2-Trichloroethane	6u
71-43-2	Benzene	6u
10061-01-5	cis-1, 3-Dichloropropene	6u
110-75-8	2-Chloroethylvinylether	12u
75-25-2	Bromoform	6u
108-10-1	4-Methyl-2-Pentanone	12u
591-78-6	2-Hexanone	12u
127-18-4	Tetrachloroethene	6u
79-34-5	1, 1, 2, 2-Tetrachloroethane	6u
108-88-3	Toluene	6u
108-90-7	Chlorobenzene	6u
100-41-4	Ethylbenzene	6u
100-42-5	Styrene	6u
	Total Xylenes	6u

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

476

Laboratory Name: ENCOTEC

Case No: 7581

Sample Number: EN427.

87FC11536

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7/10/87

Date Analyzed: 8/08/87

Conc/(Dil Factor) 1

Percent Moisture (Decanted) 18%

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)	
108-95-2	Phenol	410u	
111-44-4	bis(-2-Chloroethyl)Ether	410u	
95-57-8	2-Chlorophenol	410u	
541-73-1	1, 3-Dichlorobenzene	410u	
106-46-7	1 4-Dichlorobenzene	410u	
100-51-6	Benzyl Alcohol	410u	
95-50-1	1 2-Dichlorobenzene	410u	
95-48-7	2-Methylphenol	410u	
39638-32-9	bis(2-chloroisopropyl)Ether	410u	
106-44-5	4-Methylphenol	410u	
621-64-7	N-Nitroso-Di-n-Propylamine	410u	
67-72-1	Hexachloroethane	410u	
98-95-3	Nitrobenzene	410u	
78-59-1	Isophorone	410u	
88-75-5	2-Nitrophenol	410u	
105-67-9	2, 4-Dimethylphenol	410u	
65-85-0	Benzoic Acid	2000u	
111-91-1	bis(-2-Chloroethoxy)Methane	410u	
120-83-2	2, 4-Dichlorophenol	410u	
120-82-1	1, 2, 4-Trichlorobenzene	410u	
91-20-3	Naphthalene	~~410u~~ (460)	8/17/87 JB
106-47-8	4-Chloroaniline	410u	
87-68-3	Hexachlorobutadiene	410u	
59-50-7	4-Chloro-3-Methylphenol	410u	
91-57-6	2-Methylnaphthalene	~~410u~~ (770)	8/17/87 JB
77-47-4	Hexachlorocyclopentadiene	410u	
88-06-2	2, 4 6 Trichlorophenol	410u	
95-95-4	2, 4, 5-Trichlorophenol	2000u	
91-58-7	2-Chloronaphthalene	410u	
88-74-4	2-Nitroaniline	2000u	
131-11-3	Dimethyl Phthalate	410u	
208-96-8	Acenaphthylene	~~410u~~ (680)	8/17/87 JB
99-09-2	3-Nitroaniline	2000u	

CAS Number		ug/l or (ug/Kg) (Circle One)	
83-32-9	Acenaphthene	410u	
51-28-5	2, 4-Dinitrophenol	2000u	
100-02-7	4-Nitrophenol	2000u	
132-64-9	Dibenzofuran	~~410u~~ [2600]	8/17/87 JB
121-14-2	2, 4-Dinitrotoluene	410u	
606-20-2	2, 6-Dinitrotoluene	410u	
84-66-2	Diethylphthalate	410u	
7005-72-3	4-Chlorophenyl-phenylether	410u	
86-73-7	Fluorene	410u	
100-01-6	4-Nitroaniline	2000u	
534-52-1	4, 6-Dinitro-2-Methylphenol	2000u	
86-30-6	N-Nitrosodiphenylamine (1)	410u	
101-55-3	4-Bromophenyl-phenylether	410u	
118-74-1	Hexachlorobenzene	410u	
87-86-5	Pentachlorophenol	2000u	
85-01-8	Phenanthrene	~~410u~~ (1600)	8/17/87 JB
120-12-7	Anthracene	~~410u~~ [1600]	
84-74-2	Di-n-Butylphthalate	410u	
206-44-0	Fluoranthene	~~410u~~ (1300)	8/17/87 JB
129-00-0	Pyrene	~~410u~~ (2000)	
85-68-7	Butylbenzylphthalate	410u	
91-94-1	3, 3'-Dichlorobenzidine	810u	
56-55-3	Benzo(a)Anthracene	~~410u~~ (1900)	8/17/87 JB
117-81-7	bis(2-Ethylhexyl)Phthalate	~~410u~~ (2400)	
218-01-9	Chrysene	~~410u~~ (1600)	
117-84-0	Di-n-Octyl Phthalate	410u	
205-99-2	Benzo(b)Fluoranthene	~~410u~~ (2300)	8/17/87 JB
207-08-9	Benzo(k)Fluoranthene	~~410u~~ [1500]	
50-32-8	Benzo(a)Pyrene	~~410u~~ (750)	
193-39-5	Indeno(1, 2, 3-cd)Pyrene	~~410u~~ (1000)	
53-70-3	Dibenz(a, h)Anthracene	410u	
191-24-2	Benzo(g, h, i)Perylene	~~410u~~ (600)	8/17/87 JB

(1)-Cannot be separated from diphenylamine

Laboratory Name: ENCOTEC

Case No: 7581

Sample Number: EN427

87FC11S36

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7-10-1987

Date Analyzed: 7-21, 22 -1987

Conc (Dil Factor) 3, 30

Percent Moisture (decanted) 18

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)	
319-84-6	Alpha-BHC	10	U
319-85-7	Beta-BHC	10	U
319-86-8	Delta-BHC	10	U
58-89-9	Gamma-BHC (Lindane)	10	U
76-44-8	Heptachlor	10	U
309-00-2	Aldrin	10	U
1024-57-3	Heptachlor Epoxide	10	U
959-98-8	Endosulfan I	10	U
60-57-1	Dieldrin	20	U
72-55-9	4,4'-DDE	400	
72-20-8	Endrin	20	U
33213-65-9	Endosulfan II	20	U
72-54-8	4,4'-DDD	20	U
1031-07-8	Endosulfan Sulfate	20	U
50-29-3	4,4'-DDT	470	
72-43-5	Methoxychlor	100	U
53494-70-5	Endrin Ketone	20	U
57-74-9	Chlordane	100	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	100	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	100	U
53469-21-9	Aroclor-1242	100	U
12672-29-6	Aroclor-1248	100	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s ____ or W_s 30.0 V_t 20000 V_i 2.0

4315

COMPUCHEM LABORATORIES

HWI/Sample Management Office
209 Madison Street
Suite 200
Alexandria, VA 22314

Attention: Mr. Richard Thacker
Deputy Project Manager

Re: EPA Contract # - 68-01-7263

Subject: REPORT OF DATA - Case # 7878 SAS #

Dear Mr. Thacker:

Enclosed herewith are the results of analytical work performed in accordance with the referenced contract.

This report covers 12 samples(s) and results associated with analysis of the duplicate matrix spike results, received by CompuChem® Laboratories on the date of 8/13/87 identified as Case Number 7878

If you have any questions regarding this data package, please contact me at 1-919-549-8263.

Sincerely,

Mary Mitchell

for Alice Evans
Manager, Report Preparation

Enclosures

NOTE: Quality Control information contained in this report applies to:

EPA Numbers: ET584, ET585, ET586, ET587, ET588, ET589, ET590, ET591, ET592
ET593, ET594, ET595

C/C Numbers: 146262, 146264, 146271, 146276, 146278, 146280, 146281, 146283,
146284, 146285, 146287, 146288

cc: EPA Region V
EMSL
Billable Repeats: ET586, ET593

EPA CASE NARRATIVE CASE# 7879
CONTRACT 68-01-7263

The Quality Assurance Notices dealing with twelve solids associated with case# 7878 are included in the narrative section. Case# 7878 is divided into separately reported portions in order to expedite delivery. This narrative summarizes the analysis of these twelve soilds for volatiles, semivolatiles, and pesticides.

The samples were received intact on 8-13-87 with the shipping container properly sealed and all chain-of-custody documents in order. The percent moistures ranged from 3 to 14 while the pH values ranged from 6.84 to 7.34. The volatile holding blanks were placed into cold storage upon receipt. No screen results were reported for samples ET591 and ET592 as the data from the initial analyses were lost after the tapes on which they had been stored were purged.

Of the volatile fractions, all sample and QC fractions were analyzed within holding times with the exceptions of samples ET595 and ET587 which, although initially analyzed within holding times, required reanalysis due to failure to meet QC criteria. All samples contained methylene chloride and acetone, and some contained toluene and/or chloroform as well. The levels of methylene chloride ranged from two to ten times the contract required detection limit(CRDL); the levels of acetone ranged from 1 to 8 X CRDL; the levels of toluene ranged from just at to below CRDL while chloroform was alwas present at amounts less than CRDL. Only samples ET593 and ET595 was a tentatively identified compound(TIC) present; both contained hexane as a TIC.

Of the semivolatile fractions, all sample and QC fractions were extracted within holding times. The samples contained some if not all of the following phenol, methylphenols, isophorone, dibenzofuran, numerous polynuclear aromatics (PNAs), phthalates, pentachlorophenol,and benzoic acid. These analytes were present at low levels with the exceptions of bis(2-ethylhexyl)phthalate and/or some of the PNAs in some samples. The maximum number of TICs were reported for all samples, and these consisted of unknowns, substituted benzenes and PNAs, and occasional pesticides.

Of the pesticide fractions, all sample and QC fractrions were extracted within holding times. The samples contained chlordane and/or either aroclor 1254 or aroclor 1260. Both of these two analytes were usually detected at high levels. Chlordane was confirmed by GC/MS for samples, ET593, ET592, ET598, ET591, ET594, ET586, ET585, and ET590. Aroclor 1254 was confirmed by GC/MS for samples ET591, ET594, ET585, and ET590. Aroclor 1260 was confirmed by GC/MS for sample ET592.

To summarize the qyuality control results, all sample and QC fractions met the surrogate recovery criteria except for those pesticide fractions which suffered interference from the PCBs present or required large dilutions. Additionally for both the volatile and semivoltile fractions, the results for the matrix spike duplicates were acceptable. However, as the pesticide matrix spike duplicates required large dilutions due to the high levels of chlordane

and aroclor 1260 present in the original, no spike recovery data were available. A blank which met all QC criteria was reported. Furthermore the discrepancies between the amounts of chlordane and aroclor 1260 detected in the original, the matrix spike and the matrix spike duplicate were attributed to sample inhomogeneity.

Elisabeth R. Nowell

Elisabeth Robins Nowell
Senior Technical Reviewer
Date 9-15-87

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 7878 CONTRACTOR COMPUCHEM

Instrument # OWA #03	Init. Cal.			Cont. Cal. 2:11			Cont. Cal. 17:12			Cont. Cal.			Cont. Cal.		
DATE/TIME:	8/26/87			8/27/87			8/27/87								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride		49	J												
Acetone		63	J		49	J									
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone	.04		J	.03	32	J	.02	34	J						
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone								30	J						
2-Hexanone								31	J						
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

Reviewer's Initials/Date: _____

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

ASE# 7878 CONTRACTOR CoMPuChem

22:48 7:44

nstrument # OWA # 14	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
E/TIME:	8/7/87			8/19/87			8/20/87			8/20/87			8/21/87		
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
oromethane								36	J		47	J		47	J
romomethane															
yl Chloride															
oroethane															
ethylene Chloride		38	J		36	J									
etone		70	J		96	J								38	J
rbon Disulfide															
1,1-Dichloroethane											30	J			
1-Dichloroethene															
ans-1,2-Dichloroethene															
loroform															
2-Butanone		0.02	J	.03	34	J	.02		J	.02		J	.03	52	J
2-Dichloroethane											26	J			
1,1-Trichloroethane															
Carbon Tetrachloride															
nyl Acetate								41	J					41	J
omodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
richloroethene															
bromochloromethane															
1,1,2-Trichloroethane															
enzene															
ns-1,3-Dichloropropene															
2-Chloroethylvinylether														34	J
romoform					27	J		28	J		27	J			
-Methyl-2-Pentanone					26	J		39	J					51	J
-Hexanone					32	J		34	J					44	J
Tetrachloroethene															
,1,2,2-Tetrachloroethane															
oluene															
Chlorobenzene															
thylbenzene															
tyrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

ET588	ET584	ET593
89	ET584-MS	94
90	ET584-MSD	95
91	ET585	
92	ET586	
	ET587	

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 7878 CONTRACTOR COMPUCHEM

Instrument # OUA #16	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	10/6/86			8/24/87			8/25/87			8/26/87					
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene								40	J		27	J			
Diethylphthalate								37	J						
4-Chlorophenyl-phenylether											26	J			
Fluorene															
4-Nitroaniline					35	J		43	J						
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether					48	J		45	J		43	J			
Hexachlorobenzene					49	J		48	J		53	J			
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene											28	J			
Butylbenzylphthalate					48	J		74	J		72	J			
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate					54	J		81	J		86	J			
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: AA / 12/11/87

Case: 7878

Contractor: COMPUCHEM

TENTATIVELY IDENTIFIED COMPOUNDS
WATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

Reviewer's Initials/Date: AA / 12/11/87

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 7878 CONTRACTOR CompuChem

Instrument # OWA 16	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	9/2/87			9/3/87											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid															
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

ET584MS
ET584MSD
BK894
BL198

Reviewer Initials/Date: _____

* These flags should be applied to the analytes on the sample data sheets.

8/87

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 7878 CONTRACTOR CompuChem

Instrument #	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	9/2/87			9/3/87											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline															
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/~~SAS~~ # 7878 CONTRACTOR COMPUCHEM

Instrument # OWA #03	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME: 6/8/87	6/8/87			8/22/87											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone		62	J		48	J									
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone	.02		J	.02		J									
1,2-Dichloroethane															
1,1,1-Trichloroethane					34	J									
Carbon Tetrachloride					49	J									
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene		36	J		26	J									
Trichloroethene															
Dibromochloromethane					51	J									
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene		32	J		57	J									
2-Chloroethylvinylether															
Bromoform					66	J									
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

Reviewer's Initials/Date: AA/12/11/87

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 7878 CONTRACTOR COMPUCHEM

Instrument # OWA # 16	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	10/6/86			8/24/87			8/25/87			8/26/87					
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether					74	J		86	J		73	J			
2-Chlorophenol								32	J		33	J			
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol					40	J		60	J		46	J			
1,2-Dichlorobenzene															
2-Methylphenol					35	J		45	J		39	J			
bis(2-chloroisopropyl)Ether					152	J		172	J		165	J			
4-Methylphenol					32	J		35	J		28	J			
N-Nitroso-Di-n-Propylamine					58	J		86	J		71	J			
Hexachloroethane															
Nitrobenzene					42	J		48	J		47	J			
Isophorone					42	J		59	J		58	J			
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid					44	J		53	J		47	J			
bis(2-Chloroethoxy)Methane					33	J		29	J		33	J			
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene					31	J		32	J		26	J			
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline					56	J		115	J		90	J			
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline					28	J		60	J		36	J			
Acenaphthene															
2,4-Dinitrophenol		36	J		73	J		76	J		87	J			
4-Nitrophenol											356	J			
Dibenzofuran															

AFFECTED SAMPLES:

ET584MS	ET586
ET584MSD	87
ET584	89
ET585	90
ET586	91
ET587	92
ET588	93
	94
	93
	95

Reviewer Initials/Date: AA/12/11/87

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE# 7878 CONTRACTOR CompuChem

Instrument # OWA#3	Init. Cal. (missing)			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE:				8/25/87											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone					29	J									
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
trans-1,2-Dichloroethene															
Chloroform															
2-Butanone				.03	28	J									
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

* These flags should be applied to the analytes on the sample data sheets.

QUALITY ASSURANCE NOTICE
sample # M-72
case # 3828

The following qualifications should be noted when reporting and/or interpreting data for the PEST fraction of this sample. These data qualifiers are used when special circumstances exist in the sample preparation or sample matrix which were beyond the laboratory's control.

[X] no surrogate recovery data available due to a 20:1 dilution factor

[ ] no spike recovery data available due to a ____:1 dilution factor

[ ] no spike and/or surrogate recovery data available due to severe matrix interferences*

[ ] variations between duplicate samples or sample spikes have been attributed to the inhomogeneous nature of the soil matrix

[ ] the following spike or surrogate compounds exhibited interferences which effected accurate quantitation:

_____ _____ _____

_____ _____ _____

[ ] additional data reviewer comments:

_____

_____

_____

data reviewer: Doug McCormack
date: 4-2-86

*the presence of PCBs and related compounds often "mask" these compounds and prevent accurate identification and quantitation

QAN26
861125

QUALITY ASSURANCE NOTICE
sample # 146278 / ET588
case # 7878

The following qualifications should be noted when reporting and/or interpreting data for the Pesticide fraction of this sample. These data qualifiers are used when special circumstances exist in the sample preparation or sample matrix which were beyond the laboratory's control.

[x] no surrogate recovery data available due to a 20 :1 dilution factor

[ ] no spike recovery data available due to a ____:1 dilution factor

[ ] no spike and/or surrogate recovery data available due to severe matrix interferences*

[ ] variations between duplicate samples or sample spikes have been attributed to the inhomogeneous nature of the soil matrix

[ ] the following spike or surrogate compounds exhibited interferences which effected accurate quantitation:

_____ _____ _____

_____ _____ _____

[ ] additional data reviewer comments:

_____

_____

_____

data reviewer: CWA
date: 8-26-87

*the presence of PCBs and related compounds often "mask" these compounds and prevent accurate identification and quantitation

QAN26
861125

LABORATORY NOTICE

CC # 146262 (ID # ET584)

CC # 146267 (MATRIX SPIKE OF CC # 146262)

CC # 146268 (MATRIX SPIKE DUPLICATE OF CC # 146262)

The volatile fractions of these samples were prepared and analyzed as Low Level Solids. Their methylene chloride quantitation report concentration ranged from 22 to 56 ug/kg and their acetone concentration ranged from 30 to 97 ug/kg. We have attributed this variation to sample inhomogeneity and are reporting the data with reference to this qualifier.

Sarah A. Hubbard

Sarah A. Hubbard

Senior Volatile Data Specialist

QUALITY ASSURANCE NOTICE
sample # 146264
case # 7878

The following qualifications should be noted when reporting and/or interpreting data for the Pesticide fraction of this sample. These data qualifiers are used when special circumstances exist in the sample preparation or sample matrix which were beyond the laboratory's control.

[X] no surrogate recovery data available due to a 100 :1 dilution factor

[ ] no spike recovery data available due to a ____:1 dilution factor

[ ] no spike and/or surrogate recovery data available due to severe matrix interferences*

[ ] variations between duplicate samples or sample spikes have been attributed to the inhomogeneous nature of the soil matrix

[ ] the following spike or surrogate compounds exhibited interferences which effected accurate quantitation:

_____ _____ _____

_____ _____ _____

[ ] additional data reviewer comments:

_____

_____

_____

data reviewer: CWA
date: 5-26-87

*the presence of PCBs and related compounds often "mask" these compounds and prevent accurate identification and quantitation

QAN26
861125

QUALITY ASSURANCE NOTICE
sample # 14621 / ET590
case # 7870

The following qualifications should be noted when reporting and/or interpreting data for the PEST fraction of this sample. These data qualifiers are used when special circumstances exist in the sample preparation or sample matrix which were beyond the laboratory's control.

[X] no surrogate recovery data available due to a 100:1 dilution factor

[ ] no spike recovery data available due to a ____:1 dilution factor

[ ] no spike and/or surrogate recovery data available due to severe matrix interferences*

[ ] variations between duplicate samples or sample spikes have been attributed to the inhomogeneous nature of the soil matrix

[ ] the following spike or surrogate compounds exhibited interferences which effected accurate quantitation:

_____ _____ _____

_____ _____ _____

[ ] additional data reviewer comments:

_____

_____

_____

data reviewer: Doug McGrath
date: 9-2-87

*the presence of PCBs and related compounds often "mask" these compounds and prevent accurate identification and quantitation

QAN26
861125

QUALITY ASSURANCE NOTICE
sample # 146283 /ETS91
case # 7878

The following qualifications should be noted when reporting and/or interpreting data for the fahud fraction of this sample. These data qualifiers are used when special circumstances exist in the sample preparation or sample matrix which were beyond the laboratory's control.

[✓] no surrogate recovery data available due to a 200 :1 dilution factor

[ ] no spike recovery data available due to a ____:1 dilution factor

[ ] no spike and/or surrogate recovery data available due to severe matrix interferences*

[ ] variations between duplicate samples or sample spikes have been attributed to the inhomogeneous nature of the soil matrix

[ ] the following spike or surrogate compounds exhibited interferences which effected accurate quantitation:

_____ _____ _____

_____ _____ _____

[ ] additional data reviewer comments:

_____

_____

_____

data reviewer: [signature]
date: 8-26-87

*the presence of PCBs and related compounds often "mask" these compounds and prevent accurate identification and quantitation

QAN26
861125

Laboratory Name ENCOTEC

Case No. 7581

Sample Number
EN 427

87FC11S36

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. ~~14247-96-5~~	~~2,2,4-Trimethylhexane~~	~~VOA~~	~~583~~	~~10 (J)~~
2. NA	UNKNOWN	BNA	335	690
3. NA	UNKNOWN	BNA	364	890
4. NA	UNKNOWN	BNA	~~469~~ 448	890
5. NA	UNKNOWN	BNA	818	650
6. 575-41-7	1,3-DIMETHYL NAPHTHALENE	BNA	936	1400
7. NA	UNKNOWN	BNA	985	970
8. NA	UNKNOWN	BNA	1213	5600
9. NA	UNKNOWN	BNA	1232	1100
10. NA	UNKNOWN	BNA	1436	1200
11. NA	UNKNOWN	BNA	1528	1500
12. NA	UNKNOWN	BNA	1668	850
13. NA	UNKNOWN	BNA	1799	1200
14. NA	UNKNOWN	BNA	1922	2800
15. NA	UNKNOWN	BNA	2152	3500
16. NA	UNKNOWN	BNA	1980	1700
17. NA	UNKNOWN	BNA	2038	6600
18. NA	UNKNOWN	BNA	2095	1300
19. NA	UNKNOWN	BNA	2169	2200
20. NA	UNKNOWN	BNA	2272	3400
21. NA	UNKNOWN	BNA	2387	4400
22.				
23. NA	NO VOLATILES FOUND	VOA	NA	NA
24.				
25.				
26.				
27.				
28.				
29.				
30.				

8-20-87

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

Date Received for Review 9/3/87 Date Review Completed 9/8/87

To: Jeff Carman

From: Zena Gold-Kaufman ZGK

Subject: US Scrap

PAN: ~~758~~ 1L0102 Case # 7581

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#	Low Soil	# 8	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

Incomplete, awaiting: _____

FIT Data Review Findings:

MEP094-102

Many heavy metals detected - check IOADS forms for transcription errors

✓ Compounds were detected in sample(s); see enclosed Chemical Evaluation Form.

Book No. 6 Page No. 176

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: US Scrap PAN# ILO102 DATE: 9/3/87

CASE # 7581 UNITS- mg/kg REVIEWER: ZGK

TOX/ PERS	COMPOUND	CRDL	3-(5x) CRDL	MEP 094	095	096	097	099	100	101
	ALUMINUM	40		13100	12300	14000	11800	19400	4090	8310
	ANTIMONY UJ									
	ARSENIC	2		14	13	15	11	19	24	9.1
	BARIUM	40		369	289	271	269	377	387	598
	BERYLLIUM	1		[1.5]	[1.9]	[2]	[1.1]	[2.5]		[1.2]
	CADMIUM	1		6.9	3.7	7	6.3	63	3.9	4.9
	CHROMIUM	2		1130	218	581	868	398	674	74
	COBALT	10		[8.7]	[5.4]	[89]		[16]	28	[12]
	COPPER	5		744	905	424	329	6450	942	271
	LEAD	1		1160	524	881	1190	1030		185
	MERCURY	.008		0.97	1.0	0.98	0.76	1.3	0.19	0.41
	NICKEL J	8		450 J	70 J	178 J	158 J	315 J	2610 J	122 J
	SELENIUM R	1								
	SILVER	2						[53]		
	THALLIUM J	2								
	TIN	8		27	24	27	[20]	115	23	[15]
	VANADIUM J	10		80 J	48 J	67 J	124 J	152 J	60 J	31 J
	ZINC	4		1210	721	809	719	2180	739	293
	CYANIDE	2		3	8.6	0.97	1.1	9.7		

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: US Scrap PAN# _____ DATE: 9/2/87

CASE # 7581 UNITS- mg/kg REVIEWER: ZGK

TOX/ PERS	COMPOUND	CRDL	3-5xCRDL	102						
	ALUMINUM			8040						
	ANTIMONY									
	ARSENIC			12						
	BARIUM			342						
	BERYLLIUM			5.1						
	CADMIUM			8.9						
	CHROMIUM			32						
	COBALT			[7.1]						
	COPPER			89						
	LEAD			259						
	MERCURY			.15						
	NICKEL			30J						
	SELENIUM									
	SILVER			[4.7]						
	THALLIUM									
	TIN			[70]						
	VANADIUM			38J						
	ZINC			1170						
	CYANIDE			0.79						

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 9/1/87

RECEIVED SEP 3 1987

SUBJECT: Review of Region V CLP Data Received for Review on 8-10-87

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory Jay Thakkar

TO: Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: U S SCRAP SMO case No. 7581

EPA Data Set No. SF 4180 No. of Samples: 8 D.U./Activity Numbers Y905/C72100

CRL No. 87FC11S29 - S36

SMO Traffic No. MEP 094 - 102

CLP Laboratory: RMAL Hrs. Required for Review: 2

Following are our findings: This review covers 8 low soil samples analyzed for metals and cyanide. Serial dilution showed interference for Ca. All Ca data are estimated. Duplicate analysis gave high RPD's for mg (30%), V (56%) limits of ±35% apply for soil duplicate analysis. All V data are estimated. Spike recoveries for Sb (67%), Ni (73%), Se (0%), Tl (72%) are shown above. Detection limits for Sb, Tl could be elevated. All Sb, Tl data are estimated (UJ). All Se data are unuseable (R). All Ni data are estimated. All other QC audits are acceptable.

Ida Lee

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory. 9.1.87
( ) Data are unacceptable.

cc: Duane Geuder, Quality Assurance Officer, EPA Support Services
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

000001

Date 8-7-87

RECEIVED SEP

COVER PAGE
INORGANIC ANALYSIS DATA PACKAGE

Lab Name ROCKY MOUNTAIN ANALYTICAL
SOW No. 784

Case No. 7581
QC Report No. 87017

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MEP094D		MEP102	
MEP094		[MEP999]	
MEP094S			
MEP095			
MEP096			
MEP097			
MEP099			
MEP100			
MEP101			

RECEIVED
AUG 10 1987
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

Comments: 8 LOW SOILS FOR TOTAL METALS AND CYANIDE ANALYSIS
SERIAL DILUTION OF SAMPLE MEP102 IS IDENTIFIED AS [MEP999]
Interference noted for Calcium on Serial Dilution

ICP Interelement and background corrections applied? Yes X No ___.
If yes, corrections applied before X or after ___ generation of raw data.

Footnotes:

NR - not required by contract at this time
Form I:
Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract required detection limit, report the value in brackets (i.e., [10]). Indicate the method used with P (for ICP/Flame AA) or F (for furnace).
U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 10U).
E - Indicates a value estimated or not reported due to the presence of Interference. Explanatory note included on cover page.
S - Indicates value determined by Method of Standard Addition.
R - Indicates spike sample recovery is not within control limits.
X - Indicates duplicate analysis is not within control limits.
+ - Indicates the correlation coefficient for method of standard addition is Less than 0.995
CV - Indicates Cold Vapor
AS - Indicates Automated Spectrophotometric

Form I

000002

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEP094

Date 8-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7581
QC REPORT NO. 87017

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	13100	P	13.	MAGNESIUM	30600	P X
2.	ANTIMONY	14U	P R	14.	MANGANESE	3610	P
3.	ARSENIC	14	F	15.	MERCURY	0.97	CV
4.	BARIUM	369	P	16.	NICKEL	450	P E
5.	BERYLLIUM	[1.5]	P	17.	POTASSIUM	[1440]	P
6.	CADMIUM	6.9	P	18.	SELENIUM	29U	F E
7.	CALCIUM	94500	P E	19.	SILVER	2.3U	P
8.	CHROMIUM	1130	P	20.	SODIUM	[700]	P
9.	COBALT	[8.7]	P	21.	THALLIUM	5.7U	F R
10.	COPPER	744	P	22.	TIN	27	P
11.	IRON	46300	P	23.	VANADIUM	80	P X
12.	LEAD	1160	P	24.	ZINC	1210	P

Cyanide 3 AS Percent Solids (%) 87

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Selenium value reported at an additional 10X dilution

Lab Manager KW

Form I

0000003

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEP095

Date 8-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7581
QC REPORT NO. 87017

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	12300	P	13.	MAGNESIUM	22400	P X
2.	ANTIMONY	14U	P R UJ	14.	MANGANESE	4450	P
3.	ARSENIC	13	F	15.	MERCURY	1.0	CV
4.	BARIUM	289	P	16.	NICKEL	70	P R J
5.	BERYLLIUM	[1.9]	P	17.	POTASSIUM	[1310]	P
6.	CADMIUM	3.7	P	18.	SELENIUM	28U	F R R
7.	CALCIUM	104000	P E J	19.	SILVER	2.2U	P
8.	CHROMIUM	218	P	20.	SODIUM	[770]	P
9.	COBALT	[5.4]	P	21.	THALLIUM	5.6U	F R UJ
10.	COPPER	905	P	22.	TIN	24	P
11.	IRON	31800	P	23.	VANADIUM	48	P X J
12.	LEAD	524	P	24.	ZINC	721	P

Cyanide 8.6 AS Percent Solids (%) 90

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Selenium value reported at an additional 10x dilution

Lab Manager [illegible]

Form I

000004

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEP096

Date 8-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7581
QC REPORT NO. 87017

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	14000	P	13.	MAGNESIUM	28100	P X
2.	ANTIMONY	15U	P R UJ	14.	MANGANESE	3470	P
3.	ARSENIC	15	FS	15.	MERCURY	0.98	CV
4.	BARIUM	271	P	16.	NICKEL	178	P R J
5.	BERYLLIUM	[2]	P	17.	POTASSIUM	[1410]	P
6.	CADMIUM	7	P	18.	SELENIUM	29U	F R R
7.	CALCIUM	106000	P E J	19.	SILVER	2.3U	P
8.	CHROMIUM	581	P	20.	SODIUM	[1290]	P
9.	COBALT	[8.9]	P	21.	THALLIUM	5.8U	F R UJ
10.	COPPER	424	P	22.	TIN	27	P
11.	IRON	40200	P	23.	VANADIUM	67	P X J
12.	LEAD	881	P	24.	ZINC	807	P

Cyanide 0.97 AS Percent Solids (%) 86

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Arsenic value determined by MSA
Selenium value reported after additional 10x dilution

Lab Manager

000005

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEP097

Date 8-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7581
QC REPORT NO. 87017

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	11800	P	13.	MAGNESIUM	27000	P X
2.	ANTIMONY	14U	P R UJ	14.	MANGANESE	7750	P
3.	ARSENIC	11	F	15.	MERCURY	0.76	CV
4.	BARIUM	269	P	16.	NICKEL	158	P R J
5.	BERYLLIUM	[1.1]	P	17.	POTASSIUM	[1070]	P
6.	CADMIUM	6.3	P	18.	SELENIUM	29U	F R R
7.	CALCIUM	114000	P E J	19.	SILVER	2.3U	P
8.	CHROMIUM	868	P	20.	SODIUM	626U	P
9.	COBALT	5.2U	P	21.	THALLIUM	5.7U	F R UJ
10.	COPPER	329	P	22.	TIN	[20]	P
11.	IRON	50300	P	23.	VANADIUM	124	P X J
12.	LEAD	1190	P	24.	ZINC	719	P

Cyanide 1.1 AS Percent Solids (%) 87

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Selenium value reported at an additional 10x dilution.
mercury value reported at an additional 5x dilution

Lab Manager [illegible]

000006

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEB099

Date 8-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7581
QC REPORT NO. 87017

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	19400	P	13.	MAGNESIUM	23900	P X
2.	ANTIMONY	15U	P R UJ	14.	MANGANESE	6230	P
3.	ARSENIC	19	F	15.	MERCURY	1.3	CV
4.	BARIUM	377	P	16.	NICKEL	315	P R J
5.	BERYLLIUM	[2.8]	P	17.	POTASSIUM	[1220]	P
6.	CADMIUM	63	P	18.	SELENIUM	29U	F R R
7.	CALCIUM	117000	P E J	19.	SILVER	[5.3]	P
8.	CHROMIUM	398	P	20.	SODIUM	[958]	P
9.	COBALT	[16]	P	21.	THALLIUM	5.8U	F R UJ
10.	COPPER	6450	P	22.	TIN	115	P
11.	IRON	50800	P	23.	VANADIUM	152	P X J
12.	LEAD	1030	P	24.	ZINC	2180	P

Cyanide 9.7 AS Percent Solids (%) 86

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Selenium value reported at an additional 10x dilution
Mercury value reported at an additional 5x dilution

Lab Manager [illegible]

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEP100

Date 8-7-89

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7581
QC REPORT NO. 87017

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	4090	P	13.	MAGNESIUM	7150	P X
2.	ANTIMONY	13U	P R	14.	MANGANESE	1600	P
3.	ARSENIC	24	F	15.	MERCURY	0.19	CV
4.	BARIUM	387	P	16.	NICKEL	2610	P R
5.	BERYLLIUM	0.54U	P	17.	POTASSIUM	[378]	P
6.	CADMIUM	3.9	P	18.	SELENIUM	2.7U	F R
7.	CALCIUM	27700	P E	19.	SILVER	2.2U	P
8.	CHROMIUM	674	P	20.	SODIUM	586U	P
9.	COBALT	28	P	21.	THALLIUM	5.4U	F R
10.	COPPER	942	P	22.	TIN	23	P
11.	IRON	56200	P	23.	VANADIUM	60	P X
12.	LEAD	195	P	24.	ZINC	739	P

Cyanide 0.54U AS Percent Solids (%) 93

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

Lab Manager

000008

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEP101

Date 8-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7581
QC REPORT NO. 87017

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	8310	P	13.	MAGNESIUM	15600	P X
2.	ANTIMONY	14U	P R UJ	14.	MANGANESE	1080	P
3.	ARSENIC	9.1	F	15.	MERCURY	0.41	CV
4.	BARIUM	598	P	16.	NICKEL	122	P R J
5.	BERYLLIUM	[1.2]	P	17.	POTASSIUM	[1150]	P
6.	CADMIUM	4.9	P	18.	SELENIUM	28U	F R P
7.	CALCIUM	41600	PE J	19.	SILVER	2.3U	P
8.	CHROMIUM	74	P	20.	SODIUM	619U	P
9.	COBALT	[12]	P	21.	THALLIUM	5.7U	F R UJ
10.	COPPER	271	P	22.	TIN	[15]	P
11.	IRON	26900	P	23.	VANADIUM	31	P X J
12.	LEAD	185	P	24.	ZINC	293	P

Cyanide 0.57U AS Percent Solids (%) 88

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Selenium value reported at an additional 10X dilution

Lab Manager [illegible]

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
209 Madison St. - Alexandria, VA 22314
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEP102

Date 8-7-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7581
QC REPORT NO. 87017

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	8040	P	13.	MAGNESIUM	[2340]	P X
2.	ANTIMONY	16U	P R UJ	14.	MANGANESE	1170	P
3.	ARSENIC	12	F	15.	MERCURY	0.15	CV
4.	BARIUM	342	P	16.	NICKEL	30	P R J
5.	BERYLLIUM	5.1	P	17.	POTASSIUM	[1660]	P
6.	CADMIUM	8.9	P	18.	SELENIUM	3.1U	F R R
7.	CALCIUM	27800	P E J	19.	SILVER	[4.7]	P
8.	CHROMIUM	32	P	20.	SODIUM	[841]	P
9.	COBALT	[7.1]	P	21.	THALLIUM	6.3U	F R UJ
10.	COPPER	89	P	22.	TIN	[20]	P
11.	IRON	29800	P	23.	VANADIUM	38	P X J
12.	LEAD	259	P	24.	ZINC	1170	P

Cyanide 0.79 AS Percent Solids (%) 80

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

Lab Manager

QC EXCEPTION SUMMARY REPORT

E # 7581
A SET # 4180
Q.C. # 87017
E: 9.1.87

SITE U S Scrap
LAB RMAL
REVIEWED BY [illegible]

MATRIX: SS
CONC. : 86

WATER SAMPLE SPK.
WATER SAMPLE DUP.
SOIL SAMPLE SPK. MEP0.94
SOIL SAMPLE DUP. MEP0.94

	OVERALL CASE QC									MATRIX SPECIFIC QC						SAMPLE SPECIFIC QC		FIELD QC			REGIONAL QC			OTHER COMMENTS
	Holding Time	Cal Blanks	Init Calibr	Contin Calibr	Prep Blk AQ	Prep Blk SOL	ICS %R	LCS % AQ	LCS % SOL	Sol Dup RPD	Sol Spk. %R	AQ Dup RPD	AQ Spk. %R	Ser Dilu AQ	Ser Dilu SOL	GFAA Dup	GFAA Spike	Blank	Dup RPD	Spike %R	Blind Blank	Blind Spike %R	Split Sample RPD	
[illegible]											67													
[illegible]																								
[illegible]																								
[illegible]																								
[illegible]																								
[illegible]															X									
[illegible]																								
[illegible]																								
[illegible]																								
[illegible]																								
[illegible]																								
[illegible]										30														
[illegible]																								
[illegible]											73													
[illegible]											0													
[illegible]																								
[illegible]											72													
[illegible]										36														
[illegible]																								
[illegible]																								

RECEIVED SEP 3 1987

1/2

000013

RECEIVED SEP 3 1987

Form III

Q.C. Report No. 87017

BLANKS

LAB NAME ROCKY MOUNTAIN ANALYTICAL CASE NO. 7581

DATE 8-7-87 UNITS ug/L

Matrix SOIL

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. ALUMINUM	[40]	15U	15U			[16]	
2. ANTIMONY	25U	25U	25U			25U	
3. ARSENIC	10U	10U	10U	10U		10U	
4. BARIUM	3U	3U	[8.7]			3U	
5. BERYLLIUM	1U	1U	[2.5]			1U	
6. CADMIUM	4U	4U	4U			4U	
7. CALCIUM	179U	179U	[226]			179U	
8. CHROMIUM	4U	4U	4U			4U	
9. COBALT	9U	9U	9U			9U	
10. COPPER	6U	[14]	6U			6U	
11. IRON	24U	[57]	24U			24U	
12. LEAD	20U	20U	20U			20U	
13. MAGNESIUM	153U	153U	153U			153U	
14. MANGANESE	4U	4U	[4.3]			4U	
15. MERCURY	0.2U	0.2U	0.2U			0.2U	
16. NICKEL	8U	8U	8U			8U	
17. POTASSIUM	175U	175U	[262]			175U	
18. SELENIUM	5U	5U	5U	5U	5U	5U	
19. SILVER	4U	4U	4U			4U	
20. SODIUM	1090U	1090U	1090U			1090U	
21. THALLIUM	10U	10U	10U	10U		10U	
22. TIN	22U	22U	22U			22U	
23. VANADIUM	7U	7U	7U			7U	
24. ZINC	3U	[4.1]	[14]			[13]	
Other:							
Cyanide	10U	10U	10U	10U		10U	

Form III

2/2

Q.C. Report No. 87017

020014

BLANKS

LAB NAME ROCKY MOUNTAIN ANALYTICAL

CASE NO. 7581 3/10/87

DATE 8-7-87

UNITS ug/L

Matrix Soil

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration - Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. ALUMINUM							
2. ANTIMONY							
3. ARSENIC	10u	10u					
4. BARIUM							
5. BERYLLIUM							
6. CADMIUM							
7. CALCIUM							
8. CHROMIUM							
9. COBALT							
10. COPPER							
11. IRON							
12. LEAD							
13. MAGNESIUM							
14. MANGANESE							
15. MERCURY	0.2u	0.2u	0.2u			0.2u	
16. NICKEL							
17. POTASSIUM							
18. SELENIUM		5u					
19. SILVER							
20. SODIUM							
21. THALLIUM							
22. TIN							
23. VANADIUM							
24. ZINC							
Other:							
Cyanide	10u	10u	10u				

Form V

000016

Q.C. Report No. 87017

SPIKE SAMPLE RECOVERY

RECEIVED SEP

LAB NAME ROCKY MOUNTAIN ANALYTICAL

CASE NO. 7581

EPA Sample No. MEP094

DATE 8-7-87

Lab Sample ID No.

Units mg/kg

MATRIX SOIL

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R[1]
Metals:					
1. ALUMINUM	75-125	11600	11400	NR	
2. ANTIMONY	75-125	167	12U	250	67
3. ARSENIC	75-125	29 S	12	20	85
4. BARIUM	75-125	1310	321	1000	99
5. BERYLLIUM	75-125	29	[1.3]	25	111
6. CADMIUM	75-125	34	6	25	112
7. CALCIUM	75-125	87300	82200	NR	
8. CHROMIUM	75-125	936	985	100	-49
9. COBALT	75-125	262	[7.5]	250	102
10. COPPER	75-125	786	647	125	111
11. IRON	75-125	30100	40300	NR	
12. LEAD	75-125	1230	1010	250	88
13. MAGNESIUM	75-125	19400	26600	NR	
14. MANGANESE	75-125	3210	3140	250	28
15. MERCURY	75-125	1.3	0.84	0.5	92
16. NICKEL	75-125	573	391	250	73
17. POTASSIUM	75-125	[1140]	[1250]	NR	
18. SELENIUM	75-125	25U	25U	5	0
19. SILVER	75-125	29	2U	25	116
20. SODIUM	75-125	[1250]	[609]	NR	
21. THALLIUM	75-125	18	5U	25	72
22. TIN	75-125	285	23	250	105
23. VANADIUM	75-125	328	70	250	103
24. ZINC	75-125	1270	1060	250	84
Other:					
Cyanide	75-125	7.8	2.6	5	104

[1] %R = [(SSR - SR)/SA] x 100

"R"- out of control

Comments: Arsenic matrix spike Results determined by MSA. Selenium matrix spike & sample Results reported at additional 10X dilutions. mercury matrix spike Result reported at an additional 5X dilution.

The following elements reported unflagged due to sample concentration greater than 4 times the Spike Added value:

Form VI

000017

RECEIVED SEP 3 1987

Q.C. Report No. 87017

DUPLICATES

LAB NAME ROCKY MOUNTAIN ANALYTICAL

DATE 8-7-87

CASE NO. 7581
EPA Sample No. MEP094
Lab Sample ID No. -
Units mg/kg

Matrix SOIL

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]	
Metals:					
1. ALUMINUM		11400	11000	3.6	
2. ANTIMONY		12U	32	NC	
3. ARSENIC		12	15 S	22	
4. BARIUM		321	306	4.8	
5. BERYLLIUM		[1.3]	[1.5]	NC	
6. CADMIUM		6	7.6	24	
7. CALCIUM		82200	86500	5.1	
8. CHROMIUM		985	849	15	
9. COBALT		[7.5]	[6.9]	NC	
10. COPPER		647	606	6.5	
11. IRON		40300	34200	16	
12. LEAD		1010	877	14	
13. MAGNESIUM		26600	19700	30	X
14. MANGANESE		3140	3460	9.7	
15. MERCURY		0.84	0.9	6.9	
16. NICKEL		391	339	14	
17. POTASSIUM		[1250]	[1100]	NC	
18. SELENIUM		25U	25U	NC	
19. SILVER		2U	2U	NC	
20. SODIUM		[609]	[669]	NC	
21. THALLIUM		5U	5U	NC	
22. TIN		23	29	23	
23. VANADIUM		70	124	56	X
24. ZINC		1060	1050	0.95	
Other:					
dessolids		87	87	0	
Cyanide		2.6	2.6	0	

X Out of Control

[1] To be added at a later date. [2] RPD = [|S-D|/((S+D)/2)] x 100

NC - Non calculable RPD due to value(s) less than CRDL

The following elements reported unflagged due to sample and/or duplicate concentration less than 5 times the CRDL and +/- CRDL:
ARSENIC, CADMIUM, TIN

1/2

000018

RECEIVED SEP

Form VII

Q.C. Report No. 87017
INSTRUMENT DETECTION LIMITS AND
LABORATORY CONTROL SAMPLE

LAB NAME ROCKY MOUNTAIN ANALYTICAL
DATE 8-7-87

CASE NO 7581
UNITS ug/L

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Furnace	Lab Control Sample True	Found	%R
Metals:						
1. ALUMINUM	200	15		1980	2010	102
2. ANTIMONY	60	25		1090	1100	101
3. ARSENIC	10	31	2	49	42	86
4. BARIUM	200	3		1980	1980	100
5. BERYLLIUM	5	1		481	524	109
6. CADMIUM	5	4		489	508	104
7. CALCIUM	5000	179		49800	53500	107
8. CHROMIUM	10	4		506	475	94
9. COBALT	50	9		474	506	107
10. COPPER	25	6		542	588	108
11. IRON	100	24		1990	2050	103
12. LEAD	5	20	1	4510	4520	100
13. MAGNESIUM	5000	153		25000	26100	105
14. MANGANESE	15	4		513	532	104
15. MERCURY	0.2		0.2CV	1.0	1.1	110
16. NICKEL	40	8		496	506	102
17. POTASSIUM	5000	175		50200	51800	103
18. SELENIUM	5		1	98	110 S	112
19. SILVER	10	4		509	511	100
20. SODIUM	5000	1090		50700	52400	103
21. THALLIUM	10		1	97	93 S	96
22. TIN	40	22		2000	2210	110
23. VANADIUM	50	7		511	527	103
24. ZINC	20	3		3100	3090	100
Other:						
Cyanide	10		10AS	58	52	90

CV - Cold Vapor
AS - Automated Spectrophotometric

2/2

Form VII

000019

Q.C. Report No. 87017
INSTRUMENT DETECTION LIMITS AND
LABORATORY CONTROL SAMPLE

LAB NAME ROCKY MOUNTAIN ANALYTICAL
DATE 8-7-87

CASE NO 7581
UNITS ug/L

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Furnace	Lab Control Sample True	Found	%R
Metals:						
1. ALUMINUM	200	15		1980		
2. ANTIMONY	60	25		1090		
3. ARSENIC	10	31	2	49		
4. BARIUM	200	3		1980		
5. BERYLLIUM	5	1		481		
6. CADMIUM	5	4		489		
7. CALCIUM	5000	179		49800		
8. CHROMIUM	10	4		506		
9. COBALT	50	9		474		
10. COPPER	25	6		542		
11. IRON	100	24		1990		
12. LEAD	5	20	1	4510		
13. MAGNESIUM	5000	153		25000		
14. MANGANESE	15	4		513		
15. MERCURY	.2		0.2CV	1.0	0.99	99
16. NICKEL	40	8		496		
17. POTASSIUM	5000	175		50200		
18. SELENIUM	5		1	98		
19. SILVER	10	4		509		
20. SODIUM	5000	1090		50700		
21. THALLIUM	10		1	97		
22. TIN	40	22		2000		
23. VANADIUM	50	7		511		
24. ZINC	20	3		3100		
Other:						
Cyanide	10		10AS			

CV - Cold Vapor
AS - Automated Spectrophotometric

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

CRL Receipt Date 9-29-87 FIT Receipt Date 12-16-87 Review Completed 12-21-87

TO: Jeff Carman

FROM: Jim Mertes

SUBJECT: U.S. Scrap

PAN: IL 0102 - CASE # 7878

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 12	Low Soil	#	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status X Completed!! for this sampling data

_____ Incomplete, awaiting: _____

FIT Data Review Findings:

— Samples contained some if not all of the following; phenol, methylphenols, isophorone, dibenzofuran, numerous PNA's, phthalates, pentachlorophenol, and benzoic acid, chlordane, aroclors.

Check Data Sheets for Transcription Errors

— Some data qualified D = diluted, see IAS case narrative for dilution factors & thus, det. limits

X Compounds were detected in sample(s); see enclosed sheet.

Book No. 6 Page No. 245 Date Sampled 8-12-87

26U:001

1 hr. charged to a Superfund Q
weeks ending 12-26-87
J.M.

U.S. Scrap
Case 7878

COMPOUND	SAMPLE	DET. LIMIT	ppb							
			ET595	588	589	590	591	584	587	586
chloromethane										
bromomethane										
vinyl chloride										
chloroethane										
methylene chloride										
acetone										
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
trans-1,2,-dichloroethene										
chloroform				3.8J					1.0J	1.7J
1,2-dichloroethane										
2-butanone										
1,1,1-trichloroethane										
carbon tetrachloride										
vinyl acetate										
bromodichloromethane										
1,1,2,2-tetrachloroethane										
1,2-dichloropropane										
trans-1,3-dichloropropene										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
cis-1,3-dichloropropene										
2-chloroethylvinylether										
bromoform										
2-hexanone										
4-methyl-2-pentanone										
tetrachloroethene										
toluene			1.8J						1.6J	
chlorobenzene										
ethylbenzene										
styrene										
total xylenes										
N-nitrosodimethylamine										
phenol				590	270J	260J	280J		220J	740
aniline										
bis(2-chloroethyl)ether										
2-chlorophenol										
1,3-dichlorobenzene										
1,4-dichlorobenzene										
benzyl alcohol										
1,2-dichlorobenzene										
2-methylphenol										
bis(2-chloroisopropyl)ether										
4-methylphenol			63J			73J	68J			
N-nitroso-di-n-propylamine										
hexachloroethane										
nitrobenzene										
isophrone			260J	740	120J	470	220J		320J	1000
2-nitrophenol										
2,4-dimethylphenol										
benzoic acid						1100J	700J		1300J	
bis(2-chloroethoxy)methane										
2,4-dichlorophenol				42J		230J				
1,2,4-trichlorobenzene										
napthalene			860	350J	640	500	610	330J	610	620
4-chloroaniline										
hexachlorobutadiene										
4-chloro-3-methylphenol										
2-methylnapthalene			1000	460	1300	750	1200	430	1000	760
hexachlorocyclopentadiene										
2,4,6-trichlorophenol				42J						
2,4,5-trichlorophenol										
2-chloronaphthalene										

VOA

45. SCRAP
Case 1878

COMPOUND	SAMPLE	DET. LIMIT	ppb ET595	588	589	590	591	584	587	586
dimethyl phthalate										
acenapthylene			160J	130J	180J	200J	210J	190J	210J	320J
3-nitroaniline										
acenaphthene			360	150J	210J	210J	400	65J	140J	340J
2,4-dinitrophenol										
4-nitrophenol										
dibenzofuran			410	120J	250J	190J	290J	180J	260J	330J
2,4-dinitrotoluene										
2,6-dinitrotoluene										
diethylphthalate			260J				150J			280J
4-chlorophenyl-phenylether										
fluorene			330J	200J	220J	240J	420	72J	180J	540
4-nitroaniline										
4,6-dinitro-2-methylphenol										
N-nitrosodiphenylamine										
4-bromophenyl-phenylether										
hexachlorobenzene										
pentachlorophenol				42J						79J
phenanthrene			2900	2200	1600	1800	3200	1100	1700	4200
anthracene			410	520	300J	390	840	210J	310J	1000
di-n-butylphthalate			130J	190J	180J	310J	250J	36J	200J	280J
fluoranthene			1800	2500	1500	1500	3000	1400	1600	4000
benzidine										
pyrene			3200	3400	3100	3400	6100	1700	2600	7100
butylbenzylphthalate				160J			150J		88J	290J
3,3'-dichlorobenzidine										
benzo(a)anthracene			1300	2100	1500	1300	3000	1200	1300	3600
bis(2-ethylhexyl)phthalate			1000				4000			3000
chrysene			1800	2300	1900	1800	3400	1600	1900	4100
di-n-octylphthalate			280J	130J	430	610	620		380	740
benzo(b&k)fluoranthene			3000	4100	3800	3200	6600	2800	3500	4200
benzo(a)pyrene			1400	1800	1600	1400	3000	1100	1400	3300
indeno(1,2,3-cd)pyrene			650	820	920	1200	1600	560	820	1500
dibenzo(a,h)anthracene			320J	440	410	500	780	330J	400	730
benzo(g,h,i)perylene			740	830	1000	1300	1800	580	1000	1600
alpha-BHC										
beta-BHC										
delta-BHC										
gamma-BHC(lindane)										
heptachlor										
aldrin										
heptachlor epoxide										
endosulfan I										
dieldrin										
4,4'-DDE										
endrin										
endosulfan II										
4,4'-DDD										
endrin aldehyde										
endosulfan sulfate										
4,4'-DDT										
methoxychlor										
endrin ketone										
chlordane			880J	3800J	960J	7600J	5100J	520J	2300J	8600
toxaphene										
Aroclor-1016										
Aroclor-1221										
Aroclor-1232										
Aroclor-1242										
Aroclor-1248										
Aroclor-1254			[illegible]J	[illegible]	[illegible]J	5900J	8350J		2000J	2100
Aroclor-1260										

COMPOUND	SAMPLE	DET. LIMIT	585	592	593	594				
chloromethane										
bromomethane										
vinyl chloride										
chloroethane										
methylene chloride										
acetone										
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
trans-1,2,-dichloroethene										
chloroform					2.6 J	1.5 J				
1,2-dichloroethane										
2-butanone										
1,1,1-trichloroethane										
carbon tetrachloride										
vinyl acetate										
bromodichloromethane										
1,1,2,2-tetrachloroethane										
1,2-dichloropropane										
trans-1,3-dichloropropene										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
cis-1,3-dichloropropene										
2-chloroethylvinylether										
bromoform										
2-hexanone										
4-methyl-2-pentanone										
tetrachloroethene										
toluene					7.4	4.3 J				
chlorobenzene										
ethylbenzene										
styrene										
total xylenes										
N-nitrosodimethylamine										
phenol			640	170 J	290 J	130 J				
aniline										
bis(2-chloroethyl)ether										
2-chlorophenol										
1,3-dichlorobenzene										
1,4-dichlorobenzene										
benzyl alcohol										
1,2-dichlorobenzene										
2-methylphenol										
bis(2-chloroisopropyl)ether										
4-methylphenol			38 J		80 J	50 J				
N-nitroso-di-n-propylamine										
hexachloroethane										
nitrobenzene										
isophrone			710	110 J	260 J	440				
2-nitrophenol										
2,4-dimethylphenol										
benzoic acid										
bis(2-chloroethoxy)methane										
2,4-dichlorophenol			94 J							
1,2,4-trichlorobenzene										
napthalene			420	530	1200	540				
4-chloroaniline										
hexachlorobutadiene										
4-chloro-3-methylphenol										
2-methylnapthalene			620	750	2000	500				
hexachlorocyclopentadiene										
2,4,6-trichlorophenol										
2,4,5-trichlorophenol										

6/87

SCRAP
case 7898

COMPOUND	SAMPLE	DET. LIMIT	585	592	593	594				
[redacted] phthalate										
apthylene			120 J	420	350 J	130 J				
[redacted]niline										
[redacted]hene			64 J	160 J	440	82 J				
initrophenol										
rophenol										
[redacted]uren			98 J	240 J	350 J	110 J				
[redacted]trotoluene										
initrotoluene										
[redacted]phthalate				240 J		210 J				
[redacted]phenyl-phenylether										
[redacted]ne			180 J	200 J	580	160 J				
roaniline										
[redacted]tro-2-methylphenol										
[redacted]odiphenylamine										
omophenyl-phenylether										
hlorobenzene										
[redacted]orophenol			60 J							
[redacted]rene			1000	2300	3800	950				
acene			250 J	500	740	190 J				
[redacted]ylphthalate			220 J	130 J	310 J	320 J				
[redacted]hene			1000	2400	3100	750				
dine										
e			1900	3800	4200 D	1400				
[redacted]zylphthalate			240 J			140 J				
[redacted]hlorobenzidine										
(a)anthracene			790	2300	2700	760				
[redacted]thylhexyl)phthalate				1400	4100 D	1900				
[redacted]			1100	2800	2900	900				
[redacted]ylphthalate			160 J	300 J	810	520				
(b&k)fluoranthene			2500	5600	5600	1700				
[redacted]pyrene			1300	2300	2600	850				
[redacted],2,3-cd)pyrene			890	1200	1400	490				
o(a,h)anthracene			300 J	530	670	230 J				
o,h,i)perylene			900	1500	1700	650				
[redacted]										
[redacted]										
BHC										
[redacted](lindane)										
[redacted]r										
hlor epoxide										
[redacted]n I										
[redacted]										
DE										
[redacted]n II										
[redacted]										
aldehyde										
[redacted]n sulfate										
[redacted]										
ychlor										
ketone										
[redacted]			45000 J	2400 J	6500 J	11000 J				
[redacted]										
r-1016										
[redacted]1221										
[redacted]232										
[redacted]242										
or-1248										
[redacted]254			[illegible] J	5000 J	2500 J	[illegible] J				
[redacted]260										

DATA QUALIFIERS

Contractor: COMPUCHEM

Case 7878

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

(1) Sample holding times:
A- Volatile fraction had samples FT595 and FT587 are exceeded holding times due to reanalysis.
B- The ABN & PEST fractions were OK.

(2) Soil Surrogate:
A- The volatiles & semi-volatiles were OK.
B- The pesticides were outside the QC limits.

(3) Soil MS/MSD:
A- The %REC of A/BN had 2 out of 22 outside QC limits.
B- The RPD of the acid had 2 out of 5 outside QC limits.
C- The pesticides were outside QC limits.

(4) Method blank:
A- The volatiles blanks has low levels of methylene chloride, acetone, ~~and~~ GB870819B14 had also low level of trichloroethylene and toluene.
B- The semi-volatiles had tph phthalate and unknown.

(5) Technical chlordane might be present in the samples but the pattern did not resemble the standard. The samples might have other PEST/PCB eluting at the same time. The quantities reported for technical chlordane were estimated.

(6) The Aroclor might be present in the samples but the pattern does not resemble the standards. The quantities reported were estimated. AA
12/11/87

Reviewed by: Al Alvan
Phone: (312) 353-6619
Date: 12/11/87

QUALITY ASSURANCE NOTICE
sample # 146271
case # 7938

The following qualifications should be noted when reporting and/or interpreting data for the PEST fraction of this sample. These data qualifiers are used when special circumstances exist in the sample preparation or sample matrix which were beyond the laboratory's control.

[ ] no surrogate recovery data available due to a ____:1 dilution factor

[ ] no spike recovery data available due to a ____:1 dilution factor

[X] no spike and/or surrogate recovery data available due to severe matrix interferences*

[ ] variations between duplicate samples or sample spikes have been attributed to the inhomogeneous nature of the soil matrix

[ ] the following spike or surrogate compounds exhibited interferences which effected accurate quantitation:

_____ _____ _____

_____ _____ _____

[ ] additional data reviewer comments:

_____

_____

_____

data reviewer: Doug McCurnell
date: 9-2-87

*the presence of PCBs and related compounds often "mask" these compounds and prevent accurate identification and quantitation

QAN26
861125

QUALITY ASSURANCE NOTICE

sample # 146271

case # 7178

ID# ~~C#7878~~ ET586

A dilution of the SV fraction of this sample was required in order to achieve accurate and discernible results by GC/MS analysis (usually to prevent detector saturation). In these cases, detection limits are elevated, while surrogate compounds may be diluted to concentrations below these limits. ~~As a result, surrogate recovery data cannot be calculated.~~

reviewer's initials [illegible]

date 8/30/87

BANBS
850531

QUALITY ASSURANCE NOTICE
sample # 146244 /ET592
case # 7878

The following qualifications should be noted when reporting and/or interpreting data for the Pchem fraction of this sample. These data qualifiers are used when special circumstances exist in the sample preparation or sample matrix which were beyond the laboratory's control.

[X] no surrogate recovery data available due to a 100:1 dilution factor

[ ] no spike recovery data available due to a ____:1 dilution factor

[X] no spike and/or surrogate recovery data available due to severe matrix interferences* PCB1260

[ ] variations between duplicate samples or sample spikes have been attributed to the inhomogeneous nature of the soil matrix

[ ] the following spike or surrogate compounds exhibited interferences which effected accurate quantitation:

_____ _____ _____

_____ _____ _____

[ ] additional data revieuer comments:

_____

_____

_____

data revieuer: Doug M. Grimwood
date: 7-9-87

*the presence of PCBs and related compounds often "mask" these compounds and prevent accurate identification and quantitation

QAN26
861125

QUALITY ASSURANCE NOTICE
sample # 148280 /ET589
case # 7223

The following qualifications should be noted when reporting and/or interpreting data for the PEST fraction of this sample. These data qualifiers are used when special circumstances exist in the sample preparation or sample matrix which were beyond the laboratory's control.

[ ] no surrogate recovery data available due to a ____:1 dilution factor

[ ] no spike recovery data available due to a ____:1 dilution factor

[x] no spike and/or surrogate recovery data available due to severe matrix interferences*

[ ] variations between duplicate samples or sample spikes have been attributed to the inhomogeneous nature of the soil matrix

[ ] the following spike or surrogate compounds exhibited interferences which effected accurate quantitation:

_____ _____ _____

_____ _____ _____

[ ] additional data revieuer comments:

_____

_____

_____

data revieuer: Doug McCormack
date: 9-2-87

*the presence of PCBs and related compounds often "mask" these compounds and prevent accurate identification and quantitation

QAN26
861125

QUALITY ASSURANCE NOTICE
sample # 14625 /ETS93
case # 7871

The following qualifications should be noted when reporting and/or interpreting data for the Pshrk fraction of this sample. These data qualifiers are used when special circumstances exist in the sample preparation or sample matrix which were beyond the laboratory's control.

[✓] no surrogate recovery data available due to a 100 :1 dilution factor

[ ] no spike recovery data available due to a ____:1 dilution factor

[ ] no spike and/or surrogate recovery data available due to severe matrix interferences*

[ ] variations between duplicate samples or sample spikes have been attributed to the inhomogeneous nature of the soil matrix

[ ] the following spike or surrogate compounds exhibited interferences which effected accurate quantitation:

_____ _____ _____

_____ _____ _____

[ ] additional data reviewer comments:

_____

_____

_____

data reviewer: [signature]
date: 8/31/87

*the presence of PCBs and related compounds often "mask" these compounds and prevent accurate identification and quantitation

QAN26
861125

QUALITY ASSURANCE NOTICE / E7594
sample # 146387
case # 7837

The following qualifications should be noted when reporting and/or interpreting data for the Pohud fraction of this sample. These data qualifiers are used when special circumstances exist in the sample preparation or sample matrix which were beyond the laboratory's control.

[ ] no surrogate recovery data available due to a 200 :1 dilution factor

[ ] no spike recovery data available due to a ____:1 dilution factor

[ ] no spike and/or surrogate recovery data available due to severe matrix interferences*

[ ] variations between duplicate samples or sample spikes have been attributed to the inhomogeneous nature of the soil matrix

[ ] the following spike or surrogate compounds exhibited interferences which effected accurate quantitation:

_____ _____ _____

_____ _____ _____

[ ] additional data reviewer comments:

_____

_____

_____

data reviewer: [illegible]
date: 8-31-87

*the presence of PCBs and related compounds often "mask" these compounds and prevent accurate identification and quantitation

QAN26
861125

QUALITY ASSURANCE NOTICE
sample # 146288 / ET595
case # 7878

The following qualifications should be noted when reporting and/or interpreting data for the Phenol fraction of this sample. These data qualifiers are used when special circumstances exist in the sample preparation or sample matrix which were beyond the laboratory's control.

[ ] no surrogate recovery data available due to a 50 :1 dilution factor

[ ] no spike recovery data available due to a ____:1 dilution factor

[ ] no spike and/or surrogate recovery data available due to severe matrix interferences*

[ ] variations between duplicate samples or sample spikes have been attributed to the inhomogeneous nature of the soil matrix

[ ] the following spike or surrogate compounds exhibited interferences which effected accurate quantitation:

_____ _____ _____

_____ _____ _____

[ ] additional data reviewer comments:

_____

_____

_____

data reviewer: [illegible]
date: 8-26-87

*the presence of PCBs and related compounds often "mask" these compounds and prevent accurate identification and quantitation

QAN26
861125

LABORATORY NOTICE

On June 15, 1985 CompuChem Laboratories began adding D3-2,4-Dinitrophenol to all standards and samples. The purpose of this addition is to enable the laboratory to have higher and more consistent analytical sensitivity for the native 2,4-Dinitrophenol . The peak corresponding to the deuterated analog is clearly labeled on each RIC as D3#1 and will not be searched and reported as a tentatively identified compound (TIC). This compound is not being used as an internal or surrogate standard.

L. Richard Flynn
Development Chemist

QA NOTICE FOR PCB 1221 + PCB 1254 STANDARDS

CompuChem, in a telephone conversation with Dr. Fred Haeberer on 10/2/84, received permission to allow the laboratory to run standard mixtures containing PCB 1221 and PCB 1254. At that time, Dr. Haeberer was the Organics Project Manager for the Contract Laboratory Program (CLP). Permission was granted since, in one injection, proper resolution of the two standards could be obtained.

This notice serves to provide an explanation for delivering a single standard chromatogram containing both PCB 1221 and PCB 1254.

Robert E. Meierer March 24, 1986
Director of Quality Assurance

SEMIVOLATILE CALCULATIONS FOR HSL COMPOUNDS AND SURROGATES

Soil samples are processed following the latest CLP Contract Modifications (7/85). Joan Fisk, Project Officer for the EPA, has agreed to allow CompuChem to concentrate SV extracts to a final volume of 0.9 ml, rather than 0.95 ml as written. Since our concentrator tubes are graduated in increments of 0.1 ml, this change will allow for greater accuracy in the concentration process. Below are the Base/Neutral and Acid calculations for various analytical requirements.

	Final Volume	Split Ratios pest : BNA	BNA Calculation
BNA fractions only	1.0 ml	-----	$\frac{1.0 * DWF * 30.0 * 33.3}{295/300) * ASW}$
Pesticide only	1.0 ml	1.0 : 9.0	$\frac{0.9 * DWF * 30.0 * 33.3}{(295/300) * (9.0/10) * ASW}$
BNA and Pesticides	BNA = 0.9 ml pest= 1.0 ml	1.0 : 9.0	$\frac{0.9 * DWF * 30.0 * 33.3}{(295/300) * (9.0/10) * ASW}$

where,

DWF = Dry Weight Factor of Sample
ASW = Actual Sample Weight used in preparation
33.3 = Conversion from ug/l to ug/kg, for reporting soil concentrations

Reference the sample package for the CLIST (computer-generated HSL listing which includes calculation formulae) as noted in the Index.

Bob Meierer

Bob Meierer,
Director of Quality Assurance

QUALITY ASSURANCE NOTICE - #2

The current CLP Protocol extraction method for soil samples employs a 1:1 acetone/methylene chloride solvent system to generate semi-volatile extracts. Pesticide grade acetone is recommended in the procedure. While GC/ECD detectable constituents are absent in the solvent system, several contaminants may be apparent when injected into a GC/MS system following the required concentration procedure. In the most recent Modifications to the Caucus Organics Protocols (7/85), the EPA recognizes the presence of these artifacts:

> "Peaks that are suspected as a aldol-condensation reaction products (i.e, 4-methyl-4-hydroxy-2-pentanone and 4-methyl-3-pentene-2-one) should be summarized on Form I, Part B, footnoted as such, but not counted as part of the ...non-HSL compound requirements." (p. B-27)

This notice serves as a data qualifier for the contaminant(s) identified on form I, Part B, as "SOLVENT ARTIFACT." In addition, we have qualified the estimated concentration values with the "B" footnote, indicating the presence of these compounds in the associated method blank. Library Searches are provided for these compounds, but are not included as part of the 20 non-HSL compound requirements.

DETECTION LIMIT CALCULATION CLARIFICATION

To protect our GC columns from unnecessary contamination, soil samples prepared according to Caucus Protocol methods are routinely diluted 5:1. Through a series of experiments we have determined that our Instrument Detection Limit for pesticides is 5X lower than the EPA Contract Required Detection Limit (CRDL). We, therefore, only adjust our detection limits if the dilution necessary to analyze the sample is greater than 5:1. If the sample is diluted by a factor of X the detection limit is adjusted by $\frac{X}{5}$ instead of X.

Jill B. Henes

Jill B. Henes,
Director of GC Dioxin Program

Bob Meierer

Bob Meierer
Director of Quality Assurance

In Reference to Case No(s):
7878

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
Telephone Record Log

Date of Call: _____

Laboratory Name: [illegible]

Lab Contact: _____

Region: [illegible]

Regional Contact: [illegible]

Call Initiated By: ____ Laboratory ✓ Region

In reference to data for the following sample number(s):

[illegible]

Summary of Questions/Issues Discussed:

[illegible]

Summary of Resolution:

[illegible]

Signature [illegible] Date [illegible]

Distribution: (1) Lab Copy, (2) Region Copy, (3) SMO Copy

Case No. 7878 Contract Laboratory COMPUCHEM Contract No. 68-01-7263

Low ✓ Medium _____

	VOLATILE			SEMI-VOLATILE								PESTICIDE**
EPA TRAFFIC NO.	TOLUENE-D8 (81-117)	BFB (74-121)	1,2 DICHLORO-ETHANE-D4 (70-121)	NITRO-BENZENE-D5 (23-120)	2-FLUORO-BIPHENYL (30-115)	TERPHENYL-D14 (18-137)			PHENOL-D6 (24-113)	2-FLUORO-PHENOL (25-121)	2,4,6 TRIBROMO PHENOL (19-122)	DIBUTYL-CHLORENDATE (20-150)
146273-B	NR	NR	NR	NR	NR	NR			NR	NR	NR	135
147109-B	100	98	101									NR
148309-B	92	90	94									
148772-B	98	100	96	NR	NR	NR			NR	NR	NR	
147086-B	NR	NR	NR	85	95	115			95	99	84	87
147785-B	NR	NR	NR	NR	NR	NR			NR	NR	NR	112
148890-B	101	99	97	NR	NR	NR			NR	NR	NR	NR
ET584 MS	116	111	112	56	62	62			60	60	69	NR
ET584 MSD	116	113	116	50	50	51			51	51	53	NR
ET586 MS	NR	NR	NR	NR	NR	NR			NR	NR	NR	***
ET586 MSD	NR	NR	NR	NR	NR	NR			NR	NR	NR	***

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: 0 out of 18 ; outside of QC limits

Semi-Volatiles: 0 out of 18 ; outside of QC limits

Pesticides: 0 out of 5 ; outside of QC limits

7/85

Comments: _____

FORM II

Case No. 7878 Contract Laboratory COMPUCHEM Contract No. 68-01-7263

Low ✓ Medium _____

	VOLATILE			SEMI-VOLATILE								PESTICIDE**
EPA SAMPLE NO.	TOLUENE-D8 (81-117)	BFB (74-121)	1,2 DICHLORO-ETHANE-D4 (70-121)	NITRO-BENZENE-D5 (23-120)	2-FLUORO-BIPHENYL (30-115)	TERPHENYL-D14 (18-137)			PHENOL-D6 (24-113)	2-FLUORO-PHENOL (25-121)	2,4,6 TRIBROMO PHENOL (19-122)	DIBUTYL-CHLORENDATE (20-150)
GB870822C03	92	89	95	NR	NR	NR			NR	NR	NR	NR
GC870825B03	95	95	93									
GC870827C03	100	94	95									
GD870820A11	112	110	107									
GC870821E14	108	108	102									
GD870821A14	106	99	99	NR	NR	NR			NR	NR	NR	NR
GB870819B14	103	100	99	NR	NR	NR			NR	NR	NR	NR
GC870829B03	105	102	105	NR	NR	NR			NR	NR	NR	NR

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: 0 out of 24 ; outside of QC limits

Semi-Volatiles: _____ out of _____ ; outside of QC limits

Pesticides: _____ out of _____ ; outside of QC limits

7/85

Comments: _____

FORM II

SOIL SURROGATE RECOVERY LEVEL

Case No. 7878 Contract Laboratory COMPUCHEM Contract No. 68-01-7263

Low ✓ Medium _____

SMO TRAFFIC NO.	VOLATILE: TOLUENE-D8 (81-117)	VOLATILE: BFB (74-121)	VOLATILE: 1,2 DICHLOROETHANE-D4 (70-121)	SEMI-VOLATILE: NITRO-BENZENE-D5 (23-120)	SEMI-VOLATILE: 2-FLUORO-BIPHENYL (30-115)	SEMI-VOLATILE: TERPHENYL-D14 (18-137)			SEMI-VOLATILE: PHENOL-D6 (24-113)	SEMI-VOLATILE: 2-FLUORO-PHENOL (25-121)	SEMI-VOLATILE: 2,4,6 TRIBROMO PHENOL (19-122)	PESTICIDE: DIBUTYL-CHLORENDATE (20-150)
ET584	116	106	109	64	58	64			64	67	66	115
ET585	96	87	98	67	67	89			63	71	64	***
ET586	96	87	96	41	43	53			41	42	49	***
ET587	113	104	106	37	35	46			34	36	43	***
ET588	107	97	98	74	69	78			65	72	81	***
ET589	108	92	94	58	51	77			62	58	61	***
ET590	109	93	99	46	40	74			45	46	49	***
ET591	102	89	96	45	39	62			45	44	47	***
ET592	99	95	96	69	57	79			63	68	60	***
ET593	84	80	87	41	44	48			36	43	49	***
ET594	110	98	104	50	44	99			47	49	54	***
ET595	107	102	103	77	68	105			72	76	70	***
PREVIOUS RUN												
ET586	NR	NR	NR	71	71	99			64	69	91	NR
ET593	NR	NR	NR	47	48	82			43	45	48	NR

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: _____ out of _____ ; outside of QC limits

Semi-Volatiles: _____ out of _____ ; outside of QC limits

Pesticides: _____ out of _____ ; outside of QC limits

7/85

Comments: _____

FORM II

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 7878 **Contractor** Compuchem **Contract No.** 68-01-7263

Low Level ✓ **Medium Level** _____

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/Kg)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. ET584	1,1-Dichloroethene	53	0	64.0	121	70.3	133	9	22	59-172
	Trichloroethene	53	0	63.5	120	68.6	129	8	24	62-137
	Chlorobenzene	53	0	63.7	120	70.1	132	10	21	60-133
	Toluene	53	0	67.6	128	72.3	136	7	21	59-139
	Benzene	53	0	70	132	74.8	141	7	21	66-142
B/N SMO SAMPLE NO. ET584	1,2,4-Trichlorobenzene	3590	0	1740	48	1580	44	10	23	38-107
	Acenaphthene	3590	65	1840	49	1550	41	18	19	31-137
	2,4 Dinitrotoluene	3590	0	1720	48	1270	35	30	47	28-89
	Pyrene	3590	1680	2560	25*	2940	35	35	36	35-142
	N-Nitrosodi-n-Propylamine	3590	0	1980	55	1760	49	12	38	41-126
	1,4-Dichlorobenzene	3590	0	1650	46	1520	42	8	27	28-104
ACID SMO SAMPLE NO. ET584	Pentachlorophenol	7180	0	2430	34	987	14*	84*	47	17-109
	Phenol	7180	0	3500	49	3730	52	6	35	26-90
	2-Chlorophenol	7180	0	3590	50	3300	46	8	50	25-102
	4-Chloro-3-Methylphenol	7180	0	4340	60	2920	41	39*	33	26-103
	4-Nitrophenol	7180	0	4420	62	3170	44	33	50	11-114
PEST SMO SAMPLE NO. ET586	Lindane	.01	0	**	0	**	0	***	50	46-127
	Heptachlor	.01	0	**	0	**	0	***	31	35-130
	Aldrin	.01	0	**	0	**	0	***	43	34-132
	Dieldrin	.02	0	**	0	**	0	***	38	31-134
	Endrin	.04	0	**	0	**	0	***	45	42-139
	4,4'-DDT	.06	0	**	0	**	0	***	50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs 0 out of 5; outside QC limits
B/N 0 out of 6; outside QC limits
ACID 2 out of 5; outside QC limits
PEST ___ out of ___; outside QC limits

RECOVERY: VOAs 0 out of 10; outside QC limits
B/N 1 out of 12; outside QC limits
ACID 1 out of 10; outside QC limits
PEST ___ out of ___; outside QC limits

Comments: _____

FORM III

7/85

METHOD BLANK SUMMARY

INSTRUMENT BLANK

Case No. 78758 Region _____ Contractor Compuchem Contract No. 68-01-7263

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC LEVEL	INST. ID	CAS NUMBER	COMPOUND (INCL. TIC OR UNKNOWN)	CONC.	UNITS	CRQL
GB870822C03	8-22	V	S	L	3	75-09-2	methylene chloride	11	ug/kg	5
"			"			67-64-1	acetone	14	"	10
GC870825B03	8-25	V	S	L	3	75-09-2	methylene chloride	10	"	5
"			"			67-64-1	acetone	17	"	10
GC870827C03	8-27	V	S	L	3	75-09-2	methylene chloride	8.6	"	5
"			"			67-64-1	acetone	21	"	10
GD870820A14	8-20	V	S	L	14	75-09-2	methylene chloride	21	"	5
"			"			67-64-1	acetone	34	"	10
GC870821C14	8-21	V	S	L	14	75-09-2	methylene chloride	13	"	5
"			"			67-64-1	acetone	19	"	10
CD870821A14	8-21	V	S	L	14	75-09-2	methylene chloride	23	"	5
"			"			67-64-1	acetone	13	"	10
GB870819B14	8-19	V	S	L	14	75-09-2	methylene chloride	12	"	5
"			"			67-64-1	acetone	23	"	10
"			"			79-01-6	trichloroethylene	1.4J	"	5
"			"			108-88-3	toluene	1.2J	"	5
GC870827B03	8-27	V	S	L	3	75-09-2	methylene chloride	13	"	5
"			"			67-64-1	acetone	20	"	10

Comments:

FORM IV 7/85

METHOD BLANK SUMMARY

Case No. 7878 Region _____ Contractor Compuchem Contract No. 68-01-7263

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC LEVEL	INST. ID	CAS NUMBER	COMPOUND (INCL. TIC OR UNKNOWN)	CONC.	UNITS	CRQL
146273	8-22	P	S	L	7	—	none	—	—	—
147109	8-20	V	S	L	14	75-09-2	methylene chloride	12	ug/kg	5
"			"			67-64-1	acetone	13	"	10
148309	8-22	V	S	L	3	75-09-2	methylene chloride	8.6	"	5
"			"			67-64-1	acetone	10	"	10
148772	8-26	V	S	L	3	75-09-2	methylene chloride	15	"	5
"			"			67-64-1	acetone	31	"	10
147086	8-24	SV	S	L	16	84-66-2	diethylphthalate	280 J	"	330
"			"			117-81-7	bis(2-ethylhexyl)phthalate	36 J	"	330
"			"			36237-66-8	unknown	300	"	NC
147785	8-22	P	S	L	7	—	none	—	—	—
147086	8-21	P	S	L	7	—	"	—	—	—
"	8-25		"		3	—	"	—	—	—
148890	8-27	V	S	L	3	75-09-2	methylene chloride	9.1	ug/kg	5
"			"			67-64-1	acetone	31	"	10

Comments:

Sample Number
ET595

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: CompuChem
Lab Sample ID No: 146286
Sample matrix: solid
Data Release
Authorized By: _____

Case: 7878
QC Report No: _____
Contract No: 68/01/7263
Date Sample
Received: 08/13/87

Volatile Compounds

Concentration: low
Date extracted/prepared: 08/26/87
Date analyzed: 08/27/87
Conc/Dil Factor: 1.02 pH: 6.94
Percent moisture (not decanted): 3%

CAS Number		ug/kg		CAS Number		ug/kg	
74-87-3	Chloromethane	10.	U	10061-02-6	trans-1,3-Dichloropropene	5.1	U
74-83-9	Bromomethane	10.	U	79-01-6	Trichloroethene	5.1	U
75-01-4	Vinyl Chloride	10.	U	124-48-1	Dibromochloromethane	5.1	U
75-00-3	Chloroethane	10.	U	79-00-5	1,1,2-Trichloroethane	5.1	U
75-09-2	Methylene Chloride	26.	BJ	71-43-2	Benzene	5.1	U
67-64-1	Acetone	36.	BJ	10061-01-5	cis-1,3-Dichloropropene	5.1	U
75-15-0	Carbon Disulfide	5.1	U	110-75-8	2-Chloroethyl Vinyl Ether	10.	U
75-35-4	1,1-Dichloroethene	5.1	U	75-25-2	Bromoform	5.1	U
75-34-3	1,1-Dichloroethane	5.1	U	108-10-1	4-Methyl-2-pentanone	10.	U
156-60-5	trans-1,2-Dichloroethene	5.1	U	591-78-6	2-Hexanone	10.	U
67-66-3	Chloroform	5.1	U	127-18-4	Tetrachloroethene	5.1	U
107-06-2	1,2-Dichloroethane	5.1	U	79-34-5	1,1,2,2-Tetrachloroethane	5.1	U
78-93-3	2-Butanone	10.	U	108-88-3	Toluene	1.8	J
71-55-6	1,1,1-Trichloroethane	5.1	U	108-90-7	Chlorobenzene	5.1	U
56-23-5	Carbon Tetrachloride	5.1	U	100-41-4	Ethyl Benzene	5.1	U
108-05-4	Vinyl Acetate	10.	U	100-42-5	Styrene	5.1	U
75-27-4	Bromodichloromethane	5.1	U		Total Xylenes	5.1	U
78-87-5	1,2-Dichloropropane	5.1	U				

AA 12/8/87

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit then report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10ug and a concentration of 3ug is calculated, then report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >/= 10ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name: CompuChem
Case : 7878

Sample Number
ET595

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: low
Date extracted/prepared: 08/15/87
Date analyzed: 08/25/87
Conc/Dil Factor: 1.05
Percent moisture (decanted): 3%

GPC Cleanup: No
Separatory Funnel Extraction: No
Continuous Liquid - Liquid Extraction: No

CAS Number		ug/kg		CAS Number		ug/kg	
108-95-2	Phenol	350	U	83-32-9	Acenaphthene	360	
111-44-4	bis(2-Chloroethyl) ether	350	U	51-28-5	2,4-Dinitrophenol	1700	U
95-57-8	2-Chlorophenol	350	U	100-02-7	4-Nitrophenol	1700	U
541-73-1	1,3-Dichlorobenzene	350	U	132-64-9	Dibenzofuran	410	
106-46-7	1,4-Dichlorobenzene	350	U	121-14-2	2,4-Dinitrotoluene	350	U
100-51-6	Benzyl Alcohol	350	U	606-20-2	2,6-Dinitrotoluene	350	U
95-50-1	1,2-Dichlorobenzene	350	U	84-66-2	Diethylphthalate	260	J
95-48-7	2-Methylphenol	350	U	7005-72-3	4-Chlorophenyl Phenyl ether	350	U
39638-32-9	bis(2-Chloroisopropyl) ether	350	U	86-73-7	Fluorene	330	J
106-44-5	4-Methylphenol	63.	J	100-01-6	4-Nitroaniline	1700	U
621-64-7	N-Nitroso-Dipropylamine	350	U	534-52-1	4,6-Dinitro-2-methylphenol	1700	U
67-72-1	Hexachloroethane	350	U	86-30-6	N-nitrosodiphenylamine (1)	350	U
98-95-3	Nitrobenzene	350	U	101-55-3	4-Bromophenyl Phenyl ether	350	U
78-59-1	Isophorone	260	J	118-74-1	Hexachlorobenzene	350	U
88-75-5	2-Nitrophenol	350	U	87-86-5	Pentachlorophenol	1700	U
105-67-9	2,4-Dimethylphenol	350	U	85-01-8	Phenanthrene	2900	HRS
65-85-0	Benzoic Acid	1700	U	120-12-7	Anthracene	410	
111-91-1	bis(2-Chloroethoxy) methane	350	U	84-74-2	Di-n-butylphthalate	130	J
120-83-2	2,4-Dichlorophenol	350	U	206-44-0	Fluoranthene	1800	
120-82-1	1,2,4-Trichlorobenzene	350	U	129-00-0	Pyrene	3200	
91-20-3	Naphthalene	860		85-68-7	Butyl Benzyl Phthalate	350	U
106-47-8	4-Chloroaniline	350	U	91-94-1	3,3'-Dichlorobenzidine	700	U
87-68-3	Hexachlorobutadiene	350	U	56-55-3	Benzo(a)anthracene	1300	
59-50-7	4-Chloro-3-methylphenol	350	U	117-81-7	bis(2-ethylhexyl)phthalate	1000	
91-57-6	2-Methylnaphthalene	1000		218-01-9	Chrysene	1800	
77-47-4	Hexachlorocyclopentadiene	350	U	117-84-0	Di-n-octyl Phthalate	280	J
88-06-2	2,4,6-Trichlorophenol	350	U	205-99-2	Benzo(b)fluoranthene	3000	(+) AA 12/8/8
95-95-4	2,4,5-Trichlorophenol	1700	U	207-08-9	Benzo(k)fluoranthene	3000	(+)
91-58-7	2-Chloronaphthalene	350	U	50-32-8	Benzo(a)pyrene	1100	
88-74-4	2-Nitroaniline	1700	U	193-39-5	Indeno(1,2,3-cd)pyrene	650	
131-11-3	Dimethyl Phthalate	350	U	53-70-3	Dibenz(a,h)anthracene	320	J
208-96-8	Acenaphthylene	160	J	191-24-2	Benzo(g,h,i)perylene	740	
99-09-2	3-Nitroaniline	1700	U				

(1) Cannot be separated from diphenylamine

(+) " " "

Laboratory Name: CompuChem Laboratories
Case No: 7878

Sample Number
ET595

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: [Low] Medium (Circle One)
Date Extracted/Prepared: 08/15/87
Date Analyzed: 08/27/87
Conc/Dil Factor: 2.06
Percent Moisture(decanted): 2.91

GPC Cleanup [ ]Yes [X]No
Separatory Funnel Extraction [X]Yes
Continuous Liquid - Liquid Extraction [ ]Yes

CAS Number		ug/l or [ug/Kg] (Circle One)	
319-84-6	Alpha - BHC	16.	U
319-85-7	Beta - BHC	16.	U
319-86-8	Delta - BHC	16.	U
58-89-9	Gamma - BHC(Lindane)	16.	U
76-44-8	Heptachlor	16.	U
309-00-2	Aldrin	16.	U
1024-57-3	Heptachlor Epoxide	16.	U
959-98-8	Endosulfan I	16.	U
60-57-1	Dieldrin	33.	U
72-55-9	4-4' - DDE	33.	U
72-20-8	Endrin	33.	U
33213-65-9	Endosulfan II	33.	U
72-54-8	4-4' - DDD	33.	U
1031-07-8	Endosulfan Sulfate	33.	U
50-29-3	4-4' - DDT	33.	U
72-43-5	Methoxychlor	160	U
53494-70-5	Endrin Ketone	33.	U
57-74-9	Chlordane	~~880~~	~~J~~
8001-35-2	Toxaphene	~~330~~	~~U~~
12674-11-2	Aroclor - 1016	160	U
11104-28-2	Aroclor - 1221	160	U
11141-16-5	Aroclor - 1232	160	U
53469-21-9	Aroclor - 1242	160	U
12672-29-6	Aroclor - 1248	160	U
11097-69-1	Aroclor - 1254	~~600~~	~~J~~
11096-82-5	Aroclor - 1260	~~330~~	~~U~~

AA
12/11/87

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(s) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) _____ or W(s) 30.00 V(t) 2000.00 V(i) 1.0

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ET595

COMPUCHEM FILE G2R46288B03

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC (UG/L OR UG/KG)	
1	110-54-3	HEXANE Same	E238	389	6.	J

1.020 50.00

SPECTROSCOPIST [illegible]

DATE 9/1/87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO. 7878

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO. [illegible] E1505

COMPUCHEM FILE GR046288A16

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
1	106-42-3	xylene BENZENE, 1,4-DIMETHYL-	SEMI2	298	700 ~~740.~~	J
~~2~~	62108-23-0	HC DECANE, 2,5,6-TRIMETHYL-	SEMI2	~~478~~	~~340.~~	J OMIT
~~3~~	6044-71-9	HC DODECANE, 6-METHYL-	SEMI2	~~553~~	~~190.~~	J OMIT
~~4~~	62108-25-2	HC DECANE, 2,6,7-TRIMETHYL-	SEMI2	~~590~~	~~220.~~	J OMIT
~~5~~	17301-32-5	HC UNDECANE, 4,7-DIMETHYL-	SEMI2	~~606~~	~~320.~~	J OMIT
~~6~~	2471-83-2	methyl naphthalene 1H-INDENE, 1-ETHYLIDENE-	SEMI2	~~622~~	~~330.~~	J OMIT
2 ~~7~~	629-59-4	HC TETRADECANE	SEMI2	664	470 ~~400.~~	J
~~8~~	575-41-7	PNA NAPHTHALENE, 1,3-DIMETHYL-	SEMI2	~~676~~	~~220.~~	J OMIT
3 ~~9~~	575-41-7	PNA NAPHTHALENE, 1,3-DIMETHYL-	SEMI2	685	620 ~~600.~~	J
4 ~~10~~	61141-72-8	HC DODECANE, 4,6-DIMETHYL-	SEMI2	699	730 ~~210.~~	J
~~11~~	55045-08-4	HC + unknown DODECANE, 2-METHYL-6-PROPYL-	SEMI2	~~794~~	~~410.~~	J OMIT
5 ~~12~~	74645-98-0	HC DODECANE, 2,7,10-TRIMETHYL-	SEMI2	822	1400 ~~1400.~~	J
~~13~~	17301-32-5	HC UNDECANE, 4,7-DIMETHYL-	SEMI2	~~865~~	~~360.~~	J OMIT

~~33,900~~ 34.9 40.00

SPECTROSCOPIST [signature]

DATE 5/29/87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPL NUMBER ET535

COMPUCHEM FILE GH046288A16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

		CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
	~~6~~ ~~14~~	629-78-7	HC HEPTADECANE	SEMI2	~~903~~	~~420.~~	J Omit
6	~~7~~ ~~15~~	610-48-0	PNA ANTHRACENE, 1-METHYL-	SEMI2	927	4100 ~~4000.~~	J
7	~~8~~ ~~16~~	832-64-4	PNA PHENANTHRENE, 4-METHYL-	SEMI2	936	3100 ~~3000.~~	J
8	~~9~~ ~~17~~	74764-11-7	HC IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BEN	SEMI2	951	2600 ~~2500.~~	J
9	~~10~~ ~~18~~	84-65-1	SAME 9,10-ANTHRACENEDIONE	SEMI2	957	2400 ~~2300.~~	J
10	~~11~~ ~~19~~	74764-11-7	HC IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BEN	SEMI2	991	3600 ~~3500.~~	J
11	~~12~~ ~~20~~	629-78-7	HC HEPTADECANE	SEMI2	1029	3300 ~~3200.~~	J
12	~~13~~ ~~21~~	238-84-6	PNA 11H-BENZO[A]FLUORENE	SEMI2	1056	2700 ~~2600.~~	J
13	~~14~~ ~~22~~	74764-11-7	unknown IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BEN	SEMI2	1066	5900 ~~5700.~~	J
14	~~15~~ ~~23~~	4452-11-3	H 2-PROPEN-1-ONE, 1,2-DIPHENYL-	SEMI2	1087	4200 ~~4100.~~	J
15	~~16~~ ~~24~~	544-76-3	HC HEXADECANE	SEMI2	1101	2900 ~~2800.~~	J
16	~~17~~ ~~25~~	74764-11-7	HC IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BEN	SEMI2	1135	2600 ~~2500.~~	J
17	~~18~~ ~~26~~	629-99-2	HC PENTACOSANE	SEMI2	1168	2400 ~~2300.~~	J

34.9 ~~33.900~~ 40.00

SPECTROSCOPIST [signature]

DATE 8/29/87

FORM1, PART B

LABORATORY NAME. COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ET[illegible]

COMPUCHEM FILE GHO-E[illegible]88A15

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
18 ~~19~~	~~629~~-99-2	PENTACOSANE HC	SEMI2	1199	6500 ~~5500~~.	J
19 ~~20~~ ~~28~~	~~629~~-99-2	PENTACOSANE HC	SEMI2	1231	7400 ~~2300~~.	J
20 ~~28~~	23812-79-1	HYDROXYLAMINE, O-DECYL- HC	SEMI2	1268	6700 ~~5500~~.	J
	~~33.900~~ 34.9	40.00				

SPECTROSCOPIST [illegible]

DATE 8/2/89

FORM1, PART B

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: CompuChem
Lab Sample ID No: 146275
Sample matrix: solid
Data Release
Authorized By: _____

Case: 7878
GC Report No: _____
Contract No: 68-01/7263
Date Sample
Received: 08/13/87

Volatile Compounds
Concentration: low
Date extracted/prepared: 08/17/87
Date analyzed: 08/21/87
Conc/Dil Factor: 1.13 pH: 6.93
Percent moisture (not decanted): 12%

CAS Number		ug/kg		CAS Number		ug/kg	
74-87-3	Chloromethane	11.	U	10061-02-6	trans-1,3-Dichloropropene	5.6	U
74-83-9	Bromomethane	11.	U	79-01-6	Trichloroethene	5.6	U
75-01-4	Vinyl Chloride	11.	U	124-48-1	Dibromochloromethane	5.6	U
75-00-3	Chloroethane	11.	U	79-00-5	1,1,2-Trichloroethane	5.6	U
75-09-2	Methylene Chloride	20.	BJ	71-43-2	Benzene	5.6	U
67-64-1	Acetone	17.	BJ	10061-01-5	cis-1,3-Dichloropropene	5.6	U
75-15-0	Carbon Disulfide	5.6	U	110-75-8	2-Chloroethyl Vinyl Ether	11.	U
75-35-4	1,1-Dichloroethene	5.6	U	75-25-2	Bromoform	5.6	U
75-34-3	1,1-Dichloroethane	5.6	U	108-10-1	4-Methyl-2-pentanone	11.	U
156-60-5	trans-1,2-Dichloroethene	5.6	U	591-78-6	2-Hexanone	11.	U
67-66-3	Chloroform	3.6	J	127-18-4	Tetrachloroethene	5.6	U
107-06-2	1,2-Dichloroethane	5.6	U	79-34-5	1,1,2,2-Tetrachloroethane	5.6	U
78-93-3	2-Butanone	11.	U	108-88-3	Toluene	5.6	U
71-55-6	1,1,1-Trichloroethane	5.6	U	108-90-7	Chlorobenzene	5.6	U
56-23-5	Carbon Tetrachloride	5.6	U	100-41-4	Ethyl Benzene	5.6	U
108-05-4	Vinyl Acetate	11.	U	100-42-5	Styrene	5.6	U
75-27-4	Bromodichloromethane	5.6	U		Total Xylenes	5.6	U
78-87-5	1,2-Dichloropropane	5.6	U				

AA 12/8/87

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit then report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10ug and a concentration of 3ug is calculated, then report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >/= 10ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name: CompuChem
Case : 7879

Sample Number
[illegible]

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: low
Date extracted/prepared: 08/15/87
Date analyzed: 08/24/87
Conc Dil Factor: 1.15
Percent moisture (decanted): 12%

GPC Cleanup: No
Separatory Funnel Extraction: No
Continuous Liquid - Liquid Extraction: No

CAS Number		ug/kg		CAS Number		ug/kg	
108-95-2	Phenol	590		83-32-9	Acenaphthene	150	J
111-44-4	bis(2-Chloroethyl) ether	380	U	51-28-5	2,4-Dinitrophenol	1900	U
95-57-8	2-Chlorophenol	380	U	100-02-7	4-Nitrophenol	1900	U
541-73-1	1,3-Dichlorobenzene	380	U	132-64-9	Dibenzofuran	120	J
106-46-7	1,4-Dichlorobenzene	380	U	121-14-2	2,4-Dinitrotoluene	380	U
100-51-6	Benzyl Alcohol	380	U	606-20-2	2,6-Dinitrotoluene	380	U
95-50-1	1,2-Dichlorobenzene	380	U	84-66-2	Diethylphthalate	250	J B
95-48-7	2-Methylphenol	380	U	7005-72-3	4-Chlorophenyl Phenyl ether	380	U
39638-32-9	bis(2-Chloroisopropyl) ether	380	U	86-73-7	Fluorene	200	J
106-44-5	4-Methylphenol	380	U	100-01-6	4-Nitroaniline	1900	U
621-64-7	N-Nitroso-Dipropylamine	380	U	534-52-1	4,6-Dinitro-2-methylphenol	1900	U
67-72-1	Hexachloroethane	380	U	86-30-6	N-nitrosodiphenylamine (1)	380	U
98-95-3	Nitrobenzene	380	U	101-55-3	4-Bromophenyl Phenyl ether	380	U
78-59-1	Isophorone	740		118-74-1	Hexachlorobenzene	380	U
88-75-5	2-Nitrophenol	380	U	87-86-5	Pentachlorophenol	42.	J
105-67-9	2,4-Dimethylphenol	380	U	85-01-8	Phenanthrene	2200	
65-85-0	Benzoic Acid	1900	U	120-12-7	Anthracene	520	
111-91-1	bis(2-Chloroethoxy) methane	380	U	84-74-2	Di-n-butylphthalate	190	J
120-83-2	2,4-Dichlorophenol	42.	J	206-44-0	Fluoranthene	2500	
120-82-1	1,2,4-Trichlorobenzene	380	U	129-00-0	Pyrene	3400	
91-20-3	Naphthalene	350	J	85-68-7	Butyl Benzyl Phthalate	160	J
106-47-8	4-Chloroaniline	380	U	91-94-1	3,3'-Dichlorobenzidine	770	U
87-68-3	Hexachlorobutadiene	380	U	56-55-3	Benzo(a)anthracene	2100	
59-50-7	4-Chloro-3-methylphenol	380	U	117-81-7	bis(2-ethylhexyl)phthalate	2500	B
91-57-6	2-Methylnaphthalene	460		218-01-9	Chrysene	2300	
77-47-4	Hexachlorocyclopentadiene	380	U	117-84-0	Di-n-octyl Phthalate	130	J
88-06-2	2,4,6-Trichlorophenol	42 ~~73~~	J	205-99-2	Benzo(b)fluoranthene	4100	II (+) AA
95-95-4	2,4,5-Trichlorophenol	1900	U	207-08-9	Benzo(k)fluoranthene	4100	II
91-58-7	2-Chloronaphthalene	380	U	50-32-8	Benzo(a)pyrene	1800	12/8/87
88-74-4	2-Nitroaniline	1900	U	193-39-5	Indeno(1,2,3-cd)pyrene	820	
131-11-3	Dimethyl Phthalate	380	U	53-70-3	Dibenz(a,h)anthracene	440	
208-96-8	Acenaphthylene	130	J	191-24-2	Benzo(g,h,i)perylene	830	
99-09-2	3-Nitroaniline	1900	U				

(1) Cannot be separated from diphenylamine

(+) " " "

Laboratory Name: __CompuChem_Laboratories__
Case No: _____7878 _____

Sample Number
ET588

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: [Low] Medium (Circle One)
Date Extracted/Prepared: _____08/15/87_____
Data Analyzed: _____08/21/87_____
Conc/Dil Factor: _____ 4.52_____
Percent Moisture(decanted): _____ 11.50_____

GPC Cleanup [ ]Yes [X]No
Separatory Funnel Extraction [ ]Yes
Continuous Liquid - Liquid Extraction [ ]Yes

CAS Number		ug/l or [ug/Kg] (Circle One)	
319-84-6	Alpha - BHC	36.	U
319-85-7	Beta - BHC	36.	U
319-86-8	Delta - BHC	36.	U
58-89-9	Gamma - BHC(Lindane)	36.	U
76-44-8	Heptachlor	36.	U
309-00-2	Aldrin	36.	U
1024-57-3	Heptachlor Epoxide	36.	U
959-98-8	Endosulfan I	36.	U
60-57-1	Dieldrin	72.	U
72-55-9	4-4' - DDE	72.	U
72-20-8	Endrin	72.	U
33213-65-9	Endosulfan II	72.	U
72-54-8	4-4' - DDD	72.	U
1031-07-8	Endosulfan Sulfate	72.	U
50-29-3	4-4' - DDT	72.	U
72-43-5	Methoxychlor	360	U
53494-70-5	Endrin Ketone	72.	U
57-74-9	Chlordane	3800	J
8001-35-2	Toxaphene	720	U
12674-11-2	Aroclor - 1016	360	U
11104-28-2	Aroclor - 1221	360	U
11141-16-5	Aroclor - 1232	360	U
53469-21-9	Aroclor - 1242	360	U
12672-29-6	Aroclor - 1248	360	U
11097-69-1	Aroclor - 1254	2800	J
11096-82-5	Aroclor - 1260	720	U

AA 12/11/87

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(s) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) _____ or W(s) _ 30.00_ V(t) _ 2000.00_ V(i) _ 5.0_

Laboratory Name: Compuchem Laboratories

Case No: 7578

Sample Number: ET555

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	NO VOLATILE COMPOUNDS FOUND			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19.				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29.				
30				

ET 588 dp

LABORATORY NAME: COMPUCHEM

SAMPLE NUMBER [illegible]

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

COMPUCHEM FILE [illegible]

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME		FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)		
1	100-39-3	BENZENE, 1,3-DIMETHYL-	isomer	SEMI2	301	940	~~[illegible]~~	J
2	95-47-6	BENZENE, 1,2-DIMETHYL-	isomer	SEMI2	322	870	~~770.~~	J
~~3~~	~~98-82-8~~	~~BENZENE, (1-METHYLETHYL)-~~	isomer	~~SEMI2~~	~~340~~	~~540.~~	~~J~~	OMIT
3 4	95-63-6	BENZENE, 1,2,4-TRIMETHYL-	isomer	SEMI2	403	810	~~720.~~	J
4 5	13151-98-9	CYCLOOCTANE, 1,4-DIMETHYL-, TRANS-	cyclic hydrocarbon	SEMI2	437	2000	~~1000.~~	J
5 6	116-02-9	CYCLOHEXANOL, 3,3,5-TRIMETHYL-	unknown	SEMI2	445	1800	~~1600.~~	J
~~7~~	~~78-59-1~~	~~2-CYCLOHEXEN-1-ONE, 3,5,5-TRIMETHYL-~~	PP	~~SEMI2~~	~~495~~	~~760.~~	~~J~~	OMIT
~~8~~	~~575-41-7~~	~~NAPHTHALENE, 1,3-DIMETHYL-~~	isomer	~~SEMI2~~	~~683~~	~~580.~~	~~J~~	OMIT
~~9~~	~~74645-22-0~~	~~DODECANE, 2,7,10-TRIMETHYL-~~	hydrocarbon	~~SEMI2~~	~~821~~	~~330.~~	~~J~~	OMIT
~~10~~	~~3913-02-8~~	~~1-OCTANOL, 2-BUTYL-~~	unknown	~~SEMI2~~	~~909~~	~~470.~~	~~J~~	OMIT
6 11	883-20-5	PHENANTHRENE, 9-METHYL-	unknown	SEMI2	928	790	~~700.~~	J
7 12	832-64-4	PHENANTHRENE, 4-METHYL-	unknown	SEMI2	938	1100	~~970.~~	J
~~13~~	~~[illegible]~~	~~HEXADECANE, 3-METHYL-~~	hydrocarbon	~~SEMI2~~	~~952~~	~~610.~~	~~J~~	OMIT

38.300

SPECTROSCOPIST SDWagner

DATE 8-30-87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

PAGE NO: [illegible]

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NUMBER ET588 dp

COMPUCHEM FILE [illegible]

		CAS NUMBER	COMPOUND NAME		FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)		
	~~14~~	~~54833-48-6~~	~~HEPTADECANE, 2,6,10,15-TETRAMETHYL-~~	unknown	~~SEMI2~~	~~993~~	~~430.~~		JOMIT
8	15	57-74-9	Chlordane RN 9/10 4,7-METHANO-1H-INDENE, 1,2,4,5,6,7,8,8-OCTACHLORO-2,	~~unknown~~	SEMI2	1015	780	~~690.~~	J
9	16	29812-79-1	HYDROXYLAMINE, O-DECYL-	hydrocarbon	SEMI2	1032	760	~~670.~~	J
10	17	238-84-6	11H-BENZO[A]FLUORENE	unknown	SEMI2	1060	1100	~~950.~~	J
11	18	238-84-6	RN 9/10 PCB + 11H-BENZO[A]FLUORENE	unknown	SEMI2	1067	1700	~~1500.~~	J
12	19	205-43-6	BENZO[B]NAPHTHO[1,2-D]THIOPHENE	unknown	SEMI2	1125	730	~~650.~~	J
13	20	203-12-3	BENZO[GHI]FLUORANTHENE	unknown	SEMI2	1130	970	~~860.~~	J
14	21	930-02-9	OCTADECANE, 1-(ETHENYLOXY)-	unknown	SEMI2	1138	1100	~~1000.~~	J
15	22	52161-54-3	BENZENE, 1,1'-(1,4-DIMETHYL-1-BUTENE-1,4-DIYL)BIS-	unknown	SEMI2	1183	970	~~860.~~	J
	~~23~~	~~2541-69-7~~	~~BENZ[A]ANTHRACENE, 7-METHYL-~~	unknown	~~SEMI2~~	~~1192~~	~~610.~~		JOMIT
	~~24~~	~~7225-68-5~~	~~DODECANE, 1-CYCLOPENTYL-4-(3-CYCLOPENTYLPROPYL)-~~	unknown	~~SEMI2~~	~~1199~~	~~630.~~		JOMIT
16	25	629-99-2	PENTACOSANE	hydrocarbon	SEMI2	1204	3300	~~2900.~~	J
17	26	629-99-2	PENTACOSANE	hydrocarbon	SEMI2	1275	3300	~~2900.~~	J

38.300

SPECTROSCOPIST SDWagner

DATE 8-30-87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7879

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NUMBER ET588 dp ~~[illegible]~~

COMPUCHEM FILE [illegible]

		CAS NUMBER	COMPOUND NAME		FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)		
	~~27~~	~~55401-65-5~~	~~PENTALENE, OCTAHYDRO-1-(2-OCTYLOECYL)-~~	unknown	~~SEMI2~~	~~1209~~	~~540.~~		~~JOMIT~~
18	28	192-97-2	BENZO[E]PYRENE	unknown	SEMI2	1295	880	~~700.~~	J
19	29	629-92-5	NONADECANE	hydrocarbon	SEMI2	1369	1100	~~960.~~	J
20	30	83-47-6	STIGMAST-5-EN-3-OL, (3.BETA.,24S)-	unknown	SEMI2	1562	1600	~~1400.~~	J

38.500 ~~[illegible]~~ 40.00

SPECTROSCOPIST SDWagner

DATE 8-30-87

Sample Number
ET59[illegible]

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: CompuChem
Lab Sample ID No: 146283
Sample matrix: solid
Data Release
Authorized By: [signature]

Case: 7872
QC Report No: _____
Contract No: 68/01/7263
Date Sample
Received: 08/13/87

Volatile Compounds

Concentration: lc
Date extracted/prepared: 08/17/87
Date analyzed: 08/21/87
Conc/Dil Factor: 1.04 pH: 6.87
Percent moisture (not decanted): 4%

CAS Number		ug/kg		CAS Number		ug/kg	
74-87-3	Chloromethane	10.	U	10061-02-6	trans-1,3-Dichloropropene	5.2	U
74-83-9	Bromomethane	10.	U	79-01-6	Trichloroethene	5.2	U
75-01-4	Vinyl Chloride	10.	U	124-48-1	Dibromochloromethane	5.2	U
75-00-3	Chloroethane	10.	U	79-00-5	1,1,2-Trichloroethane	5.2	U
75-09-2	Methylene Chloride	24.	BJ	71-43-2	Benzene	5.2	U
67-64-1	Acetone	28.	BJ	10061-01-5	cis-1,3-Dichloropropene	5.2	U
75-15-0	Carbon Disulfide	5.2	U	110-75-8	2-Chloroethyl Vinyl Ether	10.	U
75-35-4	1,1-Dichloroethene	5.2	U	75-25-2	Bromoform	5.2	U
75-34-3	1,1-Dichloroethane	5.2	U	108-10-1	4-Methyl-2-pentanone	10.	U
156-60-5	trans-1,2-Dichloroethene	5.2	U	591-78-6	2-Hexanone	10.	U
67-66-3	Chloroform	5.2	U	127-18-4	Tetrachloroethene	5.2	U
107-06-2	1,2-Dichloroethane	5.2	U	79-34-5	1,1,2,2-Tetrachloroethane	5.2	U
78-93-3	2-Butanone	10.	U	108-88-3	Toluene	5.2	U
71-55-6	1,1,1-Trichloroethane	5.2	U	108-90-7	Chlorobenzene	5.2	U
56-23-5	Carbon Tetrachloride	5.2	U	100-41-4	Ethyl Benzene	5.2	U
108-05-4	Vinyl Acetate	10.	U	100-42-5	Styrene	5.2	U
75-27-4	Bromodichloromethane	5.2	U		Total Xylenes	5.2	U
78-87-5	1,2-Dichloropropane	5.2	U				

AA 12/8/87

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit then report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10ug and a concentration of 3ug is calculated, then report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >/= 10ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name: CompuChem
Case : 7878

Sample Number
E7559

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: low
Date extracted/prepared: 08/15/87
Date analyzed: 08/25/87
Conc/Dil Factor: 1.06
Percent moisture (decanted): 4%

GPC Cleanup: No
Separatory Funnel Extraction: No
Continuous Liquid - Liquid Extraction: No

CAS Number		ug/kg		CAS Number		ug/kg	
108-95-2	Phenol	270	J	83-32-9	Acenaphthene	210	
111-44-4	bis(2-Chloroethyl) ether	350	U	51-28-5	2,4-Dinitrophenol	1800	U
95-57-8	2-Chlorophenol	350	U	100-02-7	4-Nitrophenol	1800	U
541-73-1	1,3-Dichlorobenzene	350	U	132-64-9	Dibenzofuran	250	J
106-46-7	1,4-Dichlorobenzene	350	U	121-14-2	2,4-Dinitrotoluene	350	U
100-51-6	Benzyl Alcohol	350	U	606-20-2	2,6-Dinitrotoluene	350	U
95-50-1	1,2-Dichlorobenzene	350	U	84-66-2	Diethylphthalate	15	J B
95-48-7	2-Methylphenol	RW 4/15 350u ~~[illegible]~~	J	7005-72-3	4-Chlorophenyl Phenyl ether	350	U
39638-32-9	bis(2-Chloroisopropyl) ether	350	U	86-73-7	Fluorene	220	J
106-44-5	4-Methylphenol	350	U	100-01-6	4-Nitroaniline	1800	U
621-64-7	N-Nitroso-Dipropylamine	350	U	534-52-1	4,6-Dinitro-2-methylphenol	1800	U
67-72-1	Hexachloroethane	350	U	86-30-6	N-nitrosodiphenylamine (1)	RW 9/10 ~~[illegible]~~ 350u	
98-95-3	Nitrobenzene	350	U	101-55-3	4-Bromophenyl Phenyl ether	350	U
78-59-1	Isophorone	120	J	118-74-1	Hexachlorobenzene	350	U
88-75-5	2-Nitrophenol	350	U	87-86-5	Pentachlorophenol	1800	U
105-67-9	2,4-Dimethylphenol	350	U	85-01-8	Phenanthrene	1600	
65-85-0	Benzoic Acid	1800	U	120-12-7	Anthracene	300	J
111-91-1	bis(2-Chloroethoxy) methane	350	U	84-74-2	Di-n-butylphthalate	180	J
120-82-2	2,4-Dichlorophenol	350	U	206-44-0	Fluoranthene	1500	
120-82-1	1,2,4-Trichlorobenzene	350	U	129-00-0	Pyrene	3100	
91-20-3	Naphthalene	640		85-68-7	Butyl Benzyl Phthalate	350	U
106-47-8	4-Chloroaniline	350	U	91-94-1	3,3'-Dichlorobenzidine	700	U
87-68-3	Hexachlorobutadiene	350	U	56-55-3	Benzo(a)anthracene	150	
59-50-7	4-Chloro-3-methylphenol	350	U	117-81-7	bis(2-ethylhexyl)phthalate	2300	BJ
91-57-6	2-Methylnaphthalene	1300		218-01-9	Chrysene	1900	
77-47-4	Hexachlorocyclopentadiene	350	U	117-84-0	Di-n-octyl Phthalate	430	
88-06-2	2,4,6-Trichlorophenol	350	U	205-99-2	Benzo(b)fluoranthene	3800	II (+) AA
95-95-4	2,4,5-Trichlorophenol	1800	U	207-08-9	Benzo(k)fluoranthene	3800	II 12/8/8
91-58-7	2-Chloronaphthalene	350	U	50-32-8	Benzo(a)pyrene	1600	
88-74-4	2-Nitroaniline	1800	U	193-39-5	Indeno(1,2,3-cd)pyrene	920	
131-11-3	Dimethyl Phthalate	350	U	53-70-3	Dibenz(a,h)anthracene	410	
208-96-8	Acenaphthylene	180	J	191-24-2	Benzo(g,h,i)perylene	1000	
99-09-2	3-Nitroaniline	1800	U				

(1) Cannot be separated from diphenylamine

(+) " " "

Laboratory Name: __CompuChem_Laboratories__
Case No: _____7878 _____

Sample Number
ET589

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration. [Low] Medium (Circle One)
Date Extracted/Prepared _____08/15/87_____
Data Analyzed. _____08/21/87_____
Conc/Dil Factor: _____ 2 08_____
Percent Moisture(decanted): _____ 3.85_____

GPC Cleanup [ ]Yes [X]No
Separatory Funnel Extraction [ ]Yes
Continuous Liquid - Liquid Extraction [ ]Yes

CAS Number		ug/l or [ug/Kg] (Circle One)	
319-84-6	Alpha - BHC	17.	U
319-85-7	Beta - BHC	17.	U
319-86-8	Delta - BHC	17.	U
58-89-9	Gamma - BHC(Lindane)	17.	U
76-44-8	Heptachlor	17	U
309-00-2	Aldrin	17	U
1024-57-3	Heptachlor Epoxide	17.	U
959-98-8	Endosulfan I	17.	U
60-57-1	Dieldrin	33.	U
72-55-9	4-4' - DDE	33.	U
72-20-8	Endrin	33.	U
33213-65-9	Endosulfan II	33.	U
72-54-8	4-4' - DDD	33.	U
1031-07-8	Endosulfan Sulfate	33.	U
50-29-3	4-4' - DDT	33.	U
72-43-5	Methoxychlor	170	U
53494-70-5	Endrin Ketone	33.	U
57-74-9	Chlordane	960	J
8001-35-2	Toxaphene	330	U
12674-11-2	Aroclor - 1016	170	U
11104-28-2	Aroclor - 1221	170	U
11141-16-5	Aroclor - 1232	170	U
53469-21-9	Aroclor - 1242	170	U
12672-29-6	Aroclor - 1248	170	U
11097-69-1	Aroclor - 1254	940	J
11096-82-5	Aroclor - 1260	330	U

AA
12/4/87

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(s) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) _____ or W(s) _ 30.00_ V(t) _ 2000.00_ V(i) _ 5.0_

Form I (continued)

Laboratory Name CompuChem Laboratories

Case No 7878

Sample Number ET589

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	NO VOLATILE COMPOUNDS FOUND			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29.				
30				

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NUMBER ET509

COMPUCHEM FILE GH0[illegible]0C16

	CAS NUMBER	COMPOUND NAME		FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
1	108-38-3	BENZENE, 1,3-DIMETHYL-	isomer	SEMI2	298	1200.	J
2	629-20-9	1,3,5,7-CYCLOOCTATETRAENE	isomer	SEMI2	317	2540 ~~2400.~~	J
3	98-82-8	BENZENE, (1-METHYLETHYL)-	isomer	SEMI2	346	2700 2600.	J
~~4~~	~~17301-32-5~~	~~UNDECANE, 4,7-DIMETHYL-~~	isomer	~~SEMI2~~	~~606~~	260.	J UMIT
~~5~~	~~2471-83-2~~	~~1H-INDENE, 1-ETHYLIDENE-~~	isomer	~~SEMI2~~	622	440.	J UMIT
6	~~629-59-4~~	TETRADECANE	hydrocarbon	SEMI2	664	450.	J UMIT
4	575-41-7	NAPHTHALENE, 1,3-DIMETHYL-	isomer	SEMI2	677	560 540.	J
5	575-41-7	NAPHTHALENE, 1,3-DIMETHYL-	isomer	SEMI2	685	1000 ~~900.~~	J
6	61141-72-8	DODECANE, 4,6-DIMETHYL-	hydrocarbon	SEMI2	699	760 730.	J
~~10~~	~~2131-41-1~~	~~NAPHTHALENE, 1,4,5-TRIMETHYL-~~	substituted naphthalene	SEMI2	732	490.	J UMIT
7	2131-42-2	NAPHTHALENE, 1,4,6-TRIMETHYL-	isomer	SEMI2	747	570 840.	J
8	2131-42-2	NAPHTHALENE, 1,4,6-TRIMETHYL-	isomer	SEMI2	756	610 590.	J
~~13~~	~~2131-42-2~~	~~NAPHTHALENE, 1,4,6-TRIMETHYL-~~	isomer	SEMI2	764	400.	J UMIT

35 340
~~33.900~~ 40.00

SPECTROSCOPIST [illegible]

DATE 8 29 87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER CT589

COMPUCHEM FILE GH0462800C16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME		FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
(9)	~~14~~ 17301-32-5	~~UNDECANE, 4,7-DIMETHYL-~~	hydrocarbon	SEMI2	771	450.	~~J~~
(10) (4)	~~15~~ 55045-11-9	TRIDECANE, 5-PROPYL-	hydrocarbon	SEMI2	796	600.	J
(11) (10)	~~16~~ 74645-98-0	DODECANE, 2,7,10-TRIMETHYL-	hydrocarbon	SEMI2	824	1400.	J
	~~17~~ ~~1812-51-7~~	~~1,1'-BIPHENYL, 2-ETHYL-~~	unknown	~~SEMI2~~	838	300.	J OMIT
(12) (4)	~~18~~ 17301-32-5	UNDECANE, 4,7-DIMETHYL-	hydrocarbon	SEMI2	867	530.	J
(13) (12)	~~19~~ 629-78-7	HEPTADECANE	hydrocarbon	SEMI2	911	680.	J
(14) (13)	~~20~~ 613-12-7	ANTHRACENE, 2-METHYL-	isomer	SEMI2	930	790.	J
(15) (14)	~~21~~ 613-12-7	ANTHRACENE, 2-METHYL-	isomer	SEMI2	939	680.	J
	~~22~~ 634-35-5	QUINOLINIUM, 1-ETHYL-, IODIDE	unknown	SEMI2	947	440.	J OMIT
(16) (5)	~~23~~ 103-24-2	NONANEDIOIC ACID, BIS(2-ETHYLHEXYL) ESTER	unknown	SEMI2	954	1200.	J
(17) (16)	~~24~~ 7125-62-4	5H-BENZOCYCLOHEPTENE, 6,7-DIHYDRO-	unknown	SEMI2	988	660.	J
	25 630-02-4	OCTACOSANE	hydrocarbon	SEMI2	994	400.	J OMIT
(8) (17)	~~26~~ 55130-16-0	9-OCTADECENOIC ACID (Z)-, PHENYLMETHYL ESTER	unknown	SEMI2	1068	1300.	J

~~33,300~~ 35,300 40.00

SPECTROSCOPIST [illegible]

DATE [illegible]

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NUMBER E1589

COMPUCHEM FILE GH046.[illegible]016

	CAS NUMBER	COMPOUND NAME		FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG L OR UG KG)	
19 18 27	629-99-2	PENTACOSANE	hydrocarbon	SEMI2	1202	1400 1300.	J
~~28~~	~~50-32-8~~	~~BENZO[A]PYRENE~~	PP	~~SEMI2~~	~~1257~~	~~980.~~	JOMIT
20 19 29	55836-30-1	HEXADECANOIC ACID, 2-OXO-, METHYL ESTER	unknown	SEMI2	1270	610 ~~590.~~	J

35.300 ~~33.900~~ 40.00

SPECTROSCOPIST [illegible]

DATE [illegible]

FORM1, PART B

Sample Number
ET590

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: CompuChem
Lab Sample ID No: 146281
Sample matrix: solid
Data Release
Authorized By: _____

Case: 7878
QC Report No: _____
Contract No: 68/01/7263
Date Sample
Received: 08/13/87

Volatile Compounds
Concentration: low
Date extracted/prepared: 08/17/87
Date analyzed: 08/21/87
Conc/Dil Factor: 1.13 pH: 6.88
Percent moisture (not decanted): 12%

CAS Number		ug/kg		CAS Number		ug/kg	
74-87-3	Chloromethane	11.	U	10061-02-6	trans-1,3-Dichloropropene	5.6	U
74-83-9	Bromomethane	11.	U	79-01-6	Trichloroethene	5.6	U
75-01-4	Vinyl Chloride	11.	U	124-48-1	Dibromochloromethane	5.6	U
75-00-3	Chloroethane	11.	U	79-00-5	1,1,2-Trichloroethane	5.6	U
75-09-2	Methylene Chloride	16.	BJ	71-43-2	Benzene	5.6	U
67-64-1	Acetone	13.	BJ	10061-01-5	cis-1,3-Dichloropropene	5.6	U
75-15-0	Carbon Disulfide	5.6	U	110-75-8	2-Chloroethyl Vinyl Ether	11.	U
75-35-4	1,1-Dichloroethene	5.6	U	75-25-2	Bromoform	5.6	U
75-34-3	1,1-Dichloroethane	5.6	U	108-10-1	4-Methyl-2-pentanone	11.	U
156-60-5	trans-1,2-Dichloroethene	5.6	U	591-78-6	2-Hexanone	11.	U
67-66-3	Chloroform	5.6	U	127-18-4	Tetrachloroethene	5.6	U
107-06-2	1,2-Dichloroethane	5.6	U	79-34-5	1,1,2,2-Tetrachloroethane	5.6	U
78-93-3	2-Butanone	11.	U	108-88-3	Toluene	5.6	U
71-55-6	1,1,1-Trichloroethane	5.6	U	108-90-7	Chlorobenzene	5.6	U
56-23-5	Carbon Tetrachloride	5.6	U	100-41-4	Ethyl Benzene	5.6	U
108-05-4	Vinyl Acetate	11.	U	100-42-5	Styrene	5.6	U
75-27-4	Bromodichloromethane	5.6	U		Total Xylenes	5.6	U
78-87-5	1,2-Dichloropropane	5.6	U				

AA 12/8/87

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit then report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10ug and a concentration of 3ug is calculated, then report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >/= 10ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name: CompuChem
Case : 7873

Sample Number
ET590

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: low
Date extracted/prepared: 08/15/87
Date analyzed: 08/25/87
Conc/Dil Factor: 1.15
Percent moisture (decanted): 12%

GPC Cleanup: No
Separatory Funnel Extraction: No
Continuous Liquid - Liquid Extraction: No

CAS Number		ug/kg		CAS Number		ug/kg	
108-95-2	Phenol	260	J	83-32-9	Acenaphthene	210	J
111-44-4	bis(2-Chloroethyl) ether	380	U	51-28-5	2,4-Dinitrophenol	1900	U
95-57-8	2-Chlorophenol	380	U	100-02-7	4-Nitrophenol	1900	U
541-73-1	1,3-Dichlorobenzene	380	U	132-64-9	Dibenzofuran	190	J
106-46-7	1,4-Dichlorobenzene	380	U	121-14-2	2,4-Dinitrotoluene	380	U
100-51-6	Benzyl Alcohol	380	U	606-20-2	2,6-Dinitrotoluene	380	U
95-50-1	1,2-Dichlorobenzene	380	U	84-66-2	Diethylphthalate	220	J B
95-48-7	2-Methylphenol	380	U	7005-72-3	4-Chlorophenyl Phenyl ether	380	U
39638-32-9	bis(2-Chloroisopropyl) ether	380	U	86-73-7	Fluorene	240	J
106-44-5	4-Methylphenol	73.	J	100-01-6	4-Nitroaniline	1900	U
621-64-7	N-Nitroso-Dipropylamine	380	U	534-52-1	4,6-Dinitro-2-methylphenol	1900	U
67-72-1	Hexachloroethane	380	U	86-30-6	N-nitrosodiphenylamine (1)	380	U
98-95-3	Nitrobenzene	380	U	101-55-3	4-Bromophenyl Phenyl ether	380	U
78-59-1	Isophorone	470		118-74-1	Hexachlorobenzene	380	U
88-75-5	2-Nitrophenol	380	U	87-86-5	Pentachlorophenol	1900	U
105-67-9	2,4-Dimethylphenol	380	U	85-01-8	Phenanthrene	1800	
65-85-0	Benzoic Acid	1100	J	120-12-7	Anthracene	390	
111-91-1	bis(2-Chloroethoxy) methane	380	U	84-74-2	Di-n-butylphthalate	310	J
120-83-2	2,4-Dichlorophenol	230	J	206-44-0	Fluoranthene	1500	
120-82-1	1,2,4-Trichlorobenzene	380	U	129-00-0	Pyrene	3400	
91-20-3	Naphthalene	500		85-68-7	Butyl Benzyl Phthalate	380	U
106-47-8	4-Chloroaniline	380	U	91-94-1	3,3'-Dichlorobenzidine	770	U
87-68-3	Hexachlorobutadiene	380	U	56-55-3	Benzo(a)anthracene	1300	
59-50-7	4-Chloro-3-methylphenol	380	U	117-81-7	bis(2-ethylhexyl)phthalate	3100	BJ
91-57-6	2-Methylnaphthalene	750		218-01-9	Chrysene	1800	
77-47-4	Hexachlorocyclopentadiene	380	U	117-84-0	Di-n-octyl Phthalate	610	
88-06-2	2,4,6-Trichlorophenol	380	U	205-99-2	Benzo(b)fluoranthene	3200 II	(+)
95-95-4	2,4,5-Trichlorophenol	1900	U	207-08-9	Benzo(k)fluoranthene	3200 II	
91-58-7	2-Chloronaphthalene	380	U	50-32-8	Benzo(a)pyrene	1400	
88-74-4	2-Nitroaniline	1900	U	193-39-5	Indeno(1,2,3-cd)pyrene	1200	AA
131-11-3	Dimethyl Phthalate RW 9/11	380 ~~50.~~	~~J~~	53-70-3	Dibenz(a,h)anthracene	500	12/8/87
208-96-8	Acenaphthylene	200	J	191-24-2	Benzo(g,h,i)perylene	1300	
99-09-2	3-Nitroaniline	1900	U				

(1) Cannot be separated from diphenylamine

(+) " " "

Laboratory Name: __CompuChem_Laboratories__
Case No: _____7878 _____

Sample Number
ET590

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: _____08/15/87_____
Data Analyzed: _____08/31/87_____
Conc/Dil Factor: _____ 22.60_____
Percent Moisture(decanted): _____ 11.50_____

GPC Cleanup [ ]Yes [X]No
Separatory Funnel Extraction [ ]Yes
Continuous Liquid - Liquid Extraction [ ]Yes

CAS Number		ug/l or [ug/Kg] (Circle One)	
319-84-6	Alpha - BHC	180	U
319-85-7	Beta - BHC	180	U
319-86-8	Delta - BHC	180	U
58-89-9	Gamma - BHC(Lindane)	180	U
76-44-8	Heptachlor	180	U
309-00-2	Aldrin	180	U
1024-57-3	Heptachlor Epoxide	180	U
959-98-8	Endosulfan I	180	U
60-57-1	Dieldrin	360	U
72-55-9	4-4' - DDE	360	U
72-20-8	Endrin	360	U
33213-65-9	Endosulfan II	360	U
72-54-8	4-4' - DDD	360	U
1031-07-8	Endosulfan Sulfate	360	U
50-29-3	4-4' - DDT	360	U
72-43-5	Methoxychlor	1800	U
53494-70-5	Endrin Ketone	~~360~~	~~U~~
57-74-9	Chlordane	7600	J
8001-35-2	Toxaphene	~~3600~~	~~U~~
12674-11-2	Aroclor - 1016	1800	U
11104-28-2	Aroclor - 1221	1800	U
11141-16-5	Aroclor - 1232	1800	U
53469-21-9	Aroclor - 1242	1800	U
12672-29-6	Aroclor - 1248	1800	U
11097-69-1	Aroclor - 1254	5900	J
11096-82-5	Aroclor - 1260	~~3600~~	~~U~~

AA 12/11/87

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(s) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) _____ or W(s) _ 30.00_ V(t) _ 2000.00_ V(i) _ 1.0_

Laboratory Name _____

Case No 7878

Sample Number ET59C

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg
1.	NO VOLATILE COMPOUNDS FOUND			
2				
3.				
4				
5				
6				
7				
8				
9				
10				
11.				
12				
13				
14				
15				
16				
17				
18				
19.				
20				
21				
22				
23				
24				
25				
26				
27.				
28				
29.				
30				

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ET590

COMPUCHEM FILE GH046281C16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME		FRACTION	SCAN NUMBER	ESTIMATED CONC (UG/L OR UG/KG)	
1	108-38-3	BENZENE, 1,3-DIMETHYL-	isomer	SEMI2	298	1000 ~~890.~~	J
2	629-20-9	1,3,5,7-CYCLOOCTATETRAENE	isomer	SEMI2	316	4200 ~~3700.~~	J
3	98-82-8	BENZENE, (1-METHYLETHYL)-	isomer	SEMI2	345	3600 ~~3200.~~	J
~~4~~	~~78-59-1~~	~~2-CYCLOHEXEN-1-ONE, 3,5,5-TRIMETHYL-~~	PP	~~SEMI2~~	~~494~~	~~440.~~	J OMIT
~~5~~	~~571-61-9~~	~~NAPHTHALENE, 1,5-DIMETHYL-~~	isomer	~~SEMI2~~	~~675~~	~~530.~~	J OMIT
4 6	575-41-7	NAPHTHALENE, 1,3-DIMETHYL-	isomer	SEMI2	684	970 ~~860.~~	J
~~7~~	~~17301-32-5~~	~~UNDECANE, 4,7-DIMETHYL-~~	hydrocarbon	~~SEMI2~~	~~770~~	~~540.~~	J OMIT
5 8	70-55-3	BENZENESULFONAMIDE, 4-METHYL-	unknown	SEMI2	809	1000 ~~1000~~ ~~920.~~	J
~~9~~	~~629-78-7~~	~~HEPTADECANE~~	hydrocarbon	~~SEMI2~~	~~819~~	~~510.~~	J OMIT
6 ep ~~10~~	~~74645-98-0~~	~~DODECANE, 2,7,10-TRIMETHYL-~~	hydrocarbon	~~SEMI2~~	~~823~~	~~640.~~	~~Keep~~
~~11~~	~~17301-32-5~~	~~UNDECANE, 4,7-DIMETHYL-~~	hydrocarbon	~~SEMI2~~	~~866~~	~~450.~~	J OMIT
7 ep ~~12~~	613-12-7	ANTHRACENE, 2-METHYL-	unknown	~~SEMI2~~	~~937~~	~~660.~~	~~Keep~~
8 13	55162-69-1	1,3,2-DIOXABORINANE, 2-(1-METHYLBUTOXY)-	unknown	SEMI2	953	1700 ~~1500.~~	J

35 300 ~~33.900~~ 40.00

SPECTROSCOPIST SDWagner

DATE 8 29 87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ET590

COMPUCHEM FILE GH046281C16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED ~~CONC.~~ (UG/L OR UG/KG)	
14	62108-26-3	hydrocarbon ~~DECANE, 2,6,8-TRIMETHYL-~~	~~SEMI2~~	~~993~~	520.	J UNIT
9 15	55401-65-5	unknown PENTALENE, OCTAHYDRO-1-(2-OCTYLDECYL)-	SEMI2	1030	940 ~~830.~~	J
10 16	61142-17-4	unknown BENZENE, (1,2,2-TRIMETHYL-3-BUTENYL)-	SEMI2	1066	2600 ~~2300.~~	J
11 17	6597-78-0	unknown BENZOIC ACID, 3,6-DICHLORO-2-METHOXY-, METHYL ESTER	SEMI2	1125	4300 ~~3800.~~	J
18	603-11-2	PP 1,2-BENZENEDICARBOXYLIC ACID, 3-NITRO-	~~SEMI2~~	~~1158~~	1500.	~~J~~ UNIT
12 19	52161-54-3	unknown BENZENE, 1,1'-(1,4-DIMETHYL-1-BUTENE-1,4-DIYL)BIS-	SEMI2	1180	1100 ~~940.~~	J
20	55401-65-5	unknown PENTALENE, OCTAHYDRO-1-(2-OCTYLDECYL)-	SEMI2	1185	~~600.~~	~~J~~ UNIT
13 21	2541-69-7	unknown ~~substituted BENZ[A]ANTHRACENE~~ BENZ[A]ANTHRACENE, 7-METHYL-	SEMI2	1190	1100 ~~1000.~~	J
14 22	52161-54-3	unknown BENZENE, 1,1'-(1,4-DIMETHYL-1-BUTENE-1,4-DIYL)BIS-	SEMI2	1195	800 ~~710.~~	J
15 23	629-99-2	hydrocarbon PENTACOSANE	SEMI2	1202	1100 ~~1000.~~	J
16 24	74685-87-3	unknown 2,5,9-TETRADECATRIENE, 3,12-DIETHYL-	SEMI2	1208	1800 ~~1600.~~	J
17 25	74685-87-3	unknown 2,5,9-TETRADECATRIENE, 3,12-DIETHYL-	SEMI2	1214	1500 ~~1300.~~	J
18 26	6597-78-0	unknown BENZOIC ACID, 3,6-DICHLORO-2-METHOXY-, METHYL ESTER	SEMI2	1232	1200 ~~1100.~~	J

~~33,900~~ 35,300 40.00

SPECTROSCOPIST SDWagner

DATE 8-29-87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ET590

COMPUCHEM FILE GH046281C16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
27	50-32-8	BENZO[A]PYRENE PP	SEMI2	1258	1000.	J
19 28	74685-87-3	2,5,9-TETRADECATRIENE, 3,12-DIETHYL- unknown	SEMI2	1264	8.20 ~~730.~~	J
20 29	55401-65-5	PENTALENE, OCTAHYDRO-1-(2-OCTYLDECYL)- unknown	SEMI2	1272	11.00 ~~900.~~	J

38.300 ~~33.900~~ 40.00

SPECTROSCOPIST [illegible]

DATE 5-29-87

FORM1, PART B

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ConcuChem
Lab Sample ID No: 146293
Sample matrix: solid
Data Release
Authorized By: _____

Case: 7679
QC Report No: _____
Contract No: 68/01/7253
Date Sample
Received: 08/13/87

Volatile Compounds
Concentration: low
Date extracted/prepared: 08/17/87
Date analyzed: 08/21/87
Conc/Dil Factor: 1.06 pH: 6.93
Percent moisture (not decanted): 6%

CAS Number		ug/kg		CAS Number		ug/kg	
74-87-3	Chloromethane	11.	U	10061-02-6	trans-1,3-Dichloropropene	5.3	U
74-83-9	Bromomethane	11.	U	79-01-6	Trichloroethene	5.3	U
75-01-4	Vinyl Chloride	11.	U	124-48-1	Dibromochloromethane	5.3	U
75-00-3	Chloroethane	11.	U	79-00-5	1,1,2-Trichloroethane	5.3	U
75-09-2	Methylene Chloride	16.	BJ	71-43-2	Benzene	5.3	U
67-64-1	Acetone	11 ~~12.8~~	BJ	10061-01-5	cis-1,3-Dichloropropene	5.3	U
75-15-0	Carbon Disulfide	5.3	U	110-75-8	2-Chloroethyl Vinyl Ether	11.	U
75-35-4	1,1-Dichloroethene	5.3	U	75-25-2	Bromoform	5.3	U
75-34-3	1,1-Dichloroethane	5.3	U	108-10-1	4-Methyl-2-pentanone	11.	U
156-60-5	trans-1,2-Dichloroethene	5.3	U	591-78-6	2-Hexanone	11.	U
67-66-3	Chloroform	5.3	U	127-18-4	Tetrachloroethene	5.3	U
107-06-2	1,2-Dichloroethane	5.3	U	79-34-5	1,1,2,2-Tetrachloroethane	5.3	U
78-93-3	2-Butanone	11.	U	108-88-3	Toluene	5.3	U
71-55-6	1,1,1-Trichloroethane	5.3	U	108-90-7	Chlorobenzene	5.3	U
56-23-5	Carbon Tetrachloride	5.3	U	100-41-4	Ethyl Benzene	5.3	U
108-05-4	Vinyl Acetate	11.	U	100-42-5	Styrene	5.3	U
75-27-4	Bromodichloromethane	5.3	U		Total Xylenes	5.3	U
78-87-5	1,2-Dichloropropane	5.3	U				

AA 12/8/87

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit then report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10ug and a concentration of 3ug is calculated, then report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >/= 10ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: low
Date extracted/prepared: 08/15/87
Date analyzed: 08/25/87
Conc/Dil Factor: 1.08
Percent moisture (decanted): 6%

GPC Cleaned: No
Separatory Funnel Extraction: No
Continuous Liquid - Liquid Extraction: No

CAS Number		ug/kg		CAS Number		ug/kg	
108-95-2	Phenol	280	J	83-32-9	Acenaphthene	400	
111-44-4	bis(2-Chloroethyl) ether	360	U	51-28-5	2,4-Dinitrophenol	1800	U
95-57-8	2-Chlorophenol	360	U	100-02-7	4-Nitrophenol	1800	U
541-73-1	1,3-Dichlorobenzene	360	U	132-64-9	Dibenzofuran	290	J
106-46-7	1,4-Dichlorobenzene	360	U	121-14-2	2,4-Dinitrotoluene	360	U
100-51-6	Benzyl Alcohol	360	U	606-20-2	2,6-Dinitrotoluene	360	U
95-50-1	1,2-Dichlorobenzene	360	U	84-66-2	Diethylphthalate	150	J
95-48-7	2-Methylphenol	360	U	7005-72-3	4-Chlorophenyl Phenyl ether	360	U
39638-32-9	bis(2-Chloroisopropyl) ether	360	U	86-73-7	Fluorene	420	
106-44-5	4-Methylphenol	68.	J	100-01-6	4-Nitroaniline	1800	U
621-64-7	N-Nitroso-Dipropylamine	360	U	534-52-1	4,6-Dinitro-2-methylphenol	1800	U
67-72-1	Hexachloroethane	360	U	86-30-6	N-nitrosodiphenylamine (1)	360	U
98-95-3	Nitrobenzene	360	U	101-55-3	4-Bromophenyl Phenyl ether	360	U
78-59-1	Isophorone	220	J	118-74-1	Hexachlorobenzene	360	U
88-75-5	2-Nitrophenol	360	U	87-86-5	Pentachlorophenol	1800	U
105-67-9	2,4-Dimethylphenol	360	U	85-01-8	Phenanthrene	3200	
65-85-0	Benzoic Acid	700	J	120-12-7	Anthracene	840	
111-91-1	bis(2-Chloroethoxy) methane	360	U	84-74-2	Di-n-butylphthalate	250	J
120-83-2	2,4-Dichlorophenol RW 9/15	~~65.~~ 360	~~J~~ U	206-44-0	Fluoranthene	3000	
120-82-1	1,2,4-Trichlorobenzene	360	U	129-00-0	Pyrene	6100	
91-20-3	Naphthalene	610		85-68-7	Butyl Benzyl Phthalate	150	J
106-47-8	4-Chloroaniline	360	U	91-94-1	3,3'-Dichlorobenzidine	720	U
87-68-3	Hexachlorobutadiene	360	U	56-55-3	Benzo(a)anthracene	3000	
59-50-7	4-Chloro-3-methylphenol	360	U	117-81-7	bis(2-ethylhexyl)phthalate	4000	
91-57-6	2-Methylnaphthalene	1200		218-01-9	Chrysene	3400	
77-47-4	Hexachlorocyclopentadiene	360	U	117-84-0	Di-n-octyl Phthalate	620	
88-06-2	2,4,6-Trichlorophenol	360	U	205-99-2	Benzo(b)fluoranthene	6600 II	Cannot be separated
95-95-4	2,4,5-Trichlorophenol	1800	U	207-08-9	Benzo(k)fluoranthene	6600 II	
91-58-7	2-Chloronaphthalene	360	U	50-32-8	Benzo(a)pyrene	3000	AA 12/8/87
88-74-4	2-Nitroaniline	1800	U	193-39-5	Indeno(1,2,3-cd)pyrene	1600	
131-11-3	Dimethyl Phthalate	360	U	53-70-3	Dibenz(a,h)anthracene	780	
208-96-8	Acenaphthylene	210	J	191-24-2	Benzo(g,h,i)perylene	1800	
99-09-2	3-Nitroaniline	1800	U				

(1) Cannot be separated from diphenylamine

Laboratory Name: CompuChem Laboratories
Case No 7878

Sample Number
ET591

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration [Low] Medium (Circle One)
Date Extracted/Prepared 08/15/87
Data Analyzed: 08/21/87
Conc/Dil Factor: 42.40
Percent Moisture(decanted) 5.66

GPC Cleanup [ ]Yes [X]No
Separatory Funnel Extraction [ ]Yes
Continuous Liquid - Liquid Extraction [ ]Yes

CAS Number		ug/l or [ug/Kg] (Circle One)	
319-84-6	Alpha - BHC	340	U
319-85-7	Beta - BHC	340	U
319-86-8	Delta - BHC	340	U
58-89-9	Gamma - BHC(Lindane)	340	U
76-44-8	Heptachlor	340	U
309-00-2	Aldrin	340	U
1024-57-3	Heptachlor Epoxide	340	U
959-98-8	Endosulfan I	340	U
60-57-1	Dieldrin	680	U
72-55-9	4-4' - DDE	680	U
72-20-8	Endrin	680	U
33213-65-9	Endosulfan II	680	U
72-54-8	4-4' - DDD	680	U
1031-07-8	Endosulfan Sulfate	680	U
50-29-3	4-4' - DDT	680	U
72-43-5	Methoxychlor	3400	U
53494-70-5	Endrin Ketone	680	U
57-74-9	Chlordane	5100	J
8001-35-2	Toxaphene	6800	U
12674-11-2	Aroclor - 1016	3400	U
11104-28-2	Aroclor - 1221	3400	U
11141-16-5	Aroclor - 1232	3400	U
53469-21-9	Aroclor - 1242	3400	U
12672-29-6	Aroclor - 1248	3400	U
11097-69-1	Aroclor - 1254	8300	J
11096-82-5	Aroclor - 1260	6800	U

AA
12/11/87

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(s) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) _____ or W(s) 30.00 V(t) 2000.00 V(i) 5.0

Form I (continued)

Laboratory Name _____

Case No 7878

Sample Number ET591

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg
1.	NO VOLATILE COMPOUNDS FOUND			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11.				
12				
13				
14				
15				
16				
17				
18				
19.				
20				
21				
22				
23				
24				
25				
26				
27.				
28				
29.				
30				

[illegible] COMPUCHEM

[illegible] NO: 7378

SAMPLE NUMBER ET591

COMPUCHEM FILE GH04[illegible]

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	[illegible] NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
1	100-41-4	ethyl benzene BENZENE, ETHYL-	SEMI2	290	410 ~~250.~~	J
2	108-38-3	xylene BENZENE, 1,3-DIMETHYL-	SEMI2	297	1200 ~~1100.~~	J
3	629-20-9	SAME 1,3,5,7-CYCLOOCTATETRAENE	SEMI2	316	5800 ~~5500.~~	J
4	93-82-8	SAME BENZENE, (1-METHYLETHYL)-	SEMI2	345	3700 ~~3100.~~	J
5	98-86-2	SAME ETHANONE, 1-PHENYL-	SEMI2	454	1000 ~~970.~~	J
~~6~~	[illegible]	methyl naphthalene 1H-INDENE, 1-ETHYLIDENE-	SEMI2	621	~~[illegible]~~	J CMIT
~~7~~	629-59-4	HC TETRADECANE	SEMI2	662	~~390.~~	J CMIT
6	[illegible]	PNA NAPHTHALENE, 1,5-DIMETHYL-	SEMI2	675	570 ~~540.~~	J
7	[illegible]-41-7	PNA NAPHTHALENE, 1,3-DIMETHYL-	SEMI2	683	1000 ~~960.~~	J
8	62108-25-2	HC DECANE, 2,6,7-TRIMETHYL-	SEMI2	697	590 ~~560.~~	J
~~11~~	2131-41-1	PNA NAPHTHALENE, 1,4,5-TRIMETHYL-	SEMI2	729	~~290.~~	J CMIT
9	2131-42-2	PNA NAPHTHALENE, 1,4,6-TRIMETHYL-	SEMI2	744	800 ~~750.~~	J
10	2131-42-2	PNA NAPHTHALENE, 1,4,6-TRIMETHYL-	SEMI2	753	640 ~~600.~~	J

~~[illegible]~~ 35.9 10.00

SPECTROSCOPIST [illegible]

DATE 8/29/87

FORM1, PART B

[illegible] NAME: [illegible]

CASE NO: 7878

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NUMBER [illegible]

COMPUCHEM FILE [illegible]

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC (UG/L OR UG/KG)	
~~[illegible]~~	74645-36-0	DODECANE, 2,7,10-TRIMETHYL- HC	SEMI2	759	~~440.~~	J OMIT
~~[illegible]~~	55045-11-9	TRIDECANE, 5-PROPYL- HC	SEMI2	793	~~480.~~	J OMIT
11 [illegible]	74645-93-0	DODECANE, 2,7,10-TRIMETHYL- HC	SEMI2	821	1200 ~~1100.~~	J
~~[illegible]~~	17301-32-5	UNDECANE, 4,7-DIMETHYL- HC	SEMI2	864	~~330.~~	J OMIT
12 [illegible]	42087-74-1	1,2-OXAPHOSPHOLE, 2-CHLORO-3,5-BIS(1,1-DIMETHYLETHYL unknown	SEMI2	886	670 ~~[illegible]~~	J
13 [illegible]	629-73-7	HEPTADECANE HC	SEMI2	908	650 ~~610.~~	J
14 [illegible]	613-12-7	ANTHRACENE, 2-METHYL- PNA	SEMI2	927	730 ~~[illegible]~~	J
15 [illegible]	[illegible]-64-4	PHENANTHRENE, 4-METHYL- unknown	SEMI2	936	960 ~~910.~~	J
~~[illegible]~~	634-35-5	QUINOLINIUM, 1-ETHYL-, IODIDE "	SEMI2	944	~~350.~~	J OMIT
16 [illegible]	29809-13-0	1-NAPHTHALENECARBONITRILE, 5,6,7,8-TETRAHYDRO- "	SEMI2	952	1200 ~~1100.~~	J
~~[illegible]~~	629-99-2	PENTACOSANE HC + unknown	SEMI2	991	~~440.~~	J OMIT
~~[illegible]~~	[illegible]-84-6	11H-BENZO[A]FLUORENE PNA	SEMI2	1056	~~520.~~	J OMIT
17 [illegible]	10340-49-5	BENZENE, (1-METHYL-3-BUTENYL)- unknown	SEMI2	1064	1300 ~~1200.~~	J

~~[illegible]~~ 357 40.00

SPECTROSCOPIST [illegible]

DATE 8/29/87

FORM1, PART B

[illegible]

[illegible]

SAMPLE NUMBER [illegible]

COMPUCHEM FILE [illegible]

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	[illegible]	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC (UG/L OR UG/KG)	
18	[illegible]	unknown BENZOIC ACID, 3,6-DICHLORO-2-METHOXY-, METHYL ESTER	SEMI2	1123	980 ~~920~~.	J
19	[illegible]	HC [illegible]	SEMI2	1268	690 ~~650~~.	J
20	[illegible]	PNA BENZO[illegible]FLUORANTHENE	SEMI2	1287	700 ~~660~~.	J

~~[illegible]~~ 35.9 [illegible]

SPECTROSCOPIST [illegible]

DATE [illegible]

Sample Number
87564

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: CompuChem
Lab Sample ID No: 146262
Sample matrix: solid
Data Release
Authorized By: _____

Case: [illegible]
QC Report No: _____
Contract No: [illegible]
Date Sample
Received: [illegible]

Volatile Compounds
Concentration: low
Date extracted prepared: [illegible]
Date analyzed: [illegible]
Conc Dil Factor: 1.06 pH: 6.93
Percent moisture (not decanted): 6%

CAS Number		ug/kg		CAS Number		ug/kg	
74-87-3	Chloromethane	11.	U	10061-02-6	trans-1,3-Dichloropropene	5.3	U
74-83-9	Bromomethane	11.	U	79-01-6	Trichloroethene	5.3	U
75-01-4	Vinyl Chloride	11.	U	124-48-1	Dibromochloromethane	5.3	U
75-00-3	Chloroethane	11.	U	79-00-5	1,1,2-Trichloroethane	5.3	U
75-09-2	Methylene Chloride	26.	BJ	71-43-2	Benzene	5.3	U
67-64-1	Acetone	32.	BJ	10061-01-5	cis-1,3-Dichloropropene	5.3	U
75-15-0	Carbon Disulfide	5.3	U	110-75-8	2-Chloroethyl Vinyl Ether	11.	U
75-35-4	1,1-Dichloroethene	5.3	U	75-25-2	Bromoform	5.3	U
75-34-3	1,1-Dichloroethane	5.3	U	108-10-1	4-Methyl-2-pentanone	11.	U
156-60-5	trans-1,2-Dichloroethene	5.3	U	591-78-6	2-Hexanone	11.	U
67-66-3	Chloroform	5.3	U	127-18-4	Tetrachloroethene	5.3	U
107-06-2	1,2-Dichloroethane	5.3	U	79-34-5	1,1,2,2-Tetrachloroethane	5.3	U
78-93-3	2-Butanone	11.	U	108-88-3	Toluene	5.3	U
71-55-6	1,1,1-Trichloroethane	5.3	U	108-90-7	Chlorobenzene	5.3	U
56-23-5	Carbon Tetrachloride	5.3	U	100-41-4	Ethyl Benzene	5.3	U
108-05-4	Vinyl Acetate	11.	U	100-42-5	Styrene	5.3	U
75-27-4	Bromodichloromethane	5.3	U		Total Xylenes	5.3	U
78-87-5	1,2-Dichloropropane	5.3	U				

AA 12/18/87

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit then report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10ug and a concentration of 3ug is calculated, then report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >/= 10ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name: CompuChem
Case : 7878

Sample Number
[illegible]

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: low
Date extracted/prepared: 08/15/87
Date analyzed: 08/24/87
Conc/Dil Factor: 1.08
Percent moisture (decanted): 6%

GPC Cleanup: No
Separatory Funnel Extraction: No
Continuous Liquid - Liquid Extraction: No

CAS Number		ug/kg		CAS Number		ug/kg	
108-95-2	Phenol	360	U	83-32-9	Acenaphthene	65.	J
111-44-4	bis(2-Chloroethyl) ether	360	U	51-28-5	2,4-Dinitrophenol	1800	U
95-57-8	2-Chlorophenol	360	U	100-02-7	4-Nitrophenol	1800	U
541-73-1	1,3-Dichlorobenzene	360	U	132-64-9	Dibenzofuran	180	J
106-46-7	1,4-Dichlorobenzene	360	U	121-14-2	2,4-Dinitrotoluene	360	U
100-51-6	Benzyl Alcohol	360	U	606-20-2	2,6-Dinitrotoluene	360	U
95-50-1	1,2-Dichlorobenzene	360	U	84-66-2	Diethylphthalate	200	JB
95-48-7	2-Methylphenol	360	U	7005-72-3	4-Chlorophenyl Phenyl ether	360	U
39638-32-9	bis(2-Chloroisopropyl) ether	360	U	86-73-7	Fluorene	72.	J
106-44-5	4-Methylphenol	360	U	100-01-6	4-Nitroaniline	1800	U
621-64-7	N-Nitroso-Dipropylamine	360	U	534-52-1	4,6-Dinitro-2-methylphenol	1800	U
67-72-1	Hexachloroethane	360	U	86-30-6	N-nitrosodiphenylamine (1)	RW 4/10 ~~57.~~ J 360 U	
98-95-3	Nitrobenzene	360	U	101-55-3	4-Bromophenyl Phenyl ether	360	U
78-59-1	Isophorone	360	U	118-74-1	Hexachlorobenzene	360	U
88-75-5	2-Nitrophenol	360	U	87-86-5	Pentachlorophenol	1800	U
105-67-9	2,4-Dimethylphenol	360	U	85-01-8	Phenanthrene	1100	
65-85-0	Benzoic Acid	1800	U	120-12-7	Anthracene	210	J
111-91-1	bis(2-Chloroethoxy) methane	360	U	84-74-2	Di-n-butylphthalate	36.	J
120-83-2	2,4-Dichlorophenol	360	U	206-44-0	Fluoranthene	1400	
120-82-1	1,2,4-Trichlorobenzene	360	U	129-00-0	Pyrene	1700	
91-20-3	Naphthalene	330	J	85-68-7	Butyl Benzyl Phthalate	360	U
106-47-8	4-Chloroaniline	360	U	91-94-1	3,3'-Dichlorobenzidine	720	U
87-68-3	Hexachlorobutadiene	360	U	56-55-3	Benzo(a)anthracene	1200	
59-50-7	4-Chloro-3-methylphenol	360	U	117-81-7	bis(2-ethylhexyl)phthalate	140	JB
91-57-6	2-Methylnaphthalene	430		218-01-9	Chrysene	1600	
77-47-4	Hexachlorocyclopentadiene	360	U	117-84-0	Di-n-octyl Phthalate	360	U
88-06-2	2,4,6-Trichlorophenol	360	U	205-99-2	Benzo(b)fluoranthene	2800 II	Cannot be separated
95-95-4	2,4,5-Trichlorophenol	1800	U	207-08-9	Benzo(k)fluoranthene	2800 II	
91-58-7	2-Chloronaphthalene	360	U	50-32-8	Benzo(a)pyrene	1100	AA 12/8/87
88-74-4	2-Nitroaniline	1800	U	193-39-5	Indeno(1,2,3-cd)pyrene	560	
131-11-3	Dimethyl Phthalate	360	U	53-70-3	Dibenz(a,h)anthracene	330	J
208-96-8	Acenaphthylene	190	J	191-24-2	Benzo(g,h,i)perylene	580	
99-09-2	3-Nitroaniline	1800	U				

(1) Cannot be separated from diphenylamine

Laboratory Name: __CompuChem_Laboratories__
Case No. _____7878 _____

Sample Number
ET584

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: [Low] Medium (Circle One)
Date Extracted/Prepared: _____08/15/87_____
Data Analyzed: _____08/21/87_____
Conc/Dil Factor: _____ 1.06_____
Percent Moisture(decanted): _____ 5.66_____

GPC Cleanup [ ]Yes [X]No
Separatory Funnel Extraction [ ]Yes
Continuous Liquid - Liquid Extraction [ ]Yes

CAS Number		ug/l or [ug/Kg] (Circle One)	
319-84-6	Alpha - BHC	8.5	U
319-85-7	Beta - BHC	8.5	U
319-86-8	Delta - BHC	8.5	U
58-89-9	Gamma - BHC(Lindane)	8.5	U
76-44-8	Heptachlor	8.5	U
309-00-2	Aldrin	8.5	U
1024-57-3	Heptachlor Epoxide	8.5	U
959-98-8	Endosulfan I	8.5	U
60-57-1	Dieldrin	17.	U
72-55-9	4-4' - DDE	17.	U
72-20-8	Endrin	17.	U
33213-65-9	Endosulfan II	17.	U
72-54-8	4-4' - DDD	17.	U
1031-07-8	Endosulfan Sulfate	17.	U
50-29-3	4-4' - DDT	17.	U
72-43-5	Methoxychlor	85.	U
53494-70-5	Endrin Ketone	17.	U
57-74-9	Chlordane	520	J
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor - 1016	85.	U
11104-28-2	Aroclor - 1221	85.	U
11141-16-5	Aroclor - 1232	85.	U
53469-21-9	Aroclor - 1242	85.	U
12672-29-6	Aroclor - 1248	85.	U
11097-69-1	Aroclor - 1254	170	U
11096-82-5	Aroclor - 1260	170	U

AA 12/11/87

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(s) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) _____ or W(s) _ 30.00_ V(t) _ 2000.00_ V(i) _ 5.0_

Form I (continued)

Case No 7878

Sample Number ET584

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	NO VOLATILE COMPOUNDS FOUND			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29.				
30				

ET584 bp

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ~~C#7878-ET5~~

COMPUCHEM FILE GH046262B16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED ~~CONC.~~ (UG/L OR UG/KG)	
(1) 1	629-20-9	1,3,5,7-CYCLOOCTATETRAENE isomer	SEMI2	322	~~660.~~ 700	J
(2) 2	98-82-8	BENZENE, (1-METHYLETHYL)- isomer	SEMI2	350	~~650.~~ 640	J
(3) 3	1743-61-9	CYCLOHEXENE, 4-ETHENYL-1,4-DIMETHYL- unknown	SEMI2	433	930 ~~880.~~	J
4	~~62108-23-0~~	DECANE, 2,5,6-TRIMETHYL- hydrocarbon	SEMI2	481	220.	J
~~5~~	~~6044-71-9~~	DODECANE, 6-METHYL- isomer	~~SEMI2~~	~~556~~	150.	J
~~5~~	~~62108-25-2~~	DECANE, 2,6,7-TRIMETHYL- hydrocarbon	SEMI2	592	200.	J
~~7~~	~~17301-32-5~~	UNDECANE, 4,7-DIMETHYL- isomer	~~SEMI2~~	608	260.	J
8	~~2471-83-2~~	1H-INDENE, 1-ETHYLIDENE- isomer	~~SEMI2~~	625	280.	J
(4) 9	629-59-4	TETRADECANE hydrocarbon	SEMI2	666	1100 ~~430.~~	J
(5) 10	575-41-7	NAPHTHALENE, 1,3-DIMETHYL- isomer	SEMI2	688	1100 ~~660.~~	J
(6) 11	61141-72-8	DODECANE, 4,6-DIMETHYL- hydrocarbon	SEMI2	701	1400 ~~810.~~	J
~~12~~	~~13189-13-4~~	1H-IMIDAZOLE-4-CARBOXAMIDE, N-PHENYL- D3	~~SEMI2~~	728	980.	J
(7) 13	10544-50-0	SULFUR, MOL. (S8) Sulfur	SEMI2	740	6700 ~~630.~~	J

35 900
~~33.300~~ 40.00

SPECTROSCOPIST SDWagner

DATE 5-29-87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ~~CW7878-ET5~~ ET584 dp

COMPUCHEM FILE GH0462E2E1E

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME		FRACTION	SCAN NUMBER	ESTIMATED ~~CONC~~ (UG/L OR UG/KG)	
(8) ~~14~~	55045-08-4	DODECANE, 2-METHYL-6-PROPYL-	unknown	SEMI2	797	590 ~~560.~~	J
(9) ~~15~~	74645-98-0	DODECANE, 2,7,10-TRIMETHYL-	hydrocarbon	SEMI2	825	1400 ~~1300.~~	J
~~16~~	~~17301-32-5~~	UNDECANE, 4,7-DIMETHYL-	hydrocarbon	~~SEMI2~~	~~868~~	~~290.~~	J omit
17	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BEN	hydrocarbon	~~SEMI2~~	~~912~~	350.	J omit
18	610-48-0	ANTHRACENE, 1-METHYL-	isomer	SEMI2	940	310.	J omit
(10) ~~19~~	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BEN	hydrocarbon	SEMI2	955	480 ~~450.~~	J
~~20~~	3891-98-3	DODECANE, 2,6,10-TRIMETHYL-	unknown	~~SEMI2~~	995	320.	J omit
(11) ~~21~~	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BEN	unknown	SEMI2	1033	280 ~~260.~~	J
(12) ~~22~~	2381-21-7	PYRENE, 1-METHYL-	substituted pyrene	SEMI2	1061	380 ~~360.~~	J
(13) ~~23~~	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BEN	hydrocarbon	SEMI2	1070	720 ~~680.~~	J
(14) ~~24~~	544-76-3	HEXADECANE	unknown	SEMI2	1106	530 ~~500.~~	J
(15) ~~25~~	205-43-6	BENZO[B]NAPHTHO[1,2-D]THIOPHENE	unknown	SEMI2	1126	800 ~~750.~~	J
(16) ~~26~~	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BEN	hydrocarbon	SEMI2	1140	390 ~~370.~~	J

~~33.900~~ 35.900 40.00

SPECTROSCOPIST [illegible]

DATE 3-29-87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ~~C#7878 ET5~~ ET584 dp

COMPUCHEM FILE GH046262B16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED ~~CONC.~~ (UG/L OR UG/KG)	
1) ~~27~~	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BEN unknown	SEMI2	1173	650 ~~640.~~	J
2) ~~28~~	629-99-2	PENTACOSANE hydrocarbon	SEMI2	1205	1000 ~~1100.~~	J
3) ~~29~~	6418-45-7	NONADECANE, 3-METHYL- unknown	SEMI2	1274	1000 ~~1100.~~	J
20) ~~30~~	205-82-3	BENZO[J]FLUORANTHENE isomer	SEMI2	1294	1000 ~~1100.~~	J

~~33.900~~ 33.100 40.00

SPECTROSCOPIST S.D. Wagner

DATE 5-29-87

FORM1, PART B

Sample Number
E7587

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: CompuChem
Lab Sample ID No: 146276
Sample matrix: solid
Data Release
Authorized By: _____

Case: 7876
QC Report No: _____
Contract No: 68/01/7263
Date Sample
Received: 08/13/87

Volatile Compounds
Concentration: low
Date extracted/prepared: 08/25/87
Date analyzed: 08/27/87
Conc/Dil Factor: 1.04 pH: 6.88
Percent moisture (not decanted): 4%

CAS Number		ug/kg		CAS Number		ug/kg	
74-87-3	Chloromethane	10.	U	10061-02-6	trans-1,3-Dichloropropene	5.2	U
74-83-9	Bromomethane	10.	U	79-01-6	Trichloroethene	5.2	U
75-01-4	Vinyl Chloride	10.	U	124-48-1	Dibromochloromethane	5.2	U
75-00-3	Chloroethane	10.	U	79-00-5	1,1,2-Trichloroethane	5.2	U
75-09-2	Methylene Chloride	25.	BJ	71-43-2	Benzene	5.2	U
67-64-1	Acetone	59.	BJ	10061-01-5	cis-1,3-Dichloropropene	5.2	U
75-15-0	Carbon Disulfide	5.2	U	110-75-8	2-Chloroethyl Vinyl Ether	10.	U
75-35-4	1,1-Dichloroethene	5.2	U	75-25-2	Bromoform	5.2	U
75-34-3	1,1-Dichloroethane	5.2	U	108-10-1	4-Methyl-2-pentanone	10.	U
156-60-5	trans-1,2-Dichloroethene	5.2	U	591-78-6	2-Hexanone	10.	U
67-66-3	Chloroform	1.0	J	127-18-4	Tetrachloroethene	5.2	U
107-06-2	1,2-Dichloroethane	5.2	U	79-34-5	1,1,2,2-Tetrachloroethane	5.2	U
78-93-3	2-Butanone	10.	U	108-88-3	Toluene	1.6	J
71-55-6	1,1,1-Trichloroethane	5.2	U	108-90-7	Chlorobenzene	5.2	U
56-23-5	Carbon Tetrachloride	5.2	U	100-41-4	Ethyl Benzene	5.2	U
108-05-4	Vinyl Acetate	10.	U	100-42-5	Styrene	5.2	U
75-27-4	Bromodichloromethane	5.2	U		Total Xylenes	5.2	U
78-87-5	1,2-Dichloropropane	5.2	U				

AA 12/8/87

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit then report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10ug and a concentration of 3ug is calculated, then report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >/= 10ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name: CompuChem
Case : 7879

Sample Number
E1587

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: low
Date extracted/prepared: 08/15/87
Date analyzed: 08/25/87
Conc/Dil Factor: 1.06
Percent moisture (decanted): 4%

GPC Cleanup: No
Separatory Funnel Extraction: No
Continuous Liquid - Liquid Extraction: No

CAS Number		ug/kg		CAS Number		ug/kg	
108-95-2	Phenol	220	J	83-32-9	Acenaphthene	140	J
111-44-4	bis(2-Chloroethyl) ether	350	U	51-28-5	2,4-Dinitrophenol	1800	U
95-57-8	2-Chlorophenol	350	U	100-02-7	4-Nitrophenol	1800	U
541-73-1	1,3-Dichlorobenzene	350	U	132-64-9	Dibenzofuran	260	J
106-46-7	1,4-Dichlorobenzene	350	U	121-14-2	2,4-Dinitrotoluene	350	U
100-51-6	Benzyl Alcohol	350	U	606-20-2	2,6-Dinitrotoluene	350	U
95-50-1	1,2-Dichlorobenzene	350	U	84-66-2	Diethylphthalate	120	J B
95-48-7	2-Methylphenol	350	U	7005-72-3	4-Chlorophenyl Phenyl ether	350	U
39638-32-9	bis(2-Chloroisopropyl) ether	350	U	86-73-7	Fluorene	180	J
106-44-5	4-Methylphenol	350	U	100-01-6	4-Nitroaniline	1800	U
621-64-7	N-Nitroso-Dipropylamine	350	U	534-52-1	4,6-Dinitro-2-methylphenol	1800	U
67-72-1	Hexachloroethane	350	U	86-30-6	N-nitrosodiphenylamine (1)	350	U
98-95-3	Nitrobenzene	350	U	101-55-3	4-Bromophenyl Phenyl ether	350	U
78-59-1	Isophorone	320	J	118-74-1	Hexachlorobenzene	350	U
88-75-5	2-Nitrophenol	350	U	87-86-5	Pentachlorophenol	1800	U
105-67-9	2,4-Dimethylphenol	350	U	85-01-8	Phenanthrene	1700	
65-85-0	Benzoic Acid	1300	J	120-12-7	Anthracene	310	J
111-91-1	bis(2-Chloroethoxy) methane	350	U	84-74-2	Di-n-butylphthalate	200	J
120-83-2	2,4-Dichlorophenol	350	U	206-44-0	Fluoranthene	1600	
120-82-1	1,2,4-Trichlorobenzene	350	U	129-00-0	Pyrene	2600	
91-20-3	Naphthalene	610		85-68-7	Butyl Benzyl Phthalate	88.	J
106-47-8	4-Chloroaniline	350	U	91-94-1	3,3'-Dichlorobenzidine	710	U
87-68-3	Hexachlorobutadiene	350	U	56-55-3	Benzo(a)anthracene	1300	
59-50-7	4-Chloro-3-methylphenol	350	U	117-81-7	bis(2-ethylhexyl)phthalate	1100	BJ
91-57-6	2-Methylnaphthalene	1000		218-01-9	Chrysene	1900	
77-47-4	Hexachlorocyclopentadiene	350	U	117-84-0	Di-n-octyl Phthalate	380	
88-06-2	2,4,6-Trichlorophenol	350	U	205-99-2	Benzo(b)fluoranthene	3500 II	Cannot be separated
95-95-4	2,4,5-Trichlorophenol	1800	U	207-08-9	Benzo(k)fluoranthene	3500 II	
91-58-7	2-Chloronaphthalene	350	U	50-32-8	Benzo(a)pyrene	1400	AA 12/8/87
88-74-4	2-Nitroaniline	1800	U	193-39-5	Indeno(1,2,3-cd)pyrene	820	
131-11-3	Dimethyl Phthalate	350	U	53-70-3	Dibenz(a,h)anthracene	400	
208-96-8	Acenaphthylene	210	J	191-24-2	Benzo(g,h,i)perylene	1000	
99-09-2	3-Nitroaniline	1800	U				

(1) Cannot be separated from diphenylamine

Laboratory Name __CompuChem_Laboratories__
Case No: _____7878 _____

Sample Number
ET587

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: [Low] Medium (Circle One)
Date Extracted/Prepared. _____08/15/87_____
Data Analyzed: _____08/25/87_____
Conc/Dil Factor: _____ 4.16_____
Percent Moisture(decanted): _____ 3.85_____

GPC Cleanup [ ]Yes [X]No
Separatory Funnel Extraction [ ]Yes
Continuous Liquid - Liquid Extraction [ ]Yes

CAS Number		ug/l or [ug/Kg] (Circle One)	
319-84-6	Alpha - BHC	33.	U
319-85-7	Beta - BHC	33.	U
319-86-8	Delta - BHC	33.	U
58-89-9	Gamma - BHC(Lindane)	33.	U
76-44-8	Heptachlor	33.	U
309-00-2	Aldrin	33.	U
1024-57-3	Heptachlor Epoxide	33.	U
959-98-8	Endosulfan I	33.	U
60-57-1	Dieldrin	66.	U
72-55-9	4-4' - DDE	66.	U
72-20-8	Endrin	66.	U
33213-65-9	Endosulfan II	66.	U
72-54-8	4-4' - DDD	66.	U
1031-07-8	Endosulfan Sulfate	66.	U
50-29-3	4-4' - DDT	66.	U
72-43-5	Methoxychlor	330	U
53494-70-5	Endrin Ketone	~~66.~~	~~U~~
57-74-9	Chlordane	2300	J
8001-35-2	Toxaphene	~~660~~	~~U~~
12674-11-2	Aroclor - 1016	330	U
11104-28-2	Aroclor - 1221	330	U
11141-16-5	Aroclor - 1232	330	U
53469-21-9	Aroclor - 1242	330	U
12672-29-6	Aroclor - 1248	330	U
11097-69-1	Aroclor - 1254	~~660~~	~~U~~
11096-82-5	Aroclor - 1260	2000	J

AA
12/11/87

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(s) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) _____ or W(s) _ 30.00_ V(t) _ 2000.00_ V(i) _ 5.0_

Laboratory Name CompuChem Laboratories

Case No 7878

Sample Number ET587

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	NO VOLATILE COMPOUNDS FOUND			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29.				
30				

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ET587

COMPUCHEM FILE GJ046276C16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME		FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
1	100-41-4	BENZENE, ETHYL-	isomer	SEMI2	290	990.	J
2	108-38-3	BENZENE, 1,3-DIMETHYL-	isomer	SEMI2	298	1600.	J
3	629-20-9	1,3,5,7-CYCLOOCTATETRAENE	isomer	SEMI2	316	7200.	J
4	98-82-8	BENZENE, (1-METHYLETHYL)-	isomer	SEMI2	346	6800.	J
5	98-83-9	BENZENE, (1-METHYLETHENYL)-	isomer	SEMI2	392	900.	J
6	98-86-2	ETHANONE, 1-PHENYL-	isomer	SEMI2	455	1500.	J
~~7~~	~~2471-83-2~~	1H-INDENE, 1-ETHYLIDENE-	isomer	SEMI2	622	420.	J [illegible]
8	~~629-59-4~~	TETRADECANE	hydrocarbon	~~SEMI2~~	664	690.	J [illegible]
7 9	571-61-9	NAPHTHALENE, 1,5-DIMETHYL-	isomer	SEMI2	676	880.	J
8 10	575-41-7	NAPHTHALENE, 1,3-DIMETHYL-	isomer	SEMI2	685	1600.	J
9 11	74645-98-0	DODECANE, 2,7,10-TRIMETHYL-	isomer	SEMI2	699	1000.	J
12	32046-26-7	PYRAZINE, METHYL-, 1,4-DIOXIDE	[illegible]	~~SEMI2~~	727	610.	J [illegible]
~~13~~	~~2131-41-1~~	NAPHTHALENE, 1,4,5-TRIMETHYL-	isomer	~~SEMI2~~	732	640.	J [illegible]

35.300
~~33.900~~ 40.00

SPECTROSCOPIST SDWagner

DATE 5-29-87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ET587

COMPUCHEM FILE GJ048276C16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED ~~CONC.~~ (UG/L OR UG/KG)	
10 14	2131-42-2	NAPHTHALENE, 1,4,6-TRIMETHYL- isomer	SEMI2	746	1200.	J
15	88-19-7	~~BENZENESULFONAMIDE, 2-METHYL-~~ unknown	~~SEMI2~~	790	680.	J OMIT
11 16	70-55-3	BENZENESULFONAMIDE, 4-METHYL- isomer	SEMI2	811	1300.	J
12 17	74645-98-0	DODECANE, 2,7,10-TRIMETHYL- isomer	SEMI2	824	1200.	J
13 18	613-12-7	ANTHRACENE, 2-METHYL- substituted anthracene	SEMI2	929	1100.	J
~~19~~	610-48-0	~~ANTHRACENE, 1-METHYL-~~ unknown	~~SEMI2~~	938	770.	J OMIT
14 20	634-35-5	QUINOLINIUM, 1-ETHYL-, IODIDE unknown	SEMI2	947	780.	J
15 21	634-35-5	QUINOLINIUM, 1-ETHYL-, IODIDE unknown	SEMI2	955	2200.	J
~~22~~	91-76-9	1,3,5-TRIAZINE-2,4-DIAMINE, 6-PHENYL- unknown	~~SEMI2~~	973	610.	J OMIT
16 23	53854-49-2	ISOQUINOLINIUM, 2-ETHYL-, IODIDE unknown	SEMI2	988	1100.	J
17 24	56851-51-5	BENZENE, (1,3-DIMETHYL-3-BUTENYL)- unknown	SEMI2	1065	5400.	J
~~25~~	603-11-2	1,2-BENZENEDICARBOXYLIC ACID, 3-NITRO- PP	~~SEMI2~~	1157	2400.	J OMIT
18 26	1705-84-6	TRIPHENYLENE, 2-METHYL- unknown	SEMI2	1189	2300.	J

~~33,900~~ 40.00

SPECTROSCOPIST SDWagner

DATE 8-29-87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ET587

COMPUCHEM FILE GJ046278C16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED ~~CONC.~~ (UG/L OR UG/KG)	
19 27	6561-44-0	OCTADECANE, 3-METHYL- hydrocarbon	SEMI2	1202	6400.	J
~~28~~	205-82-3	BENZO[J]FLUORANTHENE PP	~~SEMI2~~	1258	3300.	J CMT
29	630-06-8	HEXATRIACONTANE hydrocarbon	SEMI2	1269	1900.	J

~~33,300~~ 35,300 40.00

SPECTROSCOPIST SDWagner

DATE 8-29-87

FORM1, PART B

Sample Number
ET[illegible]

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: CompuChem
Lab Sample ID No: 146271
Sample matrix: solid
Data Release
Authorized By: [signature]

Case: 7878
QC Report No: _____
Contract No: 68/01/7263
Date Sample
Received: 08/13/87

Volatile Compounds

Concentration: low
Date extracted/prepared: 08/21/87
Date analyzed: 08/22/87
Conc/Dil Factor: 1.16 pH: 7.34
Percent moisture (not decanted): 14%

CAS Number		ug/kg		CAS Number		ug/kg	
74-87-3	Chloromethane	12.	U	10061-02-6	trans-1,3-Dichloropropene	5.8	U
74-83-9	Bromomethane	12.	U	79-01-6	Trichloroethene	5.8	U
75-01-4	Vinyl Chloride	12.	U	124-48-1	Dibromochloromethane	5.8	U
75-00-3	Chloroethane	12.	U	79-00-5	1,1,2-Trichloroethane	5.8	U
75-09-2	Methylene Chloride	52.	BJ	71-43-2	Benzene	5.8	U
67-64-1	Acetone	16.	BJ	10061-01-5	cis-1,3-Dichloropropene	5.8	U
75-15-0	Carbon Disulfide	5.8	U	110-75-8	2-Chloroethyl Vinyl Ether	12.	U
75-35-4	1,1-Dichloroethene	5.8	U	75-25-2	Bromoform	5.8	U
75-34-3	1,1-Dichloroethane	5.8	U	108-10-1	4-Methyl-2-pentanone	12.	U
156-60-5	trans-1,2-Dichloroethene	5.8	U	591-78-6	2-Hexanone	12.	U
67-66-3	Chloroform	1.7	J	127-18-4	Tetrachloroethene	5.8	U
107-06-2	1,2-Dichloroethane	5.8	U	79-34-5	1,1,2,2-Tetrachloroethane	5.8	U
78-93-3	2-Butanone	12.	U	108-88-3	Toluene	5.8	U
71-55-6	1,1,1-Trichloroethane	5.8	U	108-90-7	Chlorobenzene	5.8	U
56-23-5	Carbon Tetrachloride	5.8	U	100-41-4	Ethyl Benzene	5.8	U
108-05-4	Vinyl Acetate	12.	U	100-42-5	Styrene	5.8	U
75-27-4	Bromodichloromethane	5.8	U		Total Xylenes	5.8	U
78-87-5	1,2-Dichloropropane	5.8	U				

AA 12/8/87

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit then report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10ug and a concentration of 3ug is calculated, then report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >/= 10ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name: [illegible]
Case : [illegible]

Sample Number
[illegible]

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: low
Date extracted/prepared: 08/15/87
Date analyzed: 08/24/87
Conc/Dil Factor: 0.18
Percent moisture (decanted): 14%

GPC Cleanup: No
Separatory Funnel Extraction: No
Continuous Liquid - Liquid Extraction: No

CAS Number		ug/kg		CAS Number		ug/kg	
108-95-2	Phenol	240		83-32-9	Acenaphthene	340	J
111-44-4	bis(2-Chloroethyl) ether	390	U	51-28-5	2,4-Dinitrophenol	2000	U
95-57-8	2-Chlorophenol	390	U	100-02-7	4-Nitrophenol	2000	U
541-73-1	1,3-Dichlorobenzene	390	U	132-64-9	Dibenzofuran	330	J
106-46-7	1,4-Dichlorobenzene	390	U	121-14-2	2,4-Dinitrotoluene	390	U
100-51-6	Benzyl Alcohol	390	U	606-20-2	2,6-Dinitrotoluene	390	U
95-50-1	1,2-Dichlorobenzene	390	U	84-66-2	Diethylphthalate	280	J
95-48-7	2-Methylphenol	390	U	7005-72-3	4-Chlorophenyl Phenyl ether	390	U
39638-32-9	bis(2-Chloroisopropyl) ether	390	U	86-73-7	Fluorene	540	
106-44-5	4-Methylphenol	390	U	100-01-6	4-Nitroaniline	2000	U
621-64-7	N-Nitroso-Dipropylamine	390	U	534-52-1	4,6-Dinitro-2-methylphenol	2000	U
67-72-1	Hexachloroethane	390	U	86-30-6	N-nitrosodiphenylamine (1)	390	U
98-95-3	Nitrobenzene	390	U	101-55-3	4-Bromophenyl Phenyl ether	390	U
78-59-1	Isophorone	1000		118-74-1	Hexachlorobenzene	390	U
88-75-5	2-Nitrophenol	390	U	87-86-5	Pentachlorophenol	79.	J
105-67-9	2,4-Dimethylphenol RW 9/15 390U ~~51.~~	~~J~~		85-01-8	Phenanthrene	4200	
65-85-0	Benzoic Acid	2000	U	120-12-7	Anthracene	1000	
111-91-1	bis(2-Chloroethoxy) methane	390	U	84-74-2	Di-n-butylphthalate	280	J
120-83-2	2,4-Dichlorophenol	390	U	206-44-0	Fluoranthene	4000	
120-82-1	1,2,4-Trichlorobenzene	390	U	129-00-0	Pyrene	7100	
91-20-3	Naphthalene	620		85-68-7	Butyl Benzyl Phthalate	290	J
106-47-8	4-Chloroaniline	390	U	91-94-1	3,3'-Dichlorobenzidine	790	U
87-68-3	Hexachlorobutadiene	390	U	56-55-3	Benzo(a)anthracene	3600	
59-50-7	4-Chloro-3-methylphenol	390	U	117-81-7	bis(2-ethylhexyl)phthalate	3000 ~~9,000~~	D
91-57-6	2-Methylnaphthalene	760		218-01-9	Chrysene	4100	
77-47-4	Hexachlorocyclopentadiene	390	U	117-84-0	Di-n-octyl Phthalate	740	
88-06-2	2,4,6-Trichlorophenol	390	U	205-99-2	Benzo(b)fluoranthene	4700 ~~1500~~	D Cannot be
95-95-4	2,4,5-Trichlorophenol RW 9/15 390U ~~67.~~	~~J~~		207-08-9	Benzo(k)fluoranthene	4700 ~~1500~~	D Separated
91-58-7	2-Chloronaphthalene	390	U	50-32-8	Benzo(a)pyrene	3300	AA 12/8/87.
88-74-4	2-Nitroaniline	2000	U	193-39-5	Indeno(1,2,3-cd)pyrene	1500	
131-11-3	Dimethyl Phthalate	390	U	53-70-3	Dibenz(a,h)anthracene	730	
208-96-8	Acenaphthylene	320	J	191-24-2	Benzo(g,h,i)perylene	1600	
99-09-2	3-Nitroaniline	2000	U				

(1) Cannot be separated from diphenylamine

Laboratory Name __CompuChem_Laboratories__
Case No: _____7878 _____

Sample Number
ET586

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration. [Low] Medium (Circle One)
Date Extracted/Prepared _____08/15/87_____
Data Analyzed. _____08/21/87_____
Conc/Dil Factor:_____ 2.32_____
Percent Moisture(decanted): _____ 13.79____

GPC Cleanup [ ]Yes [X]No
Separatory Funnel Extraction [X]Yes
Continuous Liquid - Liquid Extraction [ ]Yes

CAS Number		ug/l or [ug/Kg] (Circle One)	
319-84-6	Alpha - BHC	18.	U
319-85-7	Beta - BHC	18.	U
319-86-8	Delta - BHC	18.	U
58-89-9	Gamma - BHC(Lindane)	18.	U
76-44-8	Heptachlor	18.	U
309-00-2	Aldrin	18.	U
1024-57-3	Heptachlor Epoxide	18.	U
959-98-8	Endosulfan I	18.	U
60-57-1	Dieldrin	37.	U
72-55-9	4-4' - DDE	37.	U
72-20-8	Endrin	37.	U
33213-65-9	Endosulfan II	37.	U
72-54-8	4-4' - DDD	37.	U
1031-07-8	Endosulfan Sulfate	37.	U
50-29-3	4-4' - DDT	37.	U
72-43-5	Methoxychlor	180	U
53494-70-5	Endrin Ketone	37.	U
57-74-9	Chlordane	8600	J
8001-35-2	Toxaphene	370	U
12674-11-2	Aroclor - 1016	180	U
11104-28-2	Aroclor - 1221	180	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	370	U
11096-82-5	Aroclor - 1260	2100	J

AA
12/11/87

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(s) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) _____ or W(s) _ 30.00_ V(t) _ 2000.00_ V(i) _ 5.0_

Form I (continued)

Laboratory Name Compuchem Laboratories

Case No 7578

Sample Number ET586

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	NO VOLATILE COMPOUNDS FOUND			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19.				
20				
21				
22				
23				
24				
25				
26				
27.				
28.				
29.				
30				

ET586 dp

[illegible] NAME: [illegible]

[illegible]

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NUMBER [illegible]

COMPOUND [illegible]

	CAS NUMBER	COMPOUND NAME		FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
~~1~~	~~100-41-4~~	~~BENZENE, ETHYL-~~	isomer	~~SEMI2~~	~~293~~	~~850.~~	~~JOUIT~~
~~2~~	~~108-38-3~~	~~BENZENE, 1,3-DIMETHYL-~~	isomer	~~SEMI2~~	~~300~~	~~870.~~	~~JOUIT~~
① ~~3~~	629-20-9	1,3,5,7-CYCLOOCTATETRAENE	isomer	SEMI2	319	5800 ~~5000.~~	J
② ~~4~~	98-82-8	BENZENE, (1-METHYLETHYL)-	isomer	SEMI2	348	4400 ~~3800.~~	J
~~5~~	~~[illegible]~~	~~CYCLOOCTANE, 1,4-DIMETHYL-, TRANS-~~	isomer	~~SEMI2~~	~~436~~	~~950.~~	~~JOUIT~~
~~6~~	~~[illegible]~~	~~ETHANONE, 1-PHENYL-~~	isomer	~~SEMI2~~	~~455~~	~~1100.~~	~~JOUIT~~
~~7~~	~~78-59-1~~	~~2-CYCLOHEXEN-1-ONE, 3,5,5-TRIMETHYL-~~	PP	~~SEMI2~~	~~494~~	~~860.~~	~~JOUIT~~
~~8~~	~~569-41-5~~	~~NAPHTHALENE, 1,8-DIMETHYL-~~	isomer	~~SEMI2~~	~~603~~	~~1000.~~	~~JOUIT~~
~~9~~	~~80-19-7~~	~~BENZENESULFONAMIDE, 2-METHYL-~~	unknown	~~SEMI2~~	~~788~~	~~430.~~	~~JOUIT~~
~~10~~	~~55045-09-4~~	~~DODECANE, 2-METHYL-6-PROPYL-~~	unknown	~~SEMI2~~	~~799~~	~~520.~~	~~JOUIT~~
~~11~~	~~70-55-3~~	~~BENZENESULFONAMIDE, 4-METHYL-~~	isomer	~~SEMI2~~	~~808~~	~~910.~~	~~JOUIT~~
③ ~~12~~	610-48-0	ANTHRACENE, 1-METHYL-	isomer	SEMI2	929	1700 ~~1500.~~	J
④ ~~13~~	[illegible]	PHENANTHRENE, 4-METHYL-	unknown	SEMI2	938	2300 ~~2000.~~	J

45.600

SPECTROSCOPIST SDWagner

DATE 8-30-87

FORM1, PART B

ET 586 dp

LABORATORY NAME: COMPUCHEM

SAMPLE NUMBER ~~[illegible]~~

CASE NO: [illegible]

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

COMPUCHEM FILE [illegible]

TENTATIVELY IDENTIFIED COMPOUNDS

		CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG L OR UG KG)	
	~~14~~	~~[illegible]~~	~~1-NAPHTHALENECARBONITRILE, 5,6,7,8-TETRAHYDRO-~~ unknown	~~SEMI2~~	~~946~~	~~850.~~	~~J~~ OUIT
(5)	~~15~~	29809-13-0	1-NAPHTHALENECARBONITRILE, 5,6,7,8-TETRAHYDRO- unknown	SEMI2	954	3200 ~~2800.~~	J
(6)	~~16~~	29809-13-0	1-NAPHTHALENECARBONITRILE, 5,6,7,8-TETRAHYDRO- unknown	SEMI2	988	1400 ~~1200.~~	J
(7)	~~17~~	57-74-9	RN 9/11 Chlordane + 4,7-METHANO-1H-INDENE, 1,2,4,5,6,7,8,8-OCTACHLORO-2, unknown	SEMI2	1015	3500 ~~3000.~~	J
(8)	~~18~~	238-84-6	11H-BENZO[A]FLUORENE unknown	SEMI2	1060	4100 3500.	J
(9)	~~19~~	10340-49-5	BENZENE, (1-METHYL-3-BUTENYL)- unknown	SEMI2	1067	11000 ~~9500.~~	J
(10)	~~20~~	74685-30-6	5-EICOSENE, (E)- isomer	SEMI2	1138	5000 ~~4300.~~	J
(11)	~~21~~	55130-16-0	9-OCTADECENOIC ACID (Z)-, PHENYLMETHYL ESTER unknown	SEMI2	1177	1900 ~~1600.~~	J
(12)	~~22~~	56599-50-9	2H-PYRAN, 2-(7-HEPTADECYNYLOXY)TETRAHYDRO- unknown	SEMI2	1198	3400 ~~2900.~~	J
(13)	~~23~~	630-07-9	PENTATRIACONTANE hydrocarbon	SEMI2	1204	12000 ~~10000.~~	J
(14)	~~24~~	74685-87-3	2,5,9-TETRADECATRIENE, 3,12-DIETHYL- unknown	SEMI2	1212	3100 ~~2700.~~	J
(15)	~~25~~	36482-24-3	RN 9/11 PP+ 6H-DIBENZO[B,D]PYRAN-1-OL, 3-HEXYL-6A,7,8,10A-TETRAH unknown	SEMI2	1222	5700 ~~4900.~~	J
(16)	~~26~~	[illegible]	2,6,10,14,18,22-TETRACOSAHEMAENE, 2,6,10,15,19,23-HE unknown	SEMI2	1226	3400 ~~2900.~~	J

45.600

SPECTROSCOPIST SDWagner

DATE 8-30-87

FORM1, PART B

ET586 hp

[illegible] NAME: COMPUCHEM

[illegible]

SAMPLE NUMBER [illegible]

COMPUCHEM FILE [illegible]

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

		CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG L OR UG KG)	
17	~~27~~	629-92-5	NONADECANE unknown	SEMI2	1237	5000 ~~4300.~~	J
18	~~28~~	629-99-2	PENTACOSANE hydrocarbon	SEMI2	1275	8800 ~~7600.~~	J
19	~~29~~	50-32-8	BENZO[A]PYRENE unknown	SEMI2	1295	3200 ~~2800.~~	J
20	~~30~~	83-47-6	STIGMAST-5-EN-3-OL, (3.BETA.,24S)- unknown	SEMI2	1564	5500 ~~4700.~~	J

45.600 ~~[illegible]~~ 40.00

SPECTROSCOPIST SDWagner

DATE 8-30-87

FORM1, PART B

Sample Number
ET585

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: CompuChem
Lab Sample ID No: 146264
Sample matrix: solid
Data Release
Authorized By:

Case: 7878
QC Report No:
Contract No: 68/01/7263
Date Sample
Received: 08/13/87

Volatile Compounds
Concentration: low
Date extracted/prepared: 08/17/87
Date analyzed: 08/20/87
Conc/Dil Factor: 1.11 pH: 7.02
Percent moisture (not decanted): 10%

CAS Number		ug/kg		CAS Number		ug/kg	
74-87-3	Chloromethane	11.	U	10061-02-6	trans-1,3-Dichloropropene	5.6	U
74-83-9	Bromomethane	11.	U	79-01-6	Trichloroethene	5.6	U
75-01-4	Vinyl Chloride	11.	U	124-48-1	Dibromochloromethane	5.6	U
75-00-3	Chloroethane	11.	U	79-00-5	1,1,2-Trichloroethane	5.6	U
75-09-2	Methylene Chloride	36.	BJ	71-43-2	Benzene	5.6	U
67-64-1	Acetone	84.	BJ	10061-01-5	cis-1,3-Dichloropropene	5.6	U
75-15-0	Carbon Disulfide	5.6	U	110-75-8	2-Chloroethyl Vinyl Ether	11.	U
75-35-4	1,1-Dichloroethene	5.6	U	75-25-2	Bromoform	5.6	U
75-34-3	1,1-Dichloroethane	5.6	U	108-10-1	4-Methyl-2-pentanone	11.	U
156-60-5	trans-1,2-Dichloroethene	5.6	U	591-78-6	2-Hexanone	11.	U
67-66-3	Chloroform	5.6	U	127-18-4	Tetrachloroethene	5.6	U
107-06-2	1,2-Dichloroethane	5.6	U	79-34-5	1,1,2,2-Tetrachloroethane	5.6	U
78-93-3	2-Butanone	11.	U	108-88-3	Toluene	5.6	U
71-55-6	1,1,1-Trichloroethane	5.6	U	108-90-7	Chlorobenzene	5.6	U
56-23-5	Carbon Tetrachloride	5.6	U	100-41-4	Ethyl Benzene	5.6	U
108-05-4	Vinyl Acetate	11.	U	100-42-5	Styrene	5.6	U
75-27-4	Bromodichloromethane	5.6	U		Total Xylenes	5.6	U
78-87-5	1,2-Dichloropropane	5.6	U				

AA 12/8/87

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit then report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10ug and a concentration of 3ug is calculated, then report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >/= 10ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name: Compuchem
Case : 7878

Sample Number
67525

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: low
Date extracted/prepared: 08/15/87
Date analyzed: 08/24/87
Conc/Dil Factor: 1.15
Percent moisture (decanted): 10%

GPC Cleanup: No
Separatory Funnel Extraction: No
Continuous Liquid - Liquid Extraction: No

CAS Number		ug/kg		CAS Number		ug/kg	
108-95-2	Phenol	640		83-32-9	Acenaphthene	64.	J
111-44-4	bis(2-Chloroethyl) ether	380	U	51-28-5	2,4-Dinitrophenol	1900	U
95-57-8	2-Chlorophenol	380	U	100-02-7	4-Nitrophenol	1900	U
541-73-1	1,3-Dichlorobenzene	380	U	132-64-9	Dibenzofuran	98.	J
106-46-7	1,4-Dichlorobenzene	380	U	121-14-2	2,4-Dinitrotoluene	380	U
100-51-6	Benzyl Alcohol	380	U	606-20-2	2,6-Dinitrotoluene	380	U
95-50-1	1,2-Dichlorobenzene	380	U	84-66-2	Diethylphthalate	220	JB
95-48-7	2-Methylphenol	380	U	7005-72-3	4-Chlorophenyl Phenyl ether	380	U
39638-32-9	bis(2-Chloroisopropyl) ether	380	U	86-73-7	Fluorene	130	J
106-44-5	4-Methylphenol	38.	J	100-01-6	4-Nitroaniline	1900	U
621-64-7	N-Nitroso-Dipropylamine	380	U	534-52-1	4,6-Dinitro-2-methylphenol	1900	U
67-72-1	Hexachloroethane	380	U	86-30-6	N-nitrosodiphenylamine (1)	380	U
98-95-3	Nitrobenzene	380	U	101-55-3	4-Bromophenyl Phenyl ether	380	U
78-59-1	Isophorone	710		118-74-1	Hexachlorobenzene	380	U
88-75-5	2-Nitrophenol	380	U	87-86-5	Pentachlorophenol	60.	J
105-67-9	2,4-Dimethylphenol	380	U	85-01-8	Phenanthrene	1000	
65-85-0	Benzoic Acid	1900	U	120-12-7	Anthracene	250	J
111-91-1	bis(2-Chloroethoxy) methane	380	U	84-74-2	Di-n-butylphthalate	220	J
120-83-2	2,4-Dichlorophenol	94.	J	206-44-0	Fluoranthene	1000	
120-82-1	1,2,4-Trichlorobenzene	380	U	129-00-0	Pyrene	1900	
91-20-3	Naphthalene	420		85-68-7	Butyl Benzyl Phthalate	240	J
106-47-8	4-Chloroaniline	380	U	91-94-1	3,3'-Dichlorobenzidine	750	U
87-68-3	Hexachlorobutadiene	380	U	56-55-3	Benzo(a)anthracene	790	
59-50-7	4-Chloro-3-methylphenol	380	U	117-81-7	bis(2-ethylhexyl)phthalate	2600	BJ
91-57-6	2-Methylnaphthalene	620		218-01-9	Chrysene	1100	
77-47-4	Hexachlorocyclopentadiene	380	U	117-84-0	Di-n-octyl Phthalate	160	J
88-06-2	2,4,6-Trichlorophenol	380	U	205-99-2	Benzo(b)fluoranthene	2500 II	Cannot be separated
95-95-4	2,4,5-Trichlorophenol	1900	U	207-08-9	Benzo(k)fluoranthene	2500 II	
91-58-7	2-Chloronaphthalene	380	U	50-32-8	Benzo(a)pyrene	1300	AA 12/8/87
88-74-4	2-Nitroaniline	1900	U	193-39-5	Indeno(1,2,3-cd)pyrene	890	
131-11-3	Dimethyl Phthalate	380	U	53-70-3	Dibenz(a,h)anthracene	300J	
208-96-8	Acenaphthylene	120	J	191-24-2	Benzo(g,h,i)perylene	900	
99-09-2	3-Nitroaniline	1900	U				

(1) Cannot be separated from diphenylamine

Laboratory Name: CompuChem Laboratories
Case No: 7878

Sample Number
ET585

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: [Low] Medium (Circle One)
Date Extracted/Prepared: 08/15/87
Date Analyzed: 08/21/87
Conc/Dil Factor: 22.20
Percent Moisture(decanted): 9.91

GPC Cleanup [ ]Yes [X]No
Separatory Funnel Extraction [ ]Yes
Continuous Liquid - Liquid Extraction [ ]Yes

CAS Number		ug/l or [ug/Kg] (Circle One)	
319-84-6	Alpha - BHC	180	U
319-85-7	Beta - BHC	180	U
319-86-8	Delta - BHC	180	U
58-89-9	Gamma - BHC(Lindane)	180	U
76-44-8	Heptachlor	180	U
309-00-2	Aldrin	180	U
1024-57-3	Heptachlor Epoxide	180	U
959-98-8	Endosulfan I	180	U
60-57-1	Dieldrin	360	U
72-55-9	4-4' - DDE	360	U
72-20-8	Endrin	360	U
33213-65-9	Endosulfan II	360	U
72-54-8	4-4' - DDD	360	U
1031-07-8	Endosulfan Sulfate	360	U
50-29-3	4-4' - DDT	360	U
72-43-5	Methoxychlor	1800	U
53494-70-5	Endrin Ketone	360	U
57-74-9	Chlordane	45000	J
8001-35-2	Toxaphene	3600	U
12674-11-2	Aroclor - 1016	1800	U
11104-28-2	Aroclor - 1221	1800	U
11141-16-5	Aroclor - 1232	1800	U
53469-21-9	Aroclor - 1242	1800	U
12672-29-6	Aroclor - 1248	1800	U
11097-69-1	Aroclor - 1254	66000	J
11096-82-5	Aroclor - 1260	3600	U

AA 12/11/87

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(s) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) _____ or W(s) 30.00 V(t) 2000.00 V(i) 5.0

Laboratory Name CompuChem Laboratories

Case No 7878

Sample Number ET585

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/g)
1.	NO VOLATILE COMPOUNDS FOUND			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NUMBER ~~C#7878~~-ET585

COMPUCHEM FILE GH046264B1E

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
1	108-38-3	BENZENE, 1,3-DIMETHYL- isomer	SEMI2	303	790 ~~710.~~	J
2	629-20-9	1,3,5,7-CYCLOOCTATETRAENE isomer	SEMI2	322	1100 ~~1000.~~	J
3	98-82-8	BENZENE, (1-METHYLETHYL)- isomer	SEMI2	351	2200 ~~2000.~~	J
4	13151-98-9	CYCLOOCTANE, 1,4-DIMETHYL-, TRANS- unknown	SEMI2	440	2100 ~~1900.~~	J
5	116-02-9	CYCLOHEXANOL, 3,3,5-TRIMETHYL- unknown	SEMI2	448	2300 ~~2100.~~	J
~~6~~	~~1758-88-9~~	~~BENZENE, 2-ETHYL-1,4-DIMETHYL-~~ PP	~~SEMI2~~	~~498~~	~~770.~~	J OMIT
~~7~~	~~90-12-0~~	~~NAPHTHALENE, 1-METHYL-~~ isomer	~~SEMI2~~	~~625~~	~~240.~~	J OMIT
~~8~~	~~569-41-5~~	~~NAPHTHALENE, 1,8-DIMETHYL-~~ isomer	~~SEMI2~~	~~688~~	~~590.~~	J OMIT
~~9~~	~~1921-70-6~~	~~PENTADECANE, 2,6,10,14-TETRAMETHYL-~~ hydrocarbon	~~SEMI2~~	~~826~~	~~480.~~	J OMIT
10	57-10-3	HEXADECANOIC ACID caprylic acid	SEMI2	939	1100 ~~950.~~	J
11	29809-13-0	1-NAPHTHALENECARBONITRILE, 5,6,7,8-TETRAHYDRO- unknown	SEMI2	958	800 ~~720.~~	J
12	57-74-9	4,7-METHANO-1H-INDENE, 1,2,4,5,6,7,8,8-OCTACHLORO-2, 9/10 chlordane + unknown	SEMI2	1019	1800 ~~1600.~~	J
13	57-74-9	4,7-METHANO-1H-INDENE, 1,2,4,5,6,7,8,8-OCTACHLORO-2, " unknown	SEMI2	1031	2800 ~~2500.~~	J

37,600
~~33,900.~~ 40.00

SPECTROSCOPIST JDWagner

DATE 8-29-87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ~~C#7878~~-ET585 (amp)

COMPUCHEM FILE GH046264B16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
(10) ~~14~~	7683-64-9	9/10 PCB + unknown 2,6,10,14,18,22-TETRACOSAHEXAENE, 2,6,10,15,19,23-HE	SEMI2	1065	680 ~~610.~~	J
(11) ~~15~~	52712-04-6	PCB + unknown 1,1'-BIPHENYL, 2,2',3,4,5,5'-HEXACHLORO-	SEMI2	1070	1400 ~~1300.~~	J
~~16~~	52663-63-5	unknown ~~1,1'-BIPHENYL, 2,2',3,5,5',6-HEXACHLORO-~~	~~SEMI2~~	~~1113~~	~~330.~~	J UNIT
(7) ~~17~~	29812-79-1	hydrocarbon HYDROXYLAMINE, O-DECYL-	SEMI2	1142	1100 ~~970.~~	J
(9) ~~18~~	55130-16-0	unknown 9-OCTADECENOIC ACID (Z)-, PHENYLMETHYL ESTER	SEMI2	1179	1200 ~~1100.~~	J
(8) ~~19~~	52161-54-3	unknown BENZENE, 1,1'-(1,4-DIMETHYL-1-BUTENE-1,4-DIYL)BIS-	SEMI2	1186	1100 ~~1000.~~	J
~~20~~	54832-83-6	unknown 1H-INDENE, OCTAHYDRO-2,2,4,4,7,7-HEXAMETHYL-, TRANS-	~~SEMI2~~	~~1192~~	~~560.~~	J UNIT
(5) ~~21~~	52161-54-3	unknown BENZENE, 1,1'-(1,4-DIMETHYL-1-BUTENE-1,4-DIYL)BIS-	SEMI2	1201	1800 ~~1600.~~	J
(16) ~~22~~	629-99-2	hydrocarbon PENTACOSANE	SEMI2	1207	2200 ~~2000.~~	J
(17) ~~23~~	2882-21-5	unknown PYRAZINE, 2-METHOXY-6-METHYL-	SEMI2	1214	1000 ~~920.~~	J
(18) ~~24~~	40702-26-9	unknown 3-CYCLOHEXENE-1-CARBOXALDEHYDE, 1,3,4-TRIMETHYL-	SEMI2	1221	1300 1200.	J
~~25~~	~~205-99-2~~	PP ~~BENZ[E]ACEPHENANTHRYLENE~~	~~SEMI2~~	~~1266~~	~~920.~~	J UNIT
~~26~~	13828-37-0	unknown CYCLOHEXANEMETHANOL, 4-(1-METHYLETHYL)-, CIS-	~~SEMI2~~	1272	490.	J UNIT

37600 ~~33.900~~ 40.00

SPECTROSCOPIST SDWagner

DATE 8-29-87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NUMBER ~~G#7878~~-ET585 (ams)

COMPUCHEM FILE GH046264B16

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
(14) ~~27~~	629-96-9	1-EICOSANOL unknown	SEMI2	1280	1900 ~~1700.~~	J
~~28~~	~~192-97-2~~	~~BENZO[E]PYRENE~~ isomer + hydrocarbon	~~SEMI2~~	~~1298~~	~~520.~~	~~J~~ UNIT
~~29~~	~~55836-30-1~~	~~HEXADECANOIC ACID, 2-OXO-, METHYL ESTER~~ unknown	~~SEMI2~~	~~1374~~	~~480.~~	J UNIT
(20) ~~30~~	83-47-6	STIGMAST-5-EN-3-OL, (3.BETA.,24S)- unknown	SEMI2	1570	1100 ~~1000.~~	J

37.600 ~~33.300~~ 40.00

SPECTROSCOPIST SDWagner

DATE 8-29-87

FORM1, PART B

Sample Number
E1592

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: CompuChem
Lab Sample ID No: 146284
Sample matrix: solid
Data Release
Authorized By: _____

Case: 7878
QC Report No: _____
Contract No: 68/01/7263
Date Sample
Received: 08/13/87

Volatile Compounds
Concentration: low
Date extracted/prepared: 08/17/87
Date analyzed: 08/21/87
Conc/Dil Factor: 1.06 pH: 6.84
Percent moisture (not decanted): 7%

CAS Number		ug/kg		CAS Number		ug/kg	
74-87-3	Chloromethane	11.	U	10061-02-6	trans-1,3-Dichloropropene	5.3	U
74-83-9	Bromomethane	11.	U	79-01-6	Trichloroethene	5.3	U
75-01-4	Vinyl Chloride	11.	U	124-48-1	Dibromochloromethane	5.3	U
75-00-3	Chloroethane	11.	U	79-00-5	1,1,2-Trichloroethane	5.3	U
75-09-2	Methylene Chloride	10.	BJ	71-43-2	Benzene	5.3	U
67-64-1	Acetone	15.	BJ	10061-01-5	cis-1,3-Dichloropropene	5.3	U
75-15-0	Carbon Disulfide	5.3	U	110-75-8	2-Chloroethyl Vinyl Ether	11.	U
75-35-4	1,1-Dichloroethene	5.3	U	75-25-2	Bromoform	5.3	U
75-34-3	1,1-Dichloroethane	5.3	U	108-10-1	4-Methyl-2-pentanone	11.	U
156-60-5	trans-1,2-Dichloroethene	5.3	U	591-78-6	2-Hexanone	11.	U
67-66-3	Chloroform	5.3	U	127-18-4	Tetrachloroethene	5.3	U
107-06-2	1,2-Dichloroethane	5.3	U	79-34-5	1,1,2,2-Tetrachloroethane	5.3	U
78-93-3	2-Butanone	11.	U	108-88-3	Toluene	5.3	U
71-55-6	1,1,1-Trichloroethane	5.3	U	108-90-7	Chlorobenzene	5.3	U
56-23-5	Carbon Tetrachloride	5.3	U	100-41-4	Ethyl Benzene	5.3	U
108-05-4	Vinyl Acetate	11.	U	100-42-5	Styrene	5.3	U
75-27-4	Bromodichloromethane	5.3	U		Total Xylenes	5.3	U
78-87-5	1,2-Dichloropropane	5.3	U				

AA 12/8/87

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit then report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10ug and a concentration of 3ug is calculated, then report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >/= 10ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name: CombuChem
Case : 7978

Sample Number
[illegible]

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: low
Date extracted/prepared: 08/15/87
Date analyzed: 08/25/87
Conc/Dil Factor: 1.09
Percent moisture (decanted): 7%

GPC Cleanup: No
Separatory Funnel Extraction: No
Continuous Liquid - Liquid Extraction: No

CAS Number		ug/kg		CAS Number		ug/kg	
108-95-2	Phenol	170	J	83-32-9	Acenaphthene	160	J
111-44-4	bis(2-Chloroethyl) ether	360	U	51-28-5	2,4-Dinitrophenol	1800	U
95-57-8	2-Chlorophenol	360	U	100-02-7	4-Nitrophenol	1800	U
541-73-1	1,3-Dichlorobenzene	360	U	132-64-9	Dibenzofuran	240	J
106-46-7	1,4-Dichlorobenzene	360	U	121-14-2	2,4-Dinitrotoluene	360	U
100-51-6	Benzyl Alcohol	360	U	606-20-2	2,6-Dinitrotoluene	360	U
95-50-1	1,2-Dichlorobenzene	360	U	84-66-2	Diethylphthalate	240	J
95-48-7	2-Methylphenol	360	U	7005-72-3	4-Chlorophenyl Phenyl ether	360	U
39638-32-9	bis(2-Chloroisopropyl) ether	360	U	86-73-7	Fluorene	200	J
106-44-5	4-Methylphenol	360	U	100-01-6	4-Nitroaniline	1800	U
621-64-7	N-Nitroso-Dipropylamine	360	U	534-52-1	4,6-Dinitro-2-methylphenol	1800	U
67-72-1	Hexachloroethane	360	U	86-30-6	N-nitrosodiphenylamine (1)	360	U
98-95-3	Nitrobenzene	360	U	101-55-3	4-Bromophenyl Phenyl ether	360	U
78-59-1	Isophorone	110	J	118-74-1	Hexachlorobenzene	360	U
88-75-5	2-Nitrophenol	360	U	87-86-5	Pentachlorophenol	1800	U
105-67-9	2,4-Dimethylphenol	360	U	85-01-8	Phenanthrene	2300	
65-85-0	Benzoic Acid	1800	U	120-12-7	Anthracene	500	
111-91-1	bis(2-Chloroethoxy) methane	360	U	84-74-2	Di-n-butylphthalate	130	J
120-83-2	2,4-Dichlorophenol	360	U	206-44-0	Fluoranthene	2400	
120-82-1	1,2,4-Trichlorobenzene	360	U	129-00-0	Pyrene	3800	
91-20-3	Naphthalene	530		85-68-7	Butyl Benzyl Phthalate	360	U
106-47-8	4-Chloroaniline	360	U	91-94-1	3,3'-Dichlorobenzidine	720	U
87-68-3	Hexachlorobutadiene	360	U	56-55-3	Benzo(a)anthracene	2300	
59-50-7	4-Chloro-3-methylphenol	360	U	117-81-7	bis(2-ethylhexyl)phthalate	1400	
91-57-6	2-Methylnaphthalene	750		218-01-9	Chrysene	2800	
77-47-4	Hexachlorocyclopentadiene	360	U	117-84-0	Di-n-octyl Phthalate	300	J
88-06-2	2,4,6-Trichlorophenol	360	U	205-99-2	Benzo(b)fluoranthene	5600	II
95-95-4	2,4,5-Trichlorophenol	1800	U	207-08-9	Benzo(k)fluoranthene	5600	II
91-58-7	2-Chloronaphthalene	360	U	50-32-8	Benzo(a)pyrene	2300	
88-74-4	2-Nitroaniline	1800	U	193-39-5	Indeno(1,2,3-cd)pyrene	1200	
131-11-3	Dimethyl Phthalate	360	U	53-70-3	Dibenz(a,h)anthracene	530	
208-96-8	Acenaphthylene	420		191-24-2	Benzo(g,h,i)perylene	1500	
99-09-2	3-Nitroaniline	1800	U				

Cannot be separated

AA 12/8/87

(1) Cannot be separated from diphenylamine

Laboratory Name: CompuChem Laboratories
Case No 7878

Sample Number
ET592

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: [Low] Medium (Circle One)
Date Extracted/Prepared 08/15/87
Data Analyzed: 08/27/87
Conc/Dil Factor: 2.14
Percent Moisture(decanted): 6.54

GPC Cleanup [ ]Yes [X]No
Separatory Funnel Extraction [ ]Yes
Continuous Liquid - Liquid Extraction [ ]Yes

CAS Number		ug/l or [ug/Kg] (Circle One)	
319-84-6	Alpha - BHC	17.	U
319-85-7	Beta - BHC	17.	U
319-86-8	Delta - BHC	17.	U
58-89-9	Gamma - BHC(Lindane)	17.	U
76-44-8	Heptachlor	17.	U
309-00-2	Aldrin	17.	U
1024-57-3	Heptachlor Epoxide	17.	U
959-98-8	Endosulfan I	17.	U
60-57-1	Dieldrin	34.	U
72-55-9	4-4' - DDE	34.	U
72-20-8	Endrin	34.	U
33213-65-9	Endosulfan II	34.	U
72-54-8	4-4' - DDD	34.	U
1031-07-8	Endosulfan Sulfate	34.	U
50-29-3	4-4' - DDT	34.	U
72-43-5	Methoxychlor	170	U
53494-70-5	Endrin Ketone	34.	U
57-74-9	Chlordane	2400	J
8001-35-2	Toxaphene	340	U
12674-11-2	Aroclor - 1016	170	U
11104-28-2	Aroclor - 1221	170	U
11141-16-5	Aroclor - 1232	170	U
53469-21-9	Aroclor - 1242	170	U
12672-29-6	Aroclor - 1248	170	U
11097-69-1	Aroclor - 1254	340	U
11096-82-5	Aroclor - 1260	5000	J

AA
12/11/87

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(s) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) _____ or W(s) 30.00 V(t) 2000.00 V(i) 1.0

Laboratory Name CompuChem Laboratories

Case No 7878

Sample Number ET592

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	NO VOLATILE COMPOUNDS FOUND			
2				
3				
4.				
5				
6				
7				
8				
9				
10				
11.				
12				
13				
14				
15				
16				
17				
18				
19.				
20				
21				
22				
23				
24				
25				
26				
27.				
28.				
29.				
30				

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ET532

COMPUCHEM FILE GH046284A1

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
1	108-38-3	isomer BENZENE, 1,3-DIMETHYL-	SEMI2	298	900 ~~840.~~	J
2	629-20-9	" 1,3,5,7-CYCLOOCTATETRAENE	SEMI2	317	2100 ~~2000.~~	J
3	98-82-8	" BENZENE, (1-METHYLETHYL)-	SEMI2	346	1600 ~~1500.~~	J
~~4~~	~~17301-32-5~~	hydrocarbon Omit UNDECANE, 4,7-DIMETHYL-	~~SEMI2~~	~~605~~	~~480~~ ~~450.~~	J
~~5~~	~~2471-83-2~~	PNA Omit 1H-INDENE, 1-ETHYLIDENE-	~~SEMI2~~	~~622~~	450 ~~420.~~	J
~~6~~	~~629-59-4~~	hydrocarbon Omit TETRADECANE	~~SEMI2~~	~~664~~	~~700~~ ~~650.~~	J
~~7~~	~~571-61-9~~	alkylsubstituted PNA Omit NAPHTHALENE, 1,5-DIMETHYL-	~~SEMI2~~	~~676~~	440 ~~410.~~	J
4 8	575-41-7	" NAPHTHALENE, 1,3-DIMETHYL-	SEMI2	685	890 ~~830.~~	J
5 9	61141-72-8	hydrocarbon DODECANE, 4,6-DIMETHYL-	SEMI2	699	810 ~~760.~~	J
6 10	2131-42-2	alkylsubstituted PNA NAPHTHALENE, 1,4,6-TRIMETHYL-	SEMI2	746	850 ~~790.~~	J
7 11	17301-32-5	unknown UNDECANE, 4,7-DIMETHYL-	SEMI2	771	960 ~~900.~~	J
~~12~~	~~55045-11-9~~	" Omit TRIDECANE, 5-PROPYL-	~~SEMI2~~	~~795~~	610 ~~570.~~	J
~~13~~	~~118-79-6~~	Omit PHENOL, 2,4,6-TRIBROMO-	~~SEMI2~~	~~802~~	620 ~~580.~~	J

~~[illegible]~~ 40.00
36.20

SPECTROSCOPIST EW

DATE 8/29/87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7978

SAMPLE NUMBER ET532

COMPUCHEM FILE GH04528A016

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
8 14	74645-98-0	hydrocarbon / DODECANE, 2,7,10-TRIMETHYL-	SEMI2	823	1500 ~~1450.~~	J
~~15~~	~~17301-32-5~~	" Omit UNDECANE, 4,7-DIMETHYL-	~~SEMI2~~	867	500 ~~470.~~	— J
9 16	629-78-7	unknown / HEPTADECANE	SEMI2	910	790 ~~740.~~	J
10 17	610-48-0	PNA / ANTHRACENE, 1-METHYL-	SEMI2	929	790 ~~740.~~	J
11 18	832-64-4	" / PHENANTHRENE, 4-METHYL-	SEMI2	938	760 ~~710.~~	J
~~19~~	~~524-35-5~~	unknown Omit QUINOLINIUM, 1-ETHYL-, IODIDE	~~SEMI2~~	946	370 ~~250.~~	— J
12 20	55045-13-1	" / TETRADECANE, 6,9-DIMETHYL-	SEMI2	953	1300 ~~1200.~~	J
~~21~~	~~74764-11-7~~	" Omit IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BEN	~~SEMI2~~	~~992~~	570 ~~530.~~	— J
13 22	74764-11-7	" IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BEN	SEMI2	1030	1600 ~~1500.~~	J
14 23	2381-21-7	PNA + unknown / PYRENE, 1-METHYL-	SEMI2	1057	1700 ~~1600.~~	J
15 24	38380-05-1	PCB + unknown 1,1'-BIPHENYL, 2,2',3,3',4,6'-HEXACHLORO-	SEMI2	1065	3900 ~~3600.~~	J
16 25	629-99-2	unknown / PENTACOSANE	SEMI2	1137	1200 ~~1100.~~	J
17 26	1705-84-6	PNA + unknown / TRIPHENYLENE, 2-METHYL-	SEMI2	1183	1400 ~~1300.~~	J

~~[illegible]~~ 40.00
36.00

SPECTROSCOPIST EPW

DATE 8/28/87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ET532

COMPUCHEM FILE GH14[illegible]

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
18 27	6561-44-0	Unknown OCTADECANE, 3-METHYL-	SEMI2	1201	3600 ~~3100.~~	J
19 28	3913-02-8	" 1-OCTANOL, 2-BUTYL-	SEMI2	1269	2500 ~~2300.~~	J
20 29	205-82-3	PNA BENZO[J]FLUORANTHENE	SEMI2	1287	1700 ~~1500.~~	J

~~33.000~~ 36.20 40.00

SPECTROSCOPIST RN

DATE 6/29/87

FORM1, PART B

Sample Number
ET593

Laboratory Name: CompuChem
Lab Sample ID No: 146285
Sample matrix: solid
Data Release
Authorized By: _____

Organics Analysis Data Sheet
(Page 1)

Case: 7878
QC Report No: _____
Contract No: 68/01/7263
Date Sample
Received: 08/13/87

Volatile Compounds

Concentration: low
Date extracted/prepared: 08/17/87
Date analyzed: 08/21/87
Conc/Dil Factor: 1.06 pH: 6.85
Percent moisture (not decanted): 7%

CAS Number		ug/kg		CAS Number		ug/kg	
74-87-3	Chloromethane	11.	U	10061-02-6	trans-1,3-Dichloropropene	5.3	U
74-83-9	Bromomethane	11.	U	79-01-6	Trichloroethene	5.3	U
75-01-4	Vinyl Chloride	11.	U	124-48-1	Dibromochloromethane	5.3	U
75-00-3	Chloroethane	11.	U	79-00-5	1,1,2-Trichloroethane	5.3	U
75-09-2	Methylene Chloride	30. B	J	71-43-2	Benzene	5.3	U
67-64-1	Acetone	30. B	J	10061-01-5	cis-1,3-Dichloropropene	5.3	U
75-15-0	Carbon Disulfide	5.3	U	110-75-8	2-Chloroethyl Vinyl Ether	11.	U
75-35-4	1,1-Dichloroethene	5.3	U	75-25-2	Bromoform	5.3	U
75-34-3	1,1-Dichloroethane	5.3	U	108-10-1	4-Methyl-2-pentanone	11.	U
156-60-5	trans-1,2-Dichloroethene	5.3	U	591-78-6	2-Hexanone	11.	U
67-66-3	Chloroform	2.6	J	127-18-4	Tetrachloroethene	5.3	U
107-06-2	1,2-Dichloroethane	5.3	U	79-34-5	1,1,2,2-Tetrachloroethane	5.3	U
78-93-3	2-Butanone	11.	U	108-88-3	Toluene	7.4	
71-55-6	1,1,1-Trichloroethane	5.3	U	108-90-7	Chlorobenzene	5.3	U
56-23-5	Carbon Tetrachloride	5.3	U	100-41-4	Ethyl Benzene	5.3	U
108-05-4	Vinyl Acetate	11.	U	100-42-5	Styrene	5.3	U
75-27-4	Bromodichloromethane	5.3	U		Total Xylenes	5.3	U
78-87-5	1,2-Dichloropropane	5.3	U				

AA 12/8/87

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit then report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10ug and a concentration of 3ug is calculated, then report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >/= 10ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name: CompuChem
Case : 7878

Sample Number
ET593

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: low
Date extracted/prepared: 08/15/87
Date analyzed: 08/25/87
Conc/Dil Factor: 1.09
Percent moisture (decanted): 7%

GPC Cleanup: No
Separatory Funnel Extraction: No
Continuous Liquid - Liquid Extraction: No

CAS Number		ug/kg		CAS Number		ug/kg	
108-95-2	Phenol	290	J	83-32-9	Acenaphthene	440	
111-44-4	bis(2-Chloroethyl) ether	360	U	51-28-5	2,4-Dinitrophenol	1800	U
95-57-8	2-Chlorophenol	360	U	100-02-7	4-Nitrophenol	1800	U
541-73-1	1,3-Dichlorobenzene	360	U	132-64-9	Dibenzofuran	350	J
106-46-7	1,4-Dichlorobenzene	360	U	121-14-2	2,4-Dinitrotoluene	360	U
100-51-6	Benzyl Alcohol	360	U	606-20-2	2,6-Dinitrotoluene	360	U
95-50-1	1,2-Dichlorobenzene	360	U	84-66-2	Diethylphthalate	360	U
95-48-7	2-Methylphenol	360	U	7005-72-3	4-Chlorophenyl Phenyl ether	360	U
39638-32-9	bis(2-Chloroisopropyl) ether	360	U	86-73-7	Fluorene	580	
106-44-5	4-Methylphenol	80.	J	100-01-6	4-Nitroaniline	1800	U
621-64-7	N-Nitroso-Dipropylamine	360	U	534-52-1	4,6-Dinitro-2-methylphenol	1800	U
67-72-1	Hexachloroethane	360	U	86-30-6	N-nitrosodiphenylamine (1)	360	U
98-95-3	Nitrobenzene	360	U	101-55-3	4-Bromophenyl Phenyl ether	360	U
78-59-1	Isophorone	260	J	118-74-1	Hexachlorobenzene	360	U
88-75-5	2-Nitrophenol	360	U	87-86-5	Pentachlorophenol	1800	U
105-67-9	2,4-Dimethylphenol	360	U	85-01-8	Phenanthrene	3800	
65-85-0	Benzoic Acid	1800	U	120-12-7	Anthracene	740	
111-91-1	bis(2-Chloroethoxy) methane	360	U	84-74-2	Di-n-butylphthalate	310	J
120-83-2	2,4-Dichlorophenol	RW 360 ~~43.~~	~~J~~	206-44-0	Fluoranthene	3100	
120-82-1	1,2,4-Trichlorobenzene	360	U	129-00-0	Pyrene	4200 ~~360~~ D	U
91-20-3	Naphthalene	1200		85-68-7	Butyl Benzyl Phthalate	360	U
106-47-8	4-Chloroaniline	360	U	91-94-1	3,3'-Dichlorobenzidine	720	U
87-68-3	Hexachlorobutadiene	360	U	56-55-3	Benzo(a)anthracene	2700	
59-50-7	4-Chloro-3-methylphenol	360	U	117-81-7	bis(2-ethylhexyl)phthalate	4100 ~~360~~ D	U
91-57-6	2-Methylnaphthalene	2000		218-01-9	Chrysene	2900	
77-47-4	Hexachlorocyclopentadiene	360	U	117-84-0	Di-n-octyl Phthalate	810	
88-06-2	2,4,6-Trichlorophenol	360	U	205-99-2	Benzo(b)fluoranthene	5600 II	Cannot be separated
95-95-4	2,4,5-Trichlorophenol	1800	U	207-08-9	Benzo(k)fluoranthene	5600 II	
91-58-7	2-Chloronaphthalene	360	U	50-32-8	Benzo(a)pyrene	2600	
88-74-4	2-Nitroaniline	1800	U	193-39-5	Indeno(1,2,3-cd)pyrene	1400	AA 12/8/87
131-11-3	Dimethyl Phthalate	360	U	53-70-3	Dibenz(a,h)anthracene	670	
208-96-8	Acenaphthylene	350	J	191-24-2	Benzo(g,h,i)perylene	1700	
99-09-2	3-Nitroaniline	1800	U				

(1) Cannot be separated from diphenylamine

Laboratory Name: CompuChem Laboratories
Case No: 7878

Sample Number
ET593

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: [Low] Medium (Circle One)
Date Extracted/Prepared: 08/20/87
Date Analyzed: 08/25/87
Conc/Dil Factor: 21.40
Percent Moisture(decanted): 6.54

GPC Cleanup [ ]Yes [X]No
Separatory Funnel Extraction [ ]Yes
Continuous Liquid - Liquid Extraction [ ]Yes

CAS Number		ug/l or [ug/Kg] (Circle One)	
319-84-6	Alpha - BHC	170	U
319-85-7	Beta - BHC	170	U
319-86-8	Delta - BHC	170	U
58-89-9	Gamma - BHC(Lindane)	170	U
76-44-8	Heptachlor	170	U
309-00-2	Aldrin	170	U
1024-57-3	Heptachlor Epoxide	170	U
959-98-8	Endosulfan I	170	U
60-57-1	Dieldrin	340	U
72-55-9	4-4' - DDE	340	U
72-20-8	Endrin	340	U
33213-65-9	Endosulfan II	340	U
72-54-8	4-4' - DDD	340	U
1031-07-8	Endosulfan Sulfate	340	U
50-29-3	4-4' - DDT	340	U
72-43-5	Methoxychlor	1700	U
53494-70-5	Endrin Ketone	340	U
57-74-9	Chlordane	6500	J
8001-35-2	Toxaphene	3400	U
12674-11-2	Aroclor - 1016	1700	U
11104-28-2	Aroclor - 1221	1700	U
11141-16-5	Aroclor - 1232	1700	U
53469-21-9	Aroclor - 1242	1700	U
12672-29-6	Aroclor - 1248	1700	U
11097-69-1	Aroclor - 1254	2500	J
11096-82-5	Aroclor - 1260	3400	U

AA 12/11/87

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(s) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) _____ or W(s) 30.00 V(t) 2000.00 V(i) 5.0

Form I (continued)

LABORATORY NAME: COMPUCHEM

SAMPLE NUMBER ET593

CASE NO: 7878

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

COMPUCHEM FILE GH046285A14

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC (UG/L OR UG/KG)	
1	110-54-3	HEXANE ~~none~~	E238	396	7.	J

1.060 50.00

SPECTROSCOPIST CDBeck

DATE 5-21-87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7078

SAMPLE NUMBER ET593

COMPUCHEM FILE GJ0406285A16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
1	100-41-4	ethyl benzene / BENZENE, ETHYL-	SEMI2	291	~~2000.~~ 2100	J
2	95-47-6	xylene / BENZENE, 1,2-DIMETHYL-	SEMI2	298	~~1600.~~ 1900	J
3	629-20-9	SAME / 1,3,5,7-CYCLOOCTATETRAENE	SEMI2	318	~~26000.~~ 31000	J
4	98-82-8	SAME / BENZENE, (1-METHYLETHYL)-	SEMI2	346	~~4600.~~ 4900	J
5	100-52-7	benzaldehyde / BENZALDEHYDE	SEMI2	374	~~1500.~~ 1900	J
6	526-73-8	mesitylene / BENZENE, 1,2,3-TRIMETHYL-	SEMI2	402	~~1600.~~ 1900	J
~~7~~	62108-23-0	HC / DECANE, 2,5,6-TRIMETHYL-	SEMI2	478	~~330.~~	J OMIT
~~8~~	17301-32-5	HC / UNDECANE, 4,7-DIMETHYL-	SEMI2	606	~~430.~~	J OMIT
~~9~~	2471-83-2	methyl naphthalene / IH-INDENE, 1-ETHYLIDENE-	SEMI2	622	~~460.~~	J OMIT
~~10~~	17301-32-5	HC / UNDECANE, 4,7-DIMETHYL-	SEMI2	664	~~670.~~	J OMIT
~~11~~	571-61-9	PNA / NAPHTHALENE, 1,5-DIMETHYL-	SEMI2	676	~~640.~~	J OMIT
12	575-41-7	PNA / NAPHTHALENE, 1,3-DIMETHYL-	SEMI2	685	~~1100.~~ 1300	J
~~13~~	31295-56-4	HC / DODECANE, 2,6,11-TRIMETHYL-	SEMI2	698	~~600.~~	J OMIT

~~38.900~~ 36.2 40.00

SPECTROSCOPIST [signature]

DATE 9/2/87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ET593

COMPUCHEM FILE GJ046285M16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
814	2131-42-2	PNA / NAPHTHALENE, 1,4,6-TRIMETHYL-	SEMI2	743	870 ~~810.~~	J
~~15~~	17301-32-5	PL / UNDECANE, 4,7-DIMETHYL-	SEMI2	770	~~700.~~	J
~~15~~	118-79-6	SS / PHENOL, 2,4,6-TRIBROMO-	SEMI2	802	~~340.~~	
9 17	17301-32-5	HC / UNDECANE, 4,7-DIMETHYL-	SEMI2	820	900 ~~970.~~	J
10 18	629-78-7	HC / HEPTADECANE	SEMI2	866	870 ~~770.~~	J
11 19	629-92-5	HC / NONADECANE	SEMI2	910	790 ~~740.~~	J
12 20	610-48-0	PNA / ANTHRACENE, 1-METHYL-	SEMI2	929	5300 ~~5100.~~	J
13 21	832-64-4	unknown / PHENANTHRENE, 4-METHYL-	SEMI2	938	5400 ~~5000.~~	J
14 22	634-35-5	" / QUINOLINIUM, 1-ETHYL-, IODIDE	SEMI2	947	5400 ~~5000.~~	J
15 23	634-35-5	~~SAME~~ unknown PN 9/10/87 / QUINOLINIUM, 1-ETHYL-, IODIDE	SEMI2	955	14000 ~~16000.~~	J
16 24	53854-49-2	unknown / ISOQUINOLINIUM, 2-ETHYL-, IODIDE	SEMI2	988	5300 ~~5400.~~	J
17 25	54833-48-6	HC / HEPTADECANE, 2,6,10,15-TETRAMETHYL-	SEMI2	993	4300 ~~4000.~~	J
18 26	74764-11-7	HC / IRON, TRICARBONYLIN-(PHENYL-2-PYRIDINYLMETHYLENE)BEN	SEMI2	1031	4700 ~~4400.~~	J

36.2 ~~33.900~~ 40.00

SPECTROSCOPIST [signature]

DATE 9/2/87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

SAMPLE NUMBER: ET593

CASE NO: 7878

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

COMPUCHEM FILE GJ046285A16

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
19 27	10340-49-5	BENZENE, (1-METHYL-3-BUTENYL)-	SEMI2	1066	~~15000.~~ 16000	J
20 28	629-78-7	HEPTADECANE	SEMI2	1202	~~5400.~~ 5200	J
~~29~~	50-32-8	BENZO[A]PYRENE	SEMI2	1257	~~5700.~~	~~J~~

~~33.900~~ 36.2 40.00

SPECTROSCOPIST

DATE 9/2/94

FORM1, PART B

Sample Number
ET594

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: CompuChem
Lab Sample ID No: 146267
Sample matrix: solid
Data Release
Authorized By: _____

Case: 7878
QC Report No: _____
Contract No: 68/01/7263
Date Sample
Received: 08/13/87

Volatile Compounds

Concentration: low
Date extracted/prepared: 08/17/87
Date analyzed: 08/21/87
Conc/Dil Factor: 1.06 pH: 6.92
Percent moisture (not decanted): 6%

CAS Number		ug/kg	CAS Number		ug/kg
74-87-3	Chloromethane	11. U	10061-02-6	trans-1,3-Dichloropropene	5.3 U
74-83-9	Bromomethane	11. U	79-01-6	Trichloroethene	5.3 U
75-01-4	Vinyl Chloride	11. U	124-48-1	Dibromochloromethane	5.3 U
75-00-3	Chloroethane	11. U	79-00-5	1,1,2-Trichloroethane	5.3 U
75-09-2	Methylene Chloride	55. BJ	71-43-2	Benzene	5.3 U
67-64-1	Acetone	18. BJ	10061-01-5	cis-1,3-Dichloropropene	5.3 U
75-15-0	Carbon Disulfide	5.3 U	110-75-8	2-Chloroethyl Vinyl Ether	11. U
75-35-4	1,1-Dichloroethene	5.3 U	75-25-2	Bromoform	5.3 U
75-34-3	1,1-Dichloroethane	5.3 U	108-10-1	4-Methyl-2-pentanone	11. U
156-60-5	trans-1,2-Dichloroethene	5.3 U	591-78-6	2-Hexanone	11. U
67-66-3	Chloroform	1.5 J	127-18-4	Tetrachloroethene	5.3 U
107-06-2	1,2-Dichloroethane	5.3 U	79-34-5	1,1,2,2-Tetrachloroethane	5.3 U
78-93-3	2-Butanone	11. U	108-88-3	Toluene	4.3 J
71-55-6	1,1,1-Trichloroethane	5.3 U	108-90-7	Chlorobenzene	5.3 U
56-23-5	Carbon Tetrachloride	5.3 U	100-41-4	Ethyl Benzene	5.3 U
108-05-4	Vinyl Acetate	11. U	100-42-5	Styrene	5.3 U
75-27-4	Bromodichloromethane	5.3 U		Total Xylenes	5.3 U
78-87-5	1,2-Dichloropropane	5.3 U			

AA 12/8/87

DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit then report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10ug and a concentration of 3ug is calculated, then report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >/= 10ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name: CompuChem
Case : 7878

Sample Number
ET594

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: low
Date extracted/prepared: 08/15/87
Date analyzed: 08/25/87
Conc/Dil Factor: 1.08
Percent moisture (decanted): 6%

GPC Cleanup: No
Separatory Funnel Extraction: No
Continuous Liquid - Liquid Extraction: No

CAS Number		ug/kg		CAS Number		ug/kg	
108-95-2	Phenol	130	J	83-32-9	Acenaphthene	82.	J
111-44-4	bis(2-Chloroethyl) ether	360	U	51-28-5	2,4-Dinitrophenol	1800	U
95-57-8	2-Chlorophenol	360	U	100-02-7	4-Nitrophenol	1800	U
541-73-1	1,3-Dichlorobenzene	360	U	132-64-9	Dibenzofuran	110	J
106-46-7	1,4-Dichlorobenzene	360	U	121-14-2	2,4-Dinitrotoluene	360	U
100-51-6	Benzyl Alcohol	360	U	606-20-2	2,6-Dinitrotoluene	360	U
95-50-1	1,2-Dichlorobenzene	360	U	84-66-2	Diethylphthalate	210	J
95-48-7	2-Methylphenol	360	U	7005-72-3	4-Chlorophenyl Phenyl ether	360	U
39638-32-9	bis(2-Chloroisopropyl) ether	360	U	86-73-7	Fluorene	100	J
106-44-5	4-Methylphenol	50.	J	100-01-6	4-Nitroaniline	1800	U
621-64-7	N-Nitroso-Dipropylamine	360	U	534-52-1	4,6-Dinitro-2-methylphenol	1800	U
67-72-1	Hexachloroethane	360	U	86-30-6	N-nitrosodiphenylamine (1)	360	U
98-95-3	Nitrobenzene	360	U	101-55-3	4-Bromophenyl Phenyl ether	360	U
78-59-1	Isophorone	440		118-74-1	Hexachlorobenzene	360	U
88-75-5	2-Nitrophenol	360	U	87-86-5	Pentachlorophenol	1800	U
105-67-9	2,4-Dimethylphenol	360	U	85-01-8	Phenanthrene	950	
65-85-0	Benzoic Acid	1800	U	120-12-7	Anthracene	190	J
111-91-1	bis(2-Chloroethoxy) methane	360	U	84-74-2	Di-n-butylphthalate	320	J
120-83-2	2,4-Dichlorophenol	360	U	206-44-0	Fluoranthene	750	
120-82-1	1,2,4-Trichlorobenzene	360	U	129-00-0	Pyrene	1400	
91-20-3	Naphthalene	540		85-68-7	Butyl Benzyl Phthalate	140	J
106-47-8	4-Chloroaniline	360	U	91-94-1	3,3'-Dichlorobenzidine	720	U
87-68-3	Hexachlorobutadiene	360	U	56-55-3	Benzo(a)anthracene	760	
59-50-7	4-Chloro-3-methylphenol	360	U	117-81-7	bis(2-ethylhexyl)phthalate	1900	
91-57-6	2-Methylnaphthalene	500		218-01-9	Chrysene	900	
77-47-4	Hexachlorocyclopentadiene	360	U	117-84-0	Di-n-octyl Phthalate	520	
88-06-2	2,4,6-Trichlorophenol	360	U	205-99-2	Benzo(b)fluoranthene	1700 II	cannot be separated
95-95-4	2,4,5-Trichlorophenol	1800	U	207-08-9	Benzo(k)fluoranthene	1700 II	
91-58-7	2-Chloronaphthalene	360	U	50-32-8	Benzo(a)pyrene	850	AA 12/8/87
88-74-4	2-Nitroaniline	1800	U	193-39-5	Indeno(1,2,3-cd)pyrene	490	
131-11-3	Dimethyl Phthalate	360	U	53-70-3	Dibenz(a,h)anthracene	230	J
208-96-8	Acenaphthylene	130	J	191-24-2	Benzo(g,h,i)perylene	650	
99-09-2	3-Nitroaniline	1800	U				

(1) Cannot be separated from diphenylamine

Laboratory Name: CompuChem Laboratories
Case No: 7878

Sample Number
ET594

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: [Low] Medium (Circle One)
Date Extracted/Prepared: 08/20/87
Date Analyzed: 08/27/87
Conc/Dil Factor: 42.40
Percent Moisture(decanted): 5.66

GPC Cleanup [ ]Yes [X]No
Separatory Funnel Extraction [ ]Yes
Continuous Liquid - Liquid Extraction [ ]Yes

CAS Number		ug/l or [ug/Kg] (Circle One)	
319-84-6	Alpha - BHC	340	U
319-85-7	Beta - BHC	340	U
319-86-8	Delta - BHC	340	U
58-89-9	Gamma - BHC(Lindane)	340	U
76-44-8	Heptachlor	340	U
309-00-2	Aldrin	340	U
1024-57-3	Heptachlor Epoxide	340	U
959-98-8	Endosulfan I	340	U
60-57-1	Dieldrin	680	U
72-55-9	4-4' - DDE	680	U
72-20-8	Endrin	680	U
33213-65-9	Endosulfan II	680	U
72-54-8	4-4' - DDD	680	U
1031-07-8	Endosulfan Sulfate	680	U
50-29-3	4-4' - DDT	680	U
72-43-5	Methoxychlor	3400	U
53494-70-5	Endrin Ketone	680	U
57-74-9	Chlordane	11000	J
8001-35-2	Toxaphene	6800	U
12674-11-2	Aroclor - 1016	3400	U
11104-28-2	Aroclor - 1221	3400	U
11141-16-5	Aroclor - 1232	3400	U
53469-21-9	Aroclor - 1242	3400	U
12672-29-6	Aroclor - 1248	3400	U
11097-69-1	Aroclor - 1254	6000	J
11096-82-5	Aroclor - 1260	6800	U

AA 12/11/87

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(s) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) _____ or W(s) 30.00 V(t) 2000.00 V(i) 1.0

Form I (continued)

Laboratory Name: Compuchem Laboratories

Case No: 78-78

Sample Number: ET594

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	NO VOLATILE COMPOUNDS FOUND			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11.				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27.				
28				
29				
30				

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ET594

COMPUCHEM FILE GH046287A16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
1	100-41-4	ethyl benzene BENZENE, ETHYL-	SEMI2	290	680 ~~640.~~	J
2	95-47-6	xylene BENZENE, 1,2-DIMETHYL-	SEMI2	297	2500 ~~2400.~~	J
3	95-47-6	xylene BENZENE, 1,2-DIMETHYL-	SEMI2	318	2100 ~~2000.~~	J
4	98-82-8	isomer BENZENE, (1-METHYLETHYL)-	SEMI2	345	1100 ~~1000.~~	J
5	108-67-8	unknown BENZENE, 1,3,5-TRIMETHYL-	SEMI2	381	650 ~~610.~~	J
6	95-63-6	mesoxylene BENZENE, 1,2,4-TRIMETHYL-	SEMI2	401	1400 ~~1300.~~	J
7	13151-98-9	unknown CYCLOOCTANE, 1,4-DIMETHYL-, TRANS-	SEMI2	436	1600 ~~1500.~~	J
8	116-02-9	" CYCLOHEXANOL, 3,3,5-TRIMETHYL-	SEMI2	444	1200 ~~1100.~~	J
9	1758-88-9	isomer BENZENE, 2-ETHYL-1,4-DIMETHYL-	SEMI2	450	1200 ~~1100.~~	J
10	98-86-2	same ETHANONE, 1-PHENYL-	SEMI2	455	890 ~~840.~~	J
~~11~~	62108-23-0	HC DECANE, 2,5,6-TRIMETHYL-	SEMI2	477	~~420.~~	J OMIT
11 12	1758-88-9	unknown BENZENE, 2-ETHYL-1,4-DIMETHYL-	SEMI2	495	770 ~~730.~~	J
12 ~~13~~	1758-88-9	" BENZENE, 2-ETHYL-1,4-DIMETHYL-	SEMI2	517	530 ~~500.~~	J [illegible]

~~33,900~~ 25.9 40.00

SPECTROSCOPIST [signature]

DATE 8/24/87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER: ET594

COMPUCHEM FILE GH046287A16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
~~14~~	17301-32-5	HC UNDECANE, 4,7-DIMETHYL-	SEMI2	606	~~250.~~	J OMIT
~~15~~	2471-83-2	methyl naphthalene 1H-INDENE, 1-ETHYLIDENE-	SEMI2	622	~~220.~~	J OMIT
13 16	17301-32-5	HC UNDECANE, 4,7-DIMETHYL-	SEMI2	664	680 ~~450.~~	J
14 17	575-41-7	PHA NAPHTHALENE, 1,3-DIMETHYL-	SEMI2	685	600 ~~570.~~	J
15 18	61141-72-8	HC DODECANE, 4,6-DIMETHYL-	SEMI2	699	610 ~~580.~~	J
~~19~~	629-78-7	HC HEPTADECANE	SEMI2	795	~~400.~~	J OMIT
~~20~~	118-79-6	SS PHENOL, 2,4,6-TRIBROMO-	SEMI2	802	~~430.~~	J OMIT
~~21~~	70-55-3	SAMS BENZENESULFONAMIDE, 4-METHYL-	SEMI2	810	~~380.~~	J OMIT
16 22	74645-98-0	HC DODECANE, 2,7,10-TRIMETHYL-	SEMI2	823	1600 ~~1000.~~	J
~~23~~	17301-32-5	HC UNDECANE, 4,7-DIMETHYL-	SEMI2	866	~~300.~~	J OMIT
~~24~~	629-78-7	HC HEPTADECANE	SEMI2	910	~~430.~~	J OMIT
17 25	74764-11-7	unk IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BEN	SEMI2	952	520 ~~530.~~	J
18 26	52161-54-3	" BENZENE, 1,1'-(1,4-DIMETHYL-1-BUTENE-1,4-DIYL)BIS-	SEMI2	1178	1000 ~~940.~~	J

~~23.900~~ 35.7 40.00

SPECTROSCOPIST [illegible]

DATE 8/29/87

FORM1, PART B

LABORATORY NAME: COMPUCHEM

CASE NO: 7878

SAMPLE NUMBER ET594

COMPUCHEM FILE GH0462877A16

ORGANICS ANALYSIS DATA SHEET (PAGE 4)

TENTATIVELY IDENTIFIED COMPOUNDS

	CAS NUMBER	COMPOUND NAME	FRACTION	SCAN NUMBER	ESTIMATED CONC. (UG/L OR UG/KG)	
19 ~~27~~	629-99-2	PENTACOSANE HC	SEMI2	1200	~~1500.~~ 1000	J
~~20~~	192-97-2	BENZO[E]PYRENE PD	SEMI2	1256	~~1500.~~	J OMIT
20 ~~29~~	629-99-2	PENTACOSANE HC	SEMI2	1268	~~1300.~~ 1000	J

~~38.900~~ 31.9 40.00

SPECTROSCOPIST [signature]

DATE 8/29/87

FORM1, PART B

Form I H

J. S. EPA Contract Laboratory Program
ample Management Office
O. Box 818 - Alexandria, VA 22313
03/557-2490 FTS: 8-557-2490

EPA Sample No.
MEU 093

Date: 09/17/87

RECEIVED OCT 13 1987

INORGANIC ANALYSIS DATA SHEET

AB NAME: CAMBRIdge Analytical Associates
W NO.: 785
B SAMPLE ID. NO.: 8708072-08

CASE NO. 7878
Lab Receipt Date 8/14/87
QC REPORT NO. 8708072

Elements Identified and Measured

oncentration: Low K Medium _____
trix: Water _____ Soil ___X___ Sludge _____ Other _____

mg/Kg dry weight

	Aluminum	12,900	P	13	Magnesium	6,570E	P
	Antimony	142N	P	14	Manganese	1,400	P
3	Arsenic	149N	F	15	Mercury	1.0	
	Barium	399N	P	16	Nickel	126N*	P
	Beryllium	[0.71]N	P	17	Potassium	2,650	P
6	Cadmium	17N	P	18	Selenium	[0.47]N	F
	Calcium	52,800	P	19	Silver	5.2N	P
	Chromium	394N	P	20	Sodium	[553]	P
	Cobalt	30N	P	21	Thallium	0.89	F
9	Copper	588N	P	22	Vanadium	47N	P
	Iron	64,900	P	23	Zinc	1,160NE	P
	Lead	743 K* 9/11/87		24			

anide 1.6N* Percent solids (%) 93

ootnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

mments: • Brown/medium/fine/roots, seeds

00009

Lab Manager Joan M. Lacoste

Form I I

U. S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEU 094

Date: 09/17/87

RECEIVED OCT 13 1987

INORGANIC ANALYSIS DATA SHEET

LAB NAME: CAMBRIdge Analytical Associates
LAB NO.: 785
LAB SAMPLE ID. NO.: 8708072-09

CASE NO. 7878
Lab Receipt date 8/14/87
QC REPORT NO. 8708072

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/Kg dry weight

	Aluminum	8,960	P	13	Magnesium	6,240E	P
	Antimony	99N	P	14	Manganese	1,090	P
5	Arsenic	9.1BN	F	15	Mercury	0.49	
	Barium	238N	P	16	Nickel	71N*	P
	Beryllium	[0.57]N	P	17	Potassium	1,200	P
6	Cadmium	8.3N	P	18	Selenium	[0.33]N	F
7	Calcium	50,200	P	19	Silver	3.9N	P
	Chromium	133N	P	20	Sodium	[623]	P
	Cobalt	19N	P	21	Thallium	0.83U	F
9	Copper	188N	P	22	Vanadium	34N	P
	Iron	45,600	P	23	Zinc	647NE	P
	Lead	389N*		24			

Cyanide 1.9N* Percent solids (%) 98

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Light Brown, black, fine, roots, pebbles

00010

Lab Manager Joan M Lacava

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

9/22/87

Date Received for Review 10/13/87 Date Review Completed 10/19/87

To: Jeff Carman

From: Zena Gold-Kaufman

Subject: US Scrap

PAN: IL0102 Case # 7878

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#	Low Soil	# 12	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

_____ Incomplete, awaiting: _____

FIT Data Review Findings:

Check ~~TRA~~ IOADS forms for transcription errors

✓ Compounds were detected in sample(s); see enclosed Chemical Evaluation Form.

Book No. 6 Page No. 244

8/12

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: US Scrap PAN# _____ DATE: 10/14/87

CASE # 7878 UNITS- mg/kg REVIEWER: EGK

TOX/ PERS	COMPOUND	CRDL	3-5xCRDL	093	094	095	096	097		
	ALUMINUM									
	ANTIMONY N ~~J~~	2.4		N ~~J~~ 142	N ~~J~~ 99	N ~~J~~ 188	N ~~J~~ 77	N ~~J~~ 75		
	ARSENIC	2		14	9.1	13	9.1	7.1		
	BARIUM									
	BERYLLIUM	1		[0.71]	[0.57]	[0.62]	[0.71]	[0.56]		
	CADMIUM	1		17	8.3	14	6.6	4.8		
	CHROMIUM	2		394	133	203	223	63		
	COBALT	10		30	19	32	18	13		
	COPPER	5		588	188	621	85	65		
	LEAD *~~J~~	1		* ~~J~~ 743	* ~~J~~ 389	* ~~J~~ 825	* ~~J~~ 363	* ~~J~~ 165		
	MERCURY	.008		1.0	0.49	0.87	0.76			
	NICKEL N* ~~J~~	8		N* ~~J~~ 126	N* ~~J~~ 71	N* ~~J~~ 137	N* ~~J~~ 63	N* ~~J~~ 93		
	SELENIUM	1		[0.47]	[0.33]	[0.58]	[0.33]			
	SILVER	2		5.2	3.9	5.3	3.0	2.7		
	THALLIUM	2		0.89				0.85		
	TIN									
	VANADIUM	10		47	34	42	33	29		
	ZINC									
	CYANIDE N* ~~J~~	2		N* ~~J~~ 1.6	N* ~~J~~ 1.9	N* ~~J~~ 1.3	N* ~~J~~ 2.2	N* ~~J~~ 1.3		

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: US Scrap PAN#: DATE: 10/14/87

CASE #: 7878 UNITS: mg/kg REVIEWER: ZGK

TOX/ PERS	COMPOUND	CRDL	3-5xCRDL	MEU 086	087	088	089	090	091	092
	ALUMINUM									
	ANTIMONY UJ				82 J	144 J	108 J	96 J	80 J	114 J
	ARSENIC			8.5	14	21		19	7.6	13
	BARIUM									
	BERYLLIUM			1.8	[0.52]		[0.92]		[0.48]	[0.59]
	CADMIUM			4.6	5.9	11	8.1	8.5	7.4	12
	CHROMIUM			33	301	379	239	206	169	287
	COBALT			18	21	28	28	27	15	24
	COPPER			54	225	245	246	162	122	347
	LEAD J			103 J	715 J	518 J	629 J	288 J	328 J	659 J
	MERCURY				0.87	0.98	0.71	1.0	0.71	1.1
	NICKEL J			28 J	69 J	87 J	104 J	61 J	36 J	96 J
	SELENIUM				[0.77]	[0.39]	[0.48]	[0.70]	[0.76]	[0.62]
	SILVER			4.0	2.4	3.5	3.6	2.7	9.4	4.6
	THALLIUM									
	TIN									
	VANADIUM			28	31	35	38	31	27	38
	ZINC									
	CYANIDE J			10 J	6.5 J	12 J	5.1 J	4.8 J	2.0 J	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

10·13·87

RECEIVED OCT 13 1987

T: Review of Region V CLP Data
Received for Review on 9-23-87

Curtis Ross, Director (5SCRL)
Central Regional Laboratory Jay Thakker

Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: U S. SCRAP SMO case No. 7878

EPA Data Set No. SF 4315 No. of Samples: 12 D.U./Activity Numbers Y905/C72100

CRL No. 87FC15S20-531

SMO Traffic No. MEU086-097

CLP Laboratory: CAMBRIDGE Hrs. Required for Review: 1/2

Following are our findings:

See Attached Review from VIAR & Co.

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Duane Geuder, Quality Assurance Officer, EPA Support Services
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

FORM 1320-6 (Rev. 5/87)

E&E Copy

RECEIVED OCT 13 1987

MEMORANDUM

DATE: October 6, 1987

TO: Jay Thakkar
USEPA Region I

FROM: Peter Isaacson
SMO Data Review Team

SUBJECT: QA/QC Compliance Review Summary for a Contract Laboratory Program Inorganic Sample Data Package: Case No. 7878

As requested, quality control and performance measures for the data packages noted have been examined and compared to EPA standards for compliance. Measures for the following general areas were evaluated:

Data Completeness	Blanks
Interference Check	Serial Dilution
Laboratory Control Sample	Analytical Spiking, MSA
Matrix Spikes/Duplicates	Holding Times
Calibration	

Any statistical measures used to support the following conclusions are attached so that the review may be reviewed by others.

Summary of Results

	I ICP	II Furnace	III Hg	IV Cyanide	V Other
Acceptable as Submitted		✓			
Acceptable with Comments	✓		✓	✓	
Unacceptable, Action Pending					
Unacceptable					

Data Reviewed By: [illegible] Date: [illegible]

Reviewed Authorized By: Peter Isaacson Date: 10/6/87

Signature: Peter Isaacson

Area Code/Phone No.: [illegible]

FTS Line: 557 2400

NARRATIVE

CASE NO. 7878

SITE NAME: U.S. Scrap, Chicago IL

LABORATORY NAME: Cambridge Analytical Associates

Laboratory

The laboratory's portion of Case No. 7878 consisted of twelve soil samples collected on August 12, 1987.

The laboratory reported no problems with the receipt of these samples.

The laboratory reported no problems with the analysis of these samples.

The evaluator has commented on the criteria specified under each fraction heading. All criteria have been assessed, but no discussion is given where the evaluator has determined that criteria were adequately performed or require no comment. Details relevant to these comments are given on the forms in Appendix A. Amounts of detected compounds are summarized in Appendix B.

RECEIVED

Evaluation by Analysis

I. ICP Analysis

_____	Initial Calibration
_____	Continuing Calibration
XX	Interference Check
XX	Matrix Spike
XX	Duplicate
_____	Laboratory Control Sample
_____	Blanks
XX	Serial Dilution

Comments:

Nineteen elements were determined by ICP. All 19 were found in all of the 12 samples except Be (10) and Na (11). A statistical summary is provided in Appendix A. These samples were a homogeneous group in terms of elemental and moisture content. Levels of Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, Ag and Zn are elevated above background levels.

Matrix spike recoveries for the ICP elements ranged from 48% to 71% (except for Sb, 25%). In light of the high levels found, these low recoveries probably do not indicate a negative bias, but reflect the complex nature of the samples. The exceptions are those elements showing levels at or below background : Ba (69%), Be (71%) and V (68%). Concentrations of these elements may be higher than reported.

Two ICP elements (Pb and Mn) had matrix spike results within QC criteria.

ICS results for Sb showed a consistent positive bias of 1550 to 1660 ppb (310 to 322 mg/kg) which is 2 to 4 times the levels reported in the samples. Coupled with a 25% matrix spike recovery, the validity of the Sb data is doubtful. Sb data may be used as detection limits (UJ).

In the serial dilution, Mg showed a negative bias, giving a concentration twice that of the original sample. In an analytical run at 10x dilution, the samples showed a similar 2 to 5 fold increase in concentration. Mg data are biased low (J).

In the duplicate analysis, Pb (54% RPD) and Ni (24% RPD) were over the QC limit. Data for Ni and Pb are therefore imprecise (J). Two elements detected in the original analysis (MEU087) were not detected in the duplicate (Be and Na).

RECEIVED OCT 13 1987

II. Furnace AA Analysis

_____	Initial Calibration
_____	Continuing Calibration
XX	Matrix Spike
_____	Duplicate
_____	Laboratory Control Sample
_____	Blanks
_____	Analytical Spiking, MSA

Comments:

Three elements were determined by GFAA (as, Se, Tl). As and Se were each found in 11 samples, and were both above background levels. The low matrix spike recoveries (As, 51% and Se, 40%) mentioned in the ICP section, probably do not indicate a significant low bias.

Tl was not detected in any samples. All QC data were satisfactory.

III. Mercury, Cyanide, Other

RECEIVED OCT 13 1987

_____	Initial Calibration
_____	Continuing Calibration
XX	Matrix Spike
XX	Duplicate
_____	Laboratory Control Sample
_____	Blanks
_____	Holding Times

Comments:

Hg was reported in ten samples and cyanide in eleven.

Hg data were reported in micrograms per liter; the corrected data in mg/kg dry weight appear in Appendix B. The reported matrix spike recovery was high (131%) but if the signal below the IOL is subtracted out, the recovery is only 118%. Hg levels are well above background (Appendix A).

The cyanide results should be used as minimum values due to a very low matrix spike recovery (6%) and a high RPD (57%). Metal ions in solution may have precipitated the cyanide spike.

RECEIVED OCT 13 1987

APPENDIX A, CASE/SAS 7878

STATISTICAL SUMMARY OF SOIL DATA (mg/kg)

Element	n (N= 12)	Geometric Mean	Geometric Deviation	Median	Background G.M.[1]	% of Background
Al	12	9780	1.26	9570	47,000	21
Sb					0.48	
As	11	12	1.44	13	5.2	22
Ba	12	211	1.55	184	440	48
Be	10	0.69	1.47	0.61	0.63	10
Cd[2]	12	8.3	1.50	8.2	0.35	233
Ca	12	52800	1.23	50800	9200	57
Cr	12	182	2.08	215	37	49
Co	12	22	1.34	23	6.7	32
Cu	12	188	2.20	207	17	114
Fe	12	42400	1.44	45800	18,000	23
Pb	12	408	1.90	54	16	2551
Mg	12	6600	1.04	6550	4400	15
Mn	12	1000	1.46	987	330	30
Hg	10	0.47	1.38	0.51	0.058	12
Ni	12	74	1.60	79	13	56
K[3]	12	1720	484	1660	15,000	11
Se	11	0.59	1.66	0.58	0.26	22
Ag[2]	12	3.9	1.46	3.8	0.05	775
Na	11	543	1.45	553	5900	9
Tl[2]					0.2	
Sn					0.89	
V	12	34	1.18	34	58	58
Zn	12	797	2.07	1150	48	1661

[1]Sources: USGS Professional Paper 1270 (1984) and Environmental Chemistry of the Elements, H.J.M. Bowen, Academic Press, London, 1979

[2]Background is Median (Bowen)

[3]Background is Arithmetic Mean (USGS)

APPENDIX B: Summary of Elements Found

Case: 7878

Site:

Lab : Cambridge

		MEV 086	MEV 087	MEV 088	MEV 089	MEV 090	MEV 091	MEV 092	MEV 093	MEV 094	MEV 095
Aluminum (Al)		15500	9830	7520	10100	8570	7760	11000	12900	8960	11700
Antimony (Sb)	UJ	78	80	144	108	96	80	114	142	99	188
Arsenic (As)		8.5	14	21		19	7.6	13	14	9.1	13
Barium (Ba)		187	165	173	266	140	181	310	399	238	459
Beryllium (Be)		1.8	0.52		0.92		0.48	0.59	0.71	0.57	0.62
Cadmium (Cd)		4.6	5.9	11	8.1	8.5	7.4	12	17	8.3	14
Calcium (Ca)		80,800	38,700	44600	50400	49300	44500	56500	52800	50200	59100
Chromium (Cr)		33	301	379	239	206	169	287	394	133	203
Cobalt (Co)		18	21	28	28	27	15	24	30	19	32
Copper (Cu)		54	225	245	246	162	122	347	588	188	621
Iron (Fe)		28600	36500	64800	47600	54500	30200	46000	64900	45600	67500
Lead (Pb)	J	103	715	518	629	288	328	659	743	389	825
Magnesium (Mg)	J	6530	6900	7080	6360	6880	6380	6870	6570	6240	6550
Manganese (Mn)		2110	666	870	1420	564	665	1130	1400	1090	1270
Mercury (Hg)			~~0.87~~	0.98	0.71	~~1.0~~	~~0.71~~	1.1	1.0	0.49	~~0.87~~
Nickel (Ni)	J	28	69	87	104	61	36	96	126	71	137
Potassium (K)		1720	2140	1300	1230	1710	1370	2330	2650	1200	2070
Selenium (Se)		2.0	0.77	0.39	0.48	0.70	0.76	0.62	0.47	0.33	0.58
Silver (Ag)		4.0	2.4	3.5	3.6	2.7	9.4	4.6	5.2	3.9	5.3
Sodium (Na)		669	247	612	462		502	541	553	623	912
Thallium (Tl)									~~0.89~~		
Tin (Sn) Not analyzed											
Vanadium (V)		28	31	35	38	31	27	38	47	34	42
Zinc (Zn)		223	1300	1440	1540	1150	532	1140	1160	647	1360
% Solid		93	88	85	91	89	96	89	93	98	93
Cyanide (CN^-) J-low		10	6.5	12	5.1	4.8	12.0		1.6	1.9	1.2

APPENDIX B: Summary of Elements Found

Case: 7878

Site:

Lab: Cambridge

		MLV [illegible]	MLV [illegible]								
Aluminum (Al)	✓	9310	6900								
Antimony (Sb)	UJ	77	75								
Arsenic (As)		7.1	7.1								
Barium (Ba)		134	112								
Beryllium (Be)		0.71	0.56								
Cadmium (Cd)		6.6	4.8								
Calcium (Ca)	✓	62100	51200								
Chromium (Cr)	✓	223	63								
Cobalt (Co)	✓	18	13								
Copper (Cu)	✓	85	65								
Iron (Fe)	✓	28400	24100								
Lead (Pb)	J	363	165								
Magnesium (Mg)	J	6540	6300								
Manganese (Mn)	✓	884	833								
Mercury (Hg)		0.76									
Nickel (Ni)	✓ J	63	93								
Potassium (K)	✓	1610	1250								
Selenium (Se)		0.33									
Silver (Ag)		3.0	2.7								
Sodium (Na)	✓	562	357								
Thallium (Tl)			0.85								
Tin (Sn)	NA Analyzed										
Vanadium (V)	✓	33	29								
Zinc (Zn)	✓	463	231								
% Solids		73	96								
Cyanide (CN⁻)	J	2.2	1.3								

CENTRAL REGIONAL LABORATORY SAMPLE DESIGNATION
ORGANICS/INORGANICS
THIS FORM IS TO BE USED FOR SAMPLES SENT TO CONTRACT ONLY

DUE DATE: 10/21/87

RECEIVED OCT 13 1987 AUG 20 1987

SUPERFUND 4315

CASE NUMBER/SAS No. 7878 SITE NAME U.S. Scrap IW LABORATORY CompuChem/Cambridge DATE SHIPPED 8/12/87

SUPERFUND DU NUMBER U905 EPA RPM or OSC (S.M.S.)/(CES) CERCLIS NUMBER IL D980679484 PAGE 1 OF 1

ACTIVITY NUMBER CT2100

CRL LOG NUMBER	ORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No.	INORGANIC TRAFFIC REPORT NUMBER	WATER OR LIQUIDS: ACID BASE NEUTRAL CPDS ORGANIC SCAN UG/L TOX17574	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN UG/L TOX17564	WATER POLYCHLORINATED BIPHENYLS UG/L PES17144	WATER CHLORINATED PESTICIDES UG/L PES17134	TOTAL METALS IN WATER UG/L MET111	WATER CYANIDE UG/L MIN74919	NITRATE-NITRITE MG/L MIN7284	AMMONIA MG/L MIN7294	RESIDUE, FILTERABLE TDS MG/L MIN7362	RESIDUE, NON FILT TSS MG/L MIN7372			SEDIMENTS or SOILS: ACID-BASE NEUTRAL CPDS ORGANIC SCAN MG/KG TOX215722	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN MG/KG TOX215622	SEDIMENTS POLYCHLORINATED BIPHENYLS MG/KG PES211422	SEDIMENT CHLORINATED PESTICIDES MG/KG 211322	TOTAL METALS MG/KG MET413	CYANIDE MG/KG MIN44930	EP TOXICITY METALS MG/KG	AMMONIA MG/KG MIN42925				
87FC15S20	ET584	MEU086													✓	✓	✓	✓	✓	✓						
87FC15S21	ET585	MEU087													✓	✓	✓	✓	✓	✓						
87FC15S22	ET586	MEU088													✓	✓	✓	✓	✓	✓						
87FC15S23	ET587	MEU089													✓	✓	✓	✓	✓	✓						
87FC15S24	ET588	MEU090													✓	✓	✓	✓	✓	✓						
87FC15S25	ET589	MEU091													✓	✓	✓	✓	✓	✓						
87FC15S26	ET590	MEU092													✓	✓	✓	✓	✓	✓						
87FC15S27	ET591	MEU093													✓	✓	✓	✓	✓	✓						
87FC15S28	ET592	MEU094													✓	✓	✓	✓	✓	✓						
87FC15S29	ET593	MEU095													✓	✓	✓	✓	✓	✓						
87FC15S30	ET594	MEU096													✓	✓	✓	✓	✓	✓						
87FC15S31	ET595	MEU097													✓	✓	✓	✓	✓	✓						

Cambridge Analytical Associates
1106 Commonwealth Avenue / Boston, Massachusetts 02215 / (617) 232-2207

RECEIVED OCT 1 3 1987

SF 4315

September 17, 1987

Ms. Linda Boynton
U.S. Environmental Protection Agency
Contract Laboratory Program
Sample Management Office (SMO)
P. O. Box 818
Alexandria, VA 22313

Dear Linda:

Enclosed is the sample data package for Case 7878 received by Cambridge Analytical Associates under Contract Number 68-01-7315 (Inorganics Analysis). Samples were received on August 14, 1987, and analyzed under QC Number 8708072.

Sincerely,

Joan M. Lacava
Inorganic Chemistry Laboratory
Sample Custodian and
Data Manager

Enclosure

. S. EPA Contract Laboratory Program
ample Management Office
. O. Box 816 - Alexandria, VA 22313
03/557-2490 FTS: 8-557-2490

Date: 09/17/87

RECEIVED OCT 13 1987

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

ab Name: CAMBRIdge Analytical Associates
OW No. 785
ab Receipt Date 08/14/87

Case No. 7878
Q.C. Report No. 8708072

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
EU 086	8708072-01	MEU 096	8708072-11
U 087	8708072-02	MEU 097	8708072-12
U 088	8708072-03		
U 089	8708072-04		
U 090	8708072-05		
U 091	8708072-06		
U 092	8708072-07		
EU 093	8708072-08		
U 094	8708072-09		
U 095	8708072-10		

mments:

ICP Interelement and background corrections applied? Yes X No ____ .
If yes, corrections applied before X___ or after _____ generation of raw data.
Footnotes:

NR - not required by contract at this time
Form I:
Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract required detection limit, report the value in brackets (i.e., [10]). Indicate the analytical method used with P (for ICP), A (for Flame AA) or F (for furnace AA).
U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 10U).
E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.
S - Indicates value determined by Method of Standard Addition.
N - Indicates spike sample recovery is not within control limits.
* - Indicates duplicate analysis is not within control limits.
+ - Indicates the correlation coefficient for method of standard addition is less than 0.995
M - Indicates duplicate injection results exceeded control limits.

Indicate method used: P for ICP; A for Flame AA and F for Furnace.

Form I A

PA Contract Laboratory Program
- Management Office
x 818 - Alexandria, VA 22313
-2490 FTS: 8-557-2490

EPA Sample No.
MEU 086

RECEIVED OCT 13 1987

Date: 09/17/87

INORGANIC ANALYSIS DATA SHEET

AME: CAMBRIdge Analytical Associates
: 785
PLE ID. NO.: 8708072-01

CASE NO. 7878
Lab Receipt Date 8/14/87
QC REPORT NO. 8708072

Elements Identified and Measured

ration: Low X Medium
x: Water Soil X Sludge Other

mg/Kg dry weight

uminum	15,500	P	13	Magnesium	6,530E	P
timony	78N	P	14	Manganese	2,110	P
Arsenic	8.5N	F	15	Mercury	0.20U	
rium	187N	P	16	Nickel	28N* J	P
ryllium	1.8N	P	17	Potassium	1,720	P
dmium	4.6N	P	18	Selenium	2.0N S	F
Calcium	86,800	P	19	Silver	4.0N	P
romium	33N	P	20	Sodium	[669]	P
alt	18N	P	21	Thallium	0.88U	F
Copper	54N	P	22	Vanadium	28N	P
on	28,600	P	23	Zinc	223NE	P
ad	J 103N** E9/mo		24			

J 10N* Percent solids (%) 93

es: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

s: black, fine, roots, rocks.

00002

Lab Manager Joan M. Lacava

Form I B

S. EPA Contract Laboratory Program
ple Management Office
. Box 818 - Alexandria, VA 22313
3/557-2490 FTS: 8-557-2490

EPA Sample No.
MEU 087

Date: 09/17/87

RECEIVED OCT 13 1987

INORGANIC ANALYSIS DATA SHEET

B NAME: CAMBRIdge Analytical Associates
N NO.: 785
SAMPLE ID. NO.: 8708072-02

CASE NO. 7878
Lab Receipt Date 8/14/87
QC REPORT NO. 8708072

Elements Identified and Measured

ncentration: Low X Medium ____
trix: Water ____ Soil X Sludge ____ Other ____

mg/Kg dry weight

	Aluminum	9,830	P	13	Magnesium	6,900E	P
	Antimony	82N	P	14	Manganese	666	P
3	Arsenic	149N	F	15	Mercury	0.87	
	Barium	168N	P	16	Nickel	69N*	P
	Beryllium	[0.52]N	P	17	Potassium	2,140	P
6	Cadmium	5.9N	P	18	Selenium	[0.77]N	F
	Calcium	38,700	P	19	Silver	2.4N	P
	Chromium	301N	P	20	Sodium	[247]	P
	Cobalt	21N	P	21	Thallium	0.93U	F
3	Copper	225N	P	22	Vanadium	31N	P
	Iron	36,500	P	23	Zinc	1,300NE	P
	Lead	715		24			

anide 6.5N* Percent solids (%) 88

ootnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

mments: brown, medium, rocks

00003

Lab Manager [signature]

Form I C

. S. EPA Contract Laboratory Program
ple Management Office
. Box 618 - Alexandria, VA 22313
3/557-2490 FTS: 8-557-2490

EPA Sample No.
MEU 088

RECEIVED 1 3 1987

Date: 09/17/87

INORGANIC ANALYSIS DATA SHEET

B NAME: CAMBRIdge Analytical Associates
NO.: 785
SAMPLE ID. NO.: 8708072-03

CASE NO. 7878
Lab Receipt Date 8/14/87
QC REPORT NO. 8708072

Elements Identified and Measured

oncentration: Low X Medium ____
trix: Water ____ Soil X Sludge ____ Other ____

mg/Kg dry weight

	Aluminum	7,820	P	13	Magnesium	7,080E	P
	Antimony	144N	P	14	Manganese	670	P
	Arsenic	21N	F	15	Mercury	0.98	
	Barium	178N	P	16	Nickel	87N*	P
	Beryllium	0.49UN	P	17	Potassium	1,300	P
6	Cadmium	11N	P	18	Selenium	[0.39]N	F
	Calcium	44,600	P	19	Silver	3.5N	P
	Chromium	379N	P	20	Sodium	[612]	P
9	Cobalt	28N	P	21	Thallium	0.96U	F
	Copper	245N	P	22	Vanadium	35N	P
	Iron	64,800	P	23	Zinc	1,940NE	P
2	Lead	518N* 9/17/87		24			

nide 12N* Percent solids (%) 85

ootnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

ments: Brown, medium, roots

00004

Lab Manager Joan M Lacava

Form I D

U. S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEU 089

Date: 09/17/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME: CAMBRIdge Analytical Associates
LAB NO.: 785
LAB SAMPLE ID. NO.: 8708072-04

CASE NO. 7878
Lab Receipt Date 8/14/87
QC REPORT NO. 8708072

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water ____ Soil X Sludge ____ Other ____

mg/Kg dry weight

1	Aluminum	10,100	P	13	Magnesium	6,360E	P
2	Antimony	108N	P	14	Manganese	1,420	P
3	Arsenic	0.31UN	F	15	Mercury	0.71	
4	Barium	266N	P	16	Nickel	[104N*]	P
5	Beryllium	[0.92]N	P	17	Potassium	1,230	P
6	Cadmium	8.1N	P	18	Selenium	[0.48]N	F
7	Calcium	50,400	P	19	Silver	3.6N	P
8	Chromium	239N	P	20	Sodium	[462]	P
9	Cobalt	28N	P	21	Thallium	0.85U	F
10	Copper	246N	P	22	Vanadium	38N	P
11	Iron	47,600	P	23	Zinc	1,540NE	P
12	Lead	[629] N* 9/17/87		24			

Cyanide [5.1N*] Percent solids (%) 96

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Dark brown, fine, roots

00005

Lab Manager Joan M Lacava

Form I E

U. S. EPA Contract Laboratory Program
ample Management Office
O. Box 818 - Alexandria, VA 22313
3/557-2490 FTS: 8-557-2490

EPA Sample No.
MEU 090

RECEIVED OCT 13 1987

Date: 09/17/87

INORGANIC ANALYSIS DATA SHEET

AB NAME: CAMBRIdge Analytical Associates
W NO.: 785
B SAMPLE ID. NO.: 8708072-05

CASE NO. 7878
Lab Receipt Date 8/14/87
QC REPORT NO. 8708072

Elements Identified and Measured

ncentration: Low ___X___ Medium _____
trix: Water _____ Soil ___X___ Sludge _____ Other _____

mg/Kg dry weight

	Aluminum	8,570	P	13	Magnesium	6,880E	P
	Antimony	96N	P	14	Manganese	564	P
S	Arsenic	19N	F	15	Mercury	1.0	
	Barium	140N	P	16	Nickel	61N*	P
	Beryllium	0.47UN	P	17	Potassium	1,710	P
	Cadmium	8.5N	P	18	Selenium	[0.70]N	F
	Calcium	49,300	P	19	Silver	2.7N	P
	Chromium	206N	P	20	Sodium	237U	P
	Cobalt	27N	P	21	Thallium	0.93U	F
	Copper	162N	P	22	Vanadium	31N	P
	Iron	54,500	P	23	Zinc	1,150NE	P
	Lead	288		24			

anide 4.6N* Percent solids (%) 89

otnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

ments: Brown, medium, roots, pebbles, twigs.

00006

Lab Manager Joan M. Lacava

Form I F

U. S. EPA Contract Laboratory Program
ample Management Office
O. Box 818 - Alexandria, VA 22313
3/557-2490 FTS: 8-557-2490

EPA Sample No.: MEU 091

Date: 09/17/87

INORGANIC ANALYSIS DATA SHEET

AB NAME: CAMBRIdge Analytical Associates
OW NO.: 785
B SAMPLE ID. NO.: 8708072-06

CASE NO. 7878
Lab Receipt Date: 8/14/87
QC REPORT NO. 8708072

Elements Identified and Measured

ncentration: Low X Medium ____

atrix: Water ____ Soil X Sludge ____ Other ____

mg/Kg dry weight

1	Aluminum	7,760	P	13	Magnesium	6,380E	P
	Antimony	80N	P	14.	Manganese	665	P
3	Arsenic	7.6N	F	15	Mercury	0.71	
4	Barium	181N	P	16	Nickel	36N*	P
	Beryllium	[0.48]N	P	17	Potassium	1,370	P
	Cadmium	7.4N	P	18	Selenium	[0.76]N	F
7	Calcium	44,500	P	19	Silver	9.4N	P
	Chromium	169N	P	20	Sodium	[502]	P
	Cobalt	15N	P	21	Thallium	0.86U	F
0	Copper	122N	P	22	Vanadium	27N	P
1	Iron	30,200	P	23	Zinc	532NE	P
	Lead	328N* 9/17/87		24			
yanide		2.0N*			Percent solids (%)	96	

otnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

mments: Brown, medium to fine, roots

00007

Lab Manager Joan M Lacava

Form I G

U. S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEU 092

Date: 09/17/87

RECEIVED OCT 13 1987

INORGANIC ANALYSIS DATA SHEET

LAB NAME: CAMBRIdge Analytical Associates
LAB NO.: 785
LAB SAMPLE ID. NO.: 8708072-07

CASE NO. 7878
Lab Receipt Date 8/14/87
QC REPORT NO. 8708072

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water ____ Soil X Sludge ____ Other ____

mg/Kg dry weight

	Aluminum	11,000	P	13	Magnesium	6,870E	P
	Antimony	114N	P	14	Manganese	1,130	P
	Arsenic	132N	F	15	Mercury	1.1	
	Barium	310N	P	16	Nickel	96N*	P
	Beryllium	[0.59]N	P	17	Potassium	2,330	P
	Cadmium	12N	P	18	Selenium	[0.62]N	F
7	Calcium	56,500	P	19	Silver	4.6N	P
	Chromium	287N	P	20	Sodium	[541]	P
	Cobalt	24N	P	21	Thallium	0.91U	F
0	Copper	347N	P	22	Vanadium	38N	P
	Iron	46,000	P	23	Zinc	1,140NE	P
	Lead	659 X*		24			
	Cyanide	0.75UN*			Percent solids (%)	89	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Brown medium/fine, roots.

00008

Lab Manager [signature]

Form I J

U. S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEU 095

Date: 09/17/87

RECEIVED OCT 13 1987

INORGANIC ANALYSIS DATA SHEET

LAB NAME: CAMBRIdge Analytical Associates
LAW NO.: 785
LAB SAMPLE ID. NO.: 8708072-10

CASE NO. 7878
Lab Receipt date - 8/14/87
QC REPORT NO. 8708072

Elements Identified and Measured

Concentration: Low ___X___ Medium _____
Matrix: Water _____ Soil ___X___ Sludge _____ Other _____

mg/Kg dry weight

	Aluminum	11,700	P	13	Magnesium	6,550E	P
	Antimony	188N	P	14	Manganese	1,270	P
3	Arsenic	139N	F	15	Mercury	0.87	
4	Barium	459N	P	16	Nickel	137N*	P
	Beryllium	[0.62]N	P	17	Potassium	2,070	P
6	Cadmium	14N	P	18	Selenium	[0.58]N	F
7	Calcium	59,100	P	19	Silver	5.3N	P
	Chromium	203N	P	20	Sodium	[912]	P
	Cobalt	32N	P	21	Thallium	0.88K	F
0	Copper	621N	P	22	Vanadium	42N	P
	Iron	67,500	P	23	Zinc	1,360NE	P
	Lead	825 K * 9/17/87		24			
	Cyanide	1.3N*			Percent solids (%)	93	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Brown, fine, roots, twigs

00011

Lab Manager Joan M Lacaire

Form I K

RECEIVED OCT 13 1987

. S. EPA Contract Laboratory Program
mple Management Office
O. Box 818 - Alexandria, VA 22313
03/557-2490 FTS: 8-557-2490

EPA Sample No.
MEU 096

Date: 09/17/87

INORGANIC ANALYSIS DATA SHEET

AB NAME: CAMBRIdge Analytical Associates
W NO.: 785
B SAMPLE ID. NO.: 8708072-11

CASE NO. 7878
Lab Receipt Date
QC REPORT NO. 8708072

Elements Identified and Measured

oncentration: Low X Medium ____
atrix: Water ____ Soil X Sludge ____ Other ____

mg/Kg dry weight

	Aluminum	9,310	P	13	Magnesium	6,540E	P
	Antimony	77N	P	14	Manganese	884	P
5	Arsenic	9.19N	F	15	Mercury	0.76	
	Barium	134N	P	16	Nickel	63N*	P
	Beryllium	[0.71]N	P	17	Potassium	1,610	P
6	Cadmium	6.6N	P	18	Selenium	[0.33]N	F
7	Calcium	62,100	P	19	Silver	3.0N	P
	Chromium	223N	P	20	Sodium	[862]	P
	Cobalt	18N	P	21	Thallium	0.88U	F
0	Copper	85N	P	22	Vanadium	33N	P
	Iron	28,400	P	23	Zinc	463NE	P
	Lead	363		24			

anide 2.2N* Percent solids (%) 93

ootnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

omments: Light Brown, fine, roots, twigs

00012

Lab Manager Joan M Lacava

Form I L

J. S. EPA Contract Laboratory Program
ample Management Office
O. Box 818 - Alexandria, VA 22313
3/557-2490 FTS: 8-557-2490

EPA Sample No.
MEU 097

Date: 09/17/87

RECEIVED ... 13 1987

INORGANIC ANALYSIS DATA SHEET

AB NAME: CAMBRIdge Analytical Associates
W NO.: 785
B SAMPLE ID. NO.: 8708072-12

CASE NO. 7878
Lab Receipt Date 8/14/87
QC REPORT NO. 8708072

Elements Identified and Measured

ncentration: Low X Medium ____
atrix: Water ____ Soil X Sludge ____ Other ____

mg/Kg dry weight

	Aluminum	6,900	P	13	Magnesium	6,320E	P
	Antimony	75N	P	14	Manganese	833	P
3	Arsenic	7.1N	F	15	Mercury	0.20U	
	Barium	112N	P	16	Nickel	93N*	P
	Beryllium	[0.56]N	P	17	Potassium	1,250	P
	Cadmium	4.8N	P	18	Selenium	0.29UN	F
	Calcium	51,200	P	19	Silver	2.7N	P
	Chromium	63N	P	20	Sodium	[352]	P
	Cobalt	13N	P	21	Thallium	0.85	F
9	Copper	65N	P	22	Vanadium	29N	P
	Iron	24,100	P	23	Zinc	231NE	P
	Lead	165 N*	PE 9/17/87	24			

anide 1.3N* Percent solids (%) 96

otnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

ments:

00013

Lab Manager Joan M Lacavre

Form III A

Q. C. Report No. 8708072

BLANKS [1]

RECEIVED

LAB NAME Cambridge Analytical Associates CASE NO. 7878

DATE 9/17/87 UNITS ug/L

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank Matrix: SOIL 1	Matrix: 2
Metals:							
1. Aluminum	143u	143u	143u	143u		29u	
2. Antimony	58u	58u	58u	58u	58u	11.6u	
3. Arsenic	1.5u	1.5u	1.5u	1.5u		~~1.5u~~ 0.30u PC 9/17/87	
4. Barium	30u	30u	30u	30u		6.0u	
5. Beryllium	2.1u	2.1u	2.1u	2.1u		0.42u	
6. Cadmium	4.7u	4.7u	4.7u	4.7u		0.94u	
7. Calcium	630u	630u	630u	630u		126u	
8. Chromium	9.4u	9.4u	9.4u	9.4u		1.9u	
9. Cobalt	38u	38u	38u			7.6u	
10. Copper	14u	14u	14u	14u		3.2u	
11. Iron	45u	45u	45u	45u	45u	9.0u	
12. Lead	100u	100u	100u	100u	100u	20u	
13. Magnesium	117u	117u	117u	117u	117u	~~117u~~ 23.4u PC 9/17	
14. Manganese	6.5u	6.5u	~~6.5~~ 7.24	6.5u		1.3u	
15. Mercury	0.2u	0.2u	0.2u	0.2u	0.2u	0.2u	
16. Nickel	28.4	28.4u	28.4u	28.4u	28.4u	~~28.4u~~ 5.68u PC 9/17/87	
17. Potassium	58u	58u	58u	58u		58u	
18. Selenium	1.4u	1.4u	1.4u	1.4u	1.4u	~~1.4u~~ 0.28u PC 9/17/87	
19. Silver	7.7u	7.7u	7.7u	7.7u		1.5u	
20. Sodium	1,050u	1,050u	1,050u	1,050u		210u	
21. Thallium	4.1u	4.1u	4.1	4.1u		~~4.1u~~ 0.82u PC 9/17/87	
22. Vanadium	23u	23u	23u	23u		4.6u	
23. Zinc	20u	20u	20u	20u	20u	4.0u	
Other:							
Cyanide							

[1] Reporting Units: aqueous, ug/L; solid mg/kg

Form III B

Q. C. Report No. 8708072

BLANKS

RECEIVED OCT 13 1987

LAB NAME Cambridge Analytical Associates CASE NO. 7878

DATE 9/17/87 UNITS ug/L

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank Matrix: 1	Matrix: 2
Metals:							
1. Aluminum	143u						
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium	9.4u						
9. Cobalt							
10. Copper							
11. Iron	45u						
12. Lead							
13. Magnesium		117u	117u				
14. Manganese							
15. Mercury		0.2u	0.2u	0.2u	0.2u		
16. Nickel		28.4u	28.4u				
17. Potassium							
18. Selenium		1.4u	1.4u	1.4u	1.4u		
19. Silver							
20. Sodium							
21. Thallium							
22. Vanadium							
23. Zinc	20u	80u					
Other:							
Cyanide							

1 Reporting Units: aqueous, ug/L; solid mg/kg