Quanterra Environmental Services

METHOD BLANK REPORT
Semivolatile Organics by GC
Project: 124416

Test: 8080-S
Matrix: SOLID
QC Run: 03 FEB 97-EX

Method 8080 - TCL Organochlorine Pesticides/PCBs

Date Analyzed: 06 FEB 97

Analyte	Result	Units	Reporting Limit
alpha-BHC	ND	ug/kg	1.7
beta-BHC	ND	ug/kg	1.7
delta-BHC	ND	ug/kg	1.7
gamma-BHC (Lindane)	ND	ug/kg	1.7
Aldrin	ND	ug/kg	1.7
Heptachlor	ND	ug/kg	1.7
Heptachlor epoxide	ND	ug/kg	1.7
Endosulfan I	ND	ug/kg	1.7
Dieldrin	ND	ug/kg	3.3
4,4'-DDE	ND	ug/kg	3.3
Endrin	ND	ug/kg	3.3
Endosulfan II	ND	ug/kg	3.3
4,4'-DDD	ND	ug/kg	3.3
Endosulfan sulfate	ND	ug/kg	3.3
4,4'-DDT	ND	ug/kg	3.3
Methoxychlor	ND	ug/kg	14
Endrin aldehyde	ND	ug/kg	3.3
alpha-Chlordane	ND	ug/kg	1.7
gamma-Chlordane	ND	ug/kg	1.7
Toxaphene	ND	ug/kg	70

Surrogate	Recovery	Acceptable Range
2,4,5,6-Tetrachloro-m-xylene	97	60 -150
Decachlorobiphenyl	135	60 -150

ND = Not Detected

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QC LOT ASSIGNMENT REPORT - MS QC
Volatile Organics by GC/MS

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK/LCS)	MS QC Run N (SA,MS,SD,D
124416-0022-SA	SOLID	8260-S		05 FEB 97-BFX	05 FEB 97-B
124416-0023-SA	SOLID	8260-S		05 FEB 97-BFX	05 FEB 97-B

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LABORATORY CONTROL SAMPLE REPORT
Volatile Organics by GC/MS
Project: 124416

Category: 8260-S Volatile Organics, 8260
Matrix: SOLID
Date Analyzed: 05 FEB 97
QC Run: 05 FEB 97-BFX
Concentration Units: ug/kg

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
1,1-Dichloroethene	50.0	65.2	130	59-172
Trichloroethene	50.0	49.3	99	62-137
Benzene	50.0	49.7	99	66-142
Toluene	50.0	47.6	95	59-139
Chlorobenzene	50.0	48.8	98	60-133

Surrogates	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
1,2-Dichloroethane-d4	50.0	52.5	105	80-120
Toluene-d8	50.0	48.9	98	81-117
Bromofluorobenzene	50.0	48.3	97	74-121

Calculations are performed before rounding to avoid round-off errors in calculated results.

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Environmental Services

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC REPORT
Volatile Organics by GC/MS
Project: 124416

Category: 8260-S Volatile Organics, 8260
Matrix: SOLID
Sample: 124416-0022
MS Run: 05 FEB 97-BF
Units: ug/kg

Analyte	Sample Result	Concentration MS Result	MSD Result	Amount Spiked MS/MSD	%Recovery MS	MSD	%RPD	Accep Li Recov
1,1-Dichloroethene	ND	63.0	63.5	50.0	126	127	0.7	59-1
Trichloroethene	ND	52.0	50.5	50.0	104	101	2.9	62-1
Benzene	ND	48.1	48.1	50.0	96	96	0.0	66-1
Toluene	ND	47.6	47.4	50.0	95	95	0.4	59-1
Chlorobenzene	ND	49.7	48.5	50.0	99	97	2.4	60-1

Surrogates	Sample %Recovery	%Recovery MS	MSD	Acceptanc Recov
1,2-Dichloroethane-d4	99	109	108	80-12
Toluene-d8	97	97	97	81-11
Bromofluorobenzene	92	97	97	74-12

ND = Not Detected

Calculations are performed before rounding to avoid round-off errors in calculated results

Quanterra Environmental Services

METHOD BLANK REPORT
Volatile Organics by GC/MS
Project: 124416

Test: 8260-SL-S Method 8260 - Volatile Organics
Matrix: SOLID
QC Run: 05 FEB 97-BFX Date Analyzed: 05 FEB 97

Analyte	Result	Units	Reporting Limit
Chloromethane	ND	ug/kg	10
Bromomethane	ND	ug/kg	10
Vinyl chloride	ND	ug/kg	10
Chloroethane	ND	ug/kg	10
Methylene chloride	ND	ug/kg	5.0
Acetone	ND	ug/kg	10
Carbon disulfide	ND	ug/kg	5.0
Trichlorofluoromethane	ND	ug/kg	5.0
1,1-Dichloroethene	ND	ug/kg	5.0
1,1-Dichloroethane	ND	ug/kg	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/kg	5.0
Chloroform	ND	ug/kg	5.0
1,2-Dichloroethane	ND	ug/kg	5.0
2-Butanone	ND	ug/kg	10
1,1,1-Trichloroethane	ND	ug/kg	5.0
Carbon tetrachloride	ND	ug/kg	5.0
Vinyl acetate	ND	ug/kg	10
Bromodichloromethane	ND	ug/kg	5.0
1,2-Dichloropropane	ND	ug/kg	5.0
cis-1,3-Dichloropropene	ND	ug/kg	5.0
Trichloroethene	ND	ug/kg	5.0
Dibromochloromethane	ND	ug/kg	5.0
1,1,2-Trichloroethane	ND	ug/kg	5.0
Benzene	ND	ug/kg	5.0
trans-1,3-Dichloropropene	ND	ug/kg	5.0
2-Chloroethyl vinyl ether	ND	ug/kg	10
Bromoform	ND	ug/kg	5.0
4-Methyl-2-pentanone	ND	ug/kg	10
2-Hexanone	ND	ug/kg	10
Tetrachloroethene	ND	ug/kg	5.0
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0
Toluene	ND	ug/kg	5.0
Chlorobenzene	ND	ug/kg	5.0
Ethylbenzene	ND	ug/kg	5.0
Styrene	ND	ug/kg	5.0
Xylenes (total)	ND	ug/kg	5.0

Surrogate	Recovery	Acceptable Range
1,2-Dichloroethane-d4	101	80 -120
Toluene-d8	96	81 -117
Bromofluorobenzene	91	74 -121

ND = Not Detected

Quanterra
Environmental Services

QC LOT ASSIGNMENT REPORT - MS QC
Wet Chemistry Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK/LCS)	MS QC Run N (SA,MS,SD,I
124416-0022-SA	SOLID	TPH-IR-S		04 FEB 97-AX	04 FEB 97-A
124416-0023-SA	SOLID	TPH-IR-S		04 FEB 97-AX	04 FEB 97-A

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Environmental Services

LABORATORY CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation
Project: 124416

Category: TPH-IR-S Total Petroleum Hydrocarbons by IR
Matrix: SOLID Date Analyzed: 05 FEB 97
QC Run: 04 FEB 97-AX
Concentration Units: mg/kg

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
TPH, Recoverable	40.0	41.4	104	75-125

Calculations are performed before rounding to avoid round-off errors in calculated results

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Environmental Services

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC REPORT
Wet Chemistry Analysis and Preparation
Project: 124416

Category: TPH-IR-S Total Petroleum Hydrocarbons by IR
Matrix: SOLID
Sample: 124430-0005
MS Run: 04 FEB 97-AA
Units mg/kg Units Qualifier: Wet weight

Analyte	Sample Result	MS Result	MSD Result	Amount Spiked MS/MSD	%Recovery MS	%Recovery MSD	%RPD	Accep Lir Recov.
	Concentration							
TPH, Recoverable	290	314	484	40.0	NC	NC	NC	75-1:

NC = Not Calculated, calculation not applicable.

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT
Wet Chemistry Analysis and Preparation
Project: 124416

Test: TRPH-S
Matrix: SOLID
QC Run: 04 FEB 97-AX

Method EPA 418.1 - Total Petroleum Hydrocarbons, Recoverable

Date Analyzed: 05 FEB 97

Analyte	Result	Units	Reporting Limit
TPH, Recoverable	ND	mg/kg	10

ND = Not Detected

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QC LOT ASSIGNMENT REPORT - MS QC
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK/LCS)	MS QC Run I (SA,MS,SD,I
124416-0001-SA	SOLID	HG-CVAA-S		11 FEB 97-HX	11 FEB 97-H
124416-0001-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0002-SA	SOLID	HG-CVAA-S		11 FEB 97-HX	11 FEB 97-H
124416-0002-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0003-SA	SOLID	HG-CVAA-S		11 FEB 97-HX	11 FEB 97-H
124416-0003-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0006-SA	SOLID	HG-CVAA-S		11 FEB 97-HX	11 FEB 97-H
124416-0006-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0007-SA	SOLID	HG-CVAA-S		11 FEB 97-HX	11 FEB 97-H
124416-0007-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0010-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0011-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0012-SA	SOLID	HG-CVAA-S		11 FEB 97-HX	11 FEB 97-H
124416-0012-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0013-SA	SOLID	HG-CVAA-S		11 FEB 97-HX	11 FEB 97-H
124416-0013-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0014-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0015-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0016-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0017-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0022-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0023-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0024-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0025-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0026-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0027-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0028-SA	SOLID	ICP-S		04 FEB 97-NX	04 FEB 97-N
124416-0029-SA	SOLID	HG-CVAA-S		11 FEB 97-HX	11 FEB 97-H
124416-0029-SA	SOLID	ICP-S		04 FEB 97-OX	04 FEB 97-O

Quanterra Environmental Services

LABORATORY CONTROL SAMPLE REPORT
Metals Analysis and Preparation
Project: 124416

Category: HG-CVAA-S Mercury by CVAA
Matrix: SOLID
Date Analyzed: 11 FEB 97
QC Run: 11 FEB 97-HX
Concentration Units: mg/kg

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
Mercury	0.833	0.775	93	80-120

Category: ICP-S ICP Metals
Matrix: SOLID
Date Analyzed: 05 FEB 97
QC Run: 04 FEB 97-NX
Concentration Units: mg/kg

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
Arsenic	200	197	98	75-110
Cadmium	5.00	4.19	84	80-115
Copper	25.0	24.2	97	85-115
Lead	50.0	46.1	92	80-110
Thallium	200	185	92	80-110
Zinc	50.0	47.3	95	80-115

Category: ICP-S ICP Metals
Matrix: SOLID
Date Analyzed: 15 FEB 97
QC Run: 04 FEB 97-OX
Concentration Units: mg/kg

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
Arsenic	200	189	95	75-110
Cadmium	5.00	4.91	98	80-115
Copper	25.0	25.4	102	85-115
Lead	50.0	47.1	94	80-110
Thallium	200	190	95	80-110
Zinc	50.0	50.3	101	80-115

Calculations are performed before rounding to avoid round-off errors in calculated results

Quanterra
Environmental Services

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC REPORT
Metals Analysis and Preparation
Project: 124416

Category: HG-CVAA-S Mercury by CVAA
Matrix: SOLID
Sample: 124416-0002
MS Run: 11 FEB 97-HB
Units mg/kg Units Qualifier: Wet wt.

Analyte	Sample Result	MS Result	MSD Result	Amount Spiked MS/MSD	%Recovery MS	%Recovery MSD	%RPD	Accep Li Recov
		Concentration						
Mercury	ND	0.200	0.187	0.167	120	112	6.7	80-1

Category: ICP-S ICP Metals
Matrix: SOLID
Sample: 124416-0001
MS Run: 04 FEB 97-NA
Units: mg/kg

Analyte	Sample Result	MS Result	MSD Result	Amount Spiked MS/MSD	%Recovery MS	%Recovery MSD	%RPD	Accep Li Recov
		Concentration						
Arsenic	ND	199	198	200	99	99	0.1	75-1
Cadmium	ND	4.32	4.14	5.00	86	83	4.3	80-1
Copper	10.9	35.6	33.3	25.0	99	90	6.7	85-1
Lead	ND	46.3	47.3	50.0	93	95	2.1	80-1
Thallium	ND	189	184	200	95	92	2.7	80-1
Zinc	21.4	69.3	69.1	50.0	96	95	0.3	80-1

Category: ICP-S ICP Metals
Matrix: SOLID
Sample: 124416-0029
MS Run: 04 FEB 97-OA
Units: mg/kg

Analyte	Sample Result	MS Result	MSD Result	Amount Spiked MS/MSD	%Recovery MS	%Recovery MSD	%RPD	Accept Lir Recov.
		Concentration						
Arsenic	ND	194	190	200	97	95	1.9	75-1
Cadmium	ND	4.48	4.44	5.00	90	89	0.9	80-1
Copper	8.33	32.8	33.2	25.0	98	99	1.2	85-1
Lead	ND	47.0	46.7	50.0	94	93	0.6	80-1
Thallium	ND	185	182	200	93	91	1.7	80-1
Zinc	28.0	77.3	75.5	50.0	98	95	2.3	80-1

ND = Not Detected

Calculations are performed before rounding to avoid round-off errors in calculated result

Quanterra Environmental Services

METHOD BLANK REPORT
Metals Analysis and Preparation
Project: 124416

Test: HG-CVAA-S Method 7471 - Mercury, Cold Vapor AA
Matrix: SOLID
QC Run: 11 FEB 97-HX Date Analyzed: 11 FEB 97

Analyte	Result	Units	Reporting Limit
Mercury	ND	mg/kg	0.040

Test: ICP-S Method 6010 - ICP Metals (Total)
Matrix: SOLID
QC Run: 04 FEB 97-NX Date Analyzed: 05 FEB 97

Analyte	Result	Units	Reporting Limit
Arsenic	ND	mg/kg	10.0
Cadmium	ND	mg/kg	0.50
Copper	ND	mg/kg	2.0
Lead	ND	mg/kg	10.0
Thallium	ND	mg/kg	50.0
Zinc	ND	mg/kg	2.0

QC Run: 04 FEB 97-OX Date Analyzed: 15 FEB 97

Analyte	Result	Units	Reporting Limit
Arsenic	ND	mg/kg	10.0
Cadmium	ND	mg/kg	0.50
Copper	ND	mg/kg	2.0
Lead	ND	mg/kg	10.0
Thallium	ND	mg/kg	50.0
Zinc	ND	mg/kg	2.0

ND = Not Detected

Quanterra
Environmental Services

QC LOT ASSIGNMENT REPORT - MS QC
Subcontracted to Quanterra Lab

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK/LCS)	MS QC Run N (SA,MS,SD,D
124416-0001-SA	SOIL	8140-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0001-SA	SOLID	8150-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0002-SA	SOIL	8140-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0002-SA	SOLID	8150-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0003-SA	SOIL	8140-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0003-SA	SOLID	8150-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0006-SA	SOIL	8140-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0006-SA	SOLID	8150-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0007-SA	SOIL	8140-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0007-SA	SOLID	8150-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0012-SA	SOIL	8140-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0012-SA	SOLID	8150-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0013-SA	SOIL	8140-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0013-SA	SOLID	8150-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0018-SA	SOIL	8140-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0018-SA	SOLID	8150-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0019-SA	SOIL	8140-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0019-SA	SOLID	8150-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0020-SA	SOIL	8140-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0020-SA	SOLID	8150-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0021-SA	SOIL	8140-SW-S	06 FEB 97-11A	06 FEB 97-11A	
124416-0021-SA	SOLID	8150-SW-S	06 FEB 97-11A	06 FEB 97-11A	

Quanterra Environmental Services

DUPLICATE CONTROL SAMPLE REPORT
Subcontracted to Quanterra Lab
Project: 124416

Category: 8140-SW-S Organophosphate Pesticides
Matrix: SOIL
QC Lot: 06 FEB 97-11A
Date Analyzed: 20 FEB 97
Concentration Units: ug/kg

Analyte	Concentration Spiked	Measured DCS1	Qual	DCS2	Qual	AVG	Accuracy Average(%) DCS	Limits	Precision (RPD) DCS	Limit
Phosdrin (Mevinphos)	167	163		170		167	100	42-151	3.8	30
Phorate (Thimet)	167	142		148		145	87	36-127	4.4	26
Diazinon	167	151		156		153	92	56-131	3.6	33
Dursban (Chlorpyrifos)	167	154		156		155	93	58-125	1.3	25
Tetrachlorvinphos	167	156		155		156	93	67-136	0.72	23

Surrogate	Concentration Spiked	Measured DCS1	Qual	DCS2	Qual	Accuracy Average(%) DCS	Limits
Ethion	167	166		165		99	56-122

Category: 8150-SW-S Herbicides
Matrix: SOLID
QC Lot: 06 FEB 97-11A
Date Analyzed: 12 FEB 97
Concentration Units: ug/kg

Analyte	Concentration Spiked	Measured DCS1	Qual	DCS2	Qual	AVG	Accuracy Average(%) DCS	Limits	Precision (RPD) DCS	Limit
2,4-D	20.0	13.7		15.6		14.6	73	36-134	13	50
2,4,5-TP (Silvex)	4.00	3.11		3.56		3.33	83	56-114	14	27
2,4,5-T	4.00	3.49		3.84		3.66	92	45-129	9.5	54
Dinoseb	20.0	10.3		12.3		11.3	57	30-120	17	40

Surrogate	Concentration Spiked	Measured DCS1	Qual	DCS2	Qual	Accuracy Average(%) DCS	Limits
2,4-DCAA	20.0	10.6		11.7		56	25-159

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE REPORT
Subcontracted to Quanterra Lab
Project: 124416

Category: 8140-SW-S Organophosphate Pesticides
Matrix: SOIL
Date Analyzed: 20 FEB 97
QC Run: 06 FEB 97-11A
Concentration Units: ug/kg

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
Phosdrin (Mevinphos)	167	163	98	42-151
Phorate (Thimet)	167	142	85	36-127
Diazinon	167	151	90	56-131
Dursban (Chlorpyrifos)	167	154	92	58-125
Tetrachlorvinphos	167	156	94	67-136

Surrogates	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
Ethion	167	166	100	56-122

Calculations are performed before rounding to avoid round-off errors in calculated res

Quanterra
Environmental Services

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC REPORT
Semivolatile Organics by GC
Project: 124416

Category: 8080-S Pesticides
Matrix: SOLID
Sample: 124416-0001
MS Run: 03 FEB 97-EA
Units ug/kg Units Qualifier: Wet wt.

Analyte	Sample Result	Concentration MS Result	Concentration MSD Result	Amount Spiked MS/MSD	%Recovery MS	%Recovery MSD	%RPD	Acceptanc Limit Recov.	RI
gamma-BHC (Lindane)	ND	25.1	25.2	33.3	75	76	0.5	12-164	1
Heptachlor	ND	27.1	26.9	33.3	81	81	0.5	26-131	2
Aldrin	ND	24.9	23.6	33.3	75	71	5.5	28-130	2
Dieldrin	ND	26.2	28.3	33.3	79	85	7.7	38-132	2
Endrin	ND	30.9	33.9	33.3	93	102	9.3	44-135	2
4,4'-DDT	ND	28.8	31.2	33.3	86	94	7.9	20-135	3

= Not Detected

lculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra
Environmental Services

METHOD BLANK REPORT
Subcontracted to Quanterra Lab
Project: 124416

Test: 8140-SW-S Method 8140 - Organophosphorus Pesticides
Matrix: SOIL
QC Run: 06 FEB 97-11A Date Analyzed: 20 FI

Analyte	Result	Units	Reporting Limit
Azinphos-methyl (Guthion)	ND	ug/kg	50
Bolstar	ND	ug/kg	50
Dursban (Chlorpyrifos)	ND	ug/kg	50
Coumaphos	ND	ug/kg	50
Demeton	ND	ug/kg	50
Diazinon	ND	ug/kg	50
Dichlorvos	ND	ug/kg	50
Disyston (Disulfoton)	ND	ug/kg	50
Ethoprop	ND	ug/kg	50
Fensulfothion	ND	ug/kg	50
Baytex (Fenthion)	ND	ug/kg	50
Merphos	ND	ug/kg	50
Phosdrin (Mevinphos)	ND	ug/kg	50
Naled	ND	ug/kg	50
Methyl parathion	ND	ug/kg	50
Phorate (Thimet)	ND	ug/kg	50
Ronnel	ND	ug/kg	50
Tetrachlorvinphos	ND	ug/kg	50
Tokuthion (Prothiophos)	ND	ug/kg	50
Trichloronate	ND	ug/kg	50

Surrogate	Recovery	Acceptable Range
Ethion	98	56 -122

Test: 8150-SW-S Method 8150 - Chlorinated Phenoxyacid Herbicides
Matrix: SOLID
QC Run: 06 FEB 97-11A Date Analyzed: 12 FE

Analyte	Result	Units	Reporting Limit
2,4-D	ND	ug/kg	25
2,4-DB	ND	ug/kg	100
2,4,5-TP (Silvex)	ND	ug/kg	5.0
2,4,5-T	ND	ug/kg	5.0
MCPP	ND	ug/kg	5000
MCPA	ND	ug/kg	5000
Dinoseb	ND	ug/kg	25
Dalapon	ND	ug/kg	100
Dichlorprop	ND	ug/kg	25
Dicamba	ND	ug/kg	10

ND = Not Detected

Quanterra
Environmental Services

METHOD BLANK REPORT (cont.)
Subcontracted to Quanterra Lab
Project: 124416

Test: 8150-SW-S Method 8150 - Chlorinated Phenoxyacid Herbicides (cont
Matrix: SOLID

Surrogate	Recovery	Acceptable Range
2,4-DCAA	61	25 -159

Quantera

CHAIN OF CUSTODY RECORD REQUEST FOR ANALYSIS

COMPANY NAME: SCS Engineers
STREET: 3711 Long Beach Blvd. 9th Fl.
CITY: Long Beach STATE: CA ZIP: 90807
PHONE: (562) 426-4544 FAX: (562) 427-0805
PROJECT NAME: LACDAC
PROJECT ADDRESS: 8841 E. Slauson Ave, Pico Rivera, CA.
PROJECT NUMBER: 01931.71.01
SAMPLER NAME AND SIGNATURE: Steve Clements
CONTACT PERSON REPORTS TO BE SENT TO: Ken Lister

CARRIER:
SHIPMENT DATE:
SHIPPING NUMBER:
NUMBER OF SAMPLES: 29
PAGE 1 OF 3
QUOTE #/P.O. #
TASK NUMBER:

TURNAROUND TIME REQUIRED:
- [x] NORMAL
- [ ] 5-DAY
- [ ] 3-DAY
- [ ] 24-HOUR
- [ ] IMMEDIATE ATTENTION

SAMPLE ID NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX	SAMPLE PRESERVATIVE(S)	CONTAINER SIZE/TYPE	DATE/TIME COLLECTED	FIELD TEMP.	FIELD pH	FIELD EC	SPECIAL PROGRAM REQUIREMENTS OR EPA - SOP & QAM REF	EPA 8080	EPA 8150	EPA 8140	Metals *	Metals **						LAB ONLY: SAMPLE CONDITION UPON RECEIPT
7347	MW1S-5-10	Soil		2½"x6" Brass Tube	1/28/97					X	X	X	X							
7348	MW1S-5-15									X	X	X	X							
7349	MW1S-5-30									X	X	X	X							
7350	MW1S-5-35									X										
7351	MW1S-5-40									X										
7352	MW2S-5-15									X	X	X	X							
7353	MW2S-5-20									X	X	X	X							
7354	MW2S-5-30									X										
7355	MW2S-5-40									X										
7356	MW3S-5-15				1/29/97					X				X						

SPECIAL INSTRUCTIONS / COMMENTS:

* Metals = As, Cd, Co, Pb, Hg, Tl, Zn
** Metals = As, Cd, Co, Pb, Tl, Zn

Please Retain unused portions of sample for Later analysis (if needed)

RELINQUISHED BY: (Signature)	DATE:	RECEIVED BY: (Signature)	DATE:	RELINQUISHED BY: (Signature)	DATE:	RECEIVED BY: (Signature)	DATE
COMPANY: SCS	TIME: 11	COMPANY:	TIME:	COMPANY:	TIME:	COMPANY:	TIME:
	1/31/97		1-31-97		1-31-97		1/31/97

CHAIN OF CUSTODY RECORD REQUEST FOR ANALYSIS

COMPANY NAME: SCS Engineers
STREET:
CITY: See Page #1 STATE: ZIP:
PHONE ( ) FAX: ( )
PROJECT NAME: LACDAC
PROJECT ADDRESS
PROJECT NUMBER: 01931.71.01
SAMPLER NAME AND SIGNATURE: Steve Clements
CONTACT PERSON REPORTS TO BE SENT TO: Ken Lister

CARRIER:
SHIPMENT DATE:
SHIPPING NUMBER:
NUMBER OF SAMPLES: 29 PAGE 2 OF 3
QUOTE #/P.O. #
TASK NUMBER:

TURNAROUND TIME REQUIRED:
☒ NORMAL
☐ 5-DAY ☐ 3-DAY
☐ 24-HOUR
☐ IMMEDIATE ATTENTION

SAMPLE ID NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX	SAMPLE PRESERVATIVE(S)	CONTAINER SIZE/TYPE	DATE/TIME COLLECTED	FIELD TEMP.	FIELD pH	FIELD EC	SPECIAL PROGRAM REQUIREMENTS OR EPA - SOP & QAM REF	EPA 8080	Metals**	EPA 8240	EPA 8150	Metals*	Zn						LAB ONLY: SAMPLE CONDITION UPON RECEIPT
7357	MW35-5-20	Soil		2 1/2"x6" Brass Tubes	1/29/97					X	X										
9500	MW15-5-20(D)									X		X	X	X							
7600	MW25-5-20(D)									X		X	X	X							
7358	B17-5-25									X	X										
7359	B17-5-30									X	X										
7360	SS4-5-3'				1/30/97										X						
7361	SS4-5-5'														X						
7362	SS5-5-3'									X		X	X								
7363	SS5-5-5'									X		X	X								
7364	SS8-5-3'									X		X	X								

SPECIAL INSTRUCTIONS / COMMENTS:

** Metals = As, Cd, Co, Pb, Tl, Zn

* Metals = As, Cd, Co, Pb, Hg, Tl, Zn

RELINQUISHED BY: (Signature)	DATE	RECEIVED BY: (Signature)	DATE:	RELINQUISHED BY: (Signature)	DATE:	RECEIVED BY: (Signature)	DATE
COMPANY: SCS	1/31/97 TIME 10:00am	COMPANY: Courier	1-31-97 TIME: 1000	COMPANY: Courier	1-31-97 TIME: 1210	COMPANY: Quanterra	1/31/97 TIME 1210

Quarterly

CHAIN OF CUSTODY RECORD REQUEST FOR ANALYSIS

COMPANY NAME: SCS Engineers
STREET:
CITY: See Page #1 STATE: ZIP:
PHONE: ( ) FAX: ( )
PROJECT NAME: LACDFC
PROJECT ADDRESS:
PROJECT NUMBER: 01931 71.01
SAMPLER NAME AND SIGNATURE: Steve Clements
CONTACT PERSON REPORTS TO BE SENT TO: Ken Lister

CARRIER:
SHIPMENT DATE:
SHIPPING NUMBER:
NUMBER OF SAMPLES: 29
PAGE 3 OF 3
QUOTE #/P.O. #
TASK NUMBER:

TURNAROUND TIME REQUIRED:
☒ NORMAL
☐ 5-DAY ☐ 3-DAY
☐ 24-HOUR
☐ IMMEDIATE ATTENTION

SAMPLE ID NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX	SAMPLE PRESERVATIVE(S)	CONTAINER SIZE/TYPE	DATE/TIME COLLECTED	FIELD TEMP	FIELD pH	FIELD EC	SPECIAL PROGRAM REQUIREMENTS OR EPA - SOP & QAM REF	EPA 8080	EPA 8140	EPA 8150	EPA 8010/8020	418.1	Carbon Chain	Pb Cd	Pb	Zn	Metals*	LAB ONLY: SAMPLE CONDITION UPON RECEIPT
7365	SS8-5.5'	Soil		2½"x6" Brass Tube	1/30/97					X	X	X								
7366	SS9-5.3'												X	X	X	X				
7367	SS9-5.5'												X	X	X	X				
7368	SS14-5.3'																X			
7369	SS14-5.5'																X			
7370	SS18-5.3'															X				
7371	SS18 5.5'															X				
7372	SS1-5.3' (D)																	X		
7373	MW3 0.4-0.1			3oz Glass J.S						X									X	

SPECIAL INSTRUCTIONS / COMMENTS:
* Metals ⇒ As, Cd, Cr, Pb, Hg, Tl, Zn

RELINQUISHED BY: (Signature)	DATE	RECEIVED BY: (Signature)	DATE:	RELINQUISHED BY: (Signature)	DATE:	RECEIVED BY: (Signature)	DATE
COMPANY	1/31/97 TIME	PBeaulieu COMPANY:	1-31-97 TIME:	PBeaulieu COMPANY:	1-31-97 TIME:	COMPANY:	1/31/97 TIME

Chain of Custody Record

QUA-412-1

To: W.SAC

Quanterra Environmental Services

Client: Quanterra
Address: 1721 S. GRAND Ave
City: SANTA ANA | State: CA | Zip Code: 92705
Project Name: SCS/LACDAE
Contract/Purchase Order/Quote No:

Project Manager: Sabina Sudoko
Telephone Number (Area Code)/Fax Number: (714) 258-8610
Site Contact: W.SAC
Lab Contact: ~~124416~~ K. Roger
Carrier/Waybill Number:

Date: 2/4/97
Lab Number: 124416
Chain Of Custody Number: 58214
Page 1 of 1

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: 8140	Analysis: 8150	Special Instructions/ Conditions of Receipt
MW15-5-10 (-01)	1/28/97				X	X						X	X	
MW15-5-15 (-02)	↓				↓	↓						↓	↓	
MW15-5-30 (-03)														
MW25-5-15 (-06)														
MW25-5-20 (-07)	1/28/97													
MW15-5-20(D) (-012)	1/29/97													
MW25-5-20(D) (-013)	1/29/97													
SS5-5-3' (-018)	1/30/97													
SS5-5-5' (-019)														
SS8-5-3' (-020)														
SS8-5-5' (-021)	1/30/97				X	X						X	X	

MW

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other 2/19/97

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By	2/4/97	1430	1. Received By	020597	1040
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments:

TRUESDAIL LABORATORIES, INC.

CHEMISTS · MICROBIOLOGISTS · ENGINEERS
RESEARCH · DEVELOPMENT · TESTING
ESTABLISHED 1931

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780
(714) 730-6239
FAX (714) 730-6462

LA County Dept. of Agricultural Commissioners
3400 La Madera Ave.
El Monte, CA 91732
Attn: Richard Wightman

Date: July 31, 1996
Recv'd: July 17, 1996
Lab. No: 90556
P.O. No: Verbal S.S.C.

Sample: One (1) soil sample labelled AC 5571-96. = BACP-1(20)

Investigation: Analyze for strychnine in soil by high performance liquid chromatography (HPLC)-ultra violet (UV) spectroscopic detection.

RESULTS

The soil sample was extracted with distilled water at pH < 2. The water extract was neutralized to pH 7 and extracted with diethylether. The ether extract was exchanged into acetonitrile for analysis by HPLC-UV. The HPLC-UV analysis was adapted from NIOSH Method 5016.

	Milligrams per Kilogram (ppm)	
HPLC-UV	AC 5571-96	Detection Limit
Strychnine	ND	0.1

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Joe Bramblett, Manager
Instrumental Methods

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising of publicity matter without prior written authorization from these Laboratories.

CHAIN OF CUSTODY RECORD REQUEST FOR ANALYSIS

COMPANY NAME: SCS Engineers
ADDRESS: 3711 Long Beach Blvd. 9th Fl. LB, CA 90807
PHONE NUMBER: (310) 426-9544
FAX: (310) 427-0805

CARRIER:
SHIPMENT DATE:
SHIPPING NUMBER:
NUMBER OF SAMPLES: 1 PAGE 1 OF 1

TURNAROUND TIME REQUIRED:
- [x] NORMAL
- [ ] 5-DAY
- [ ] 3-DAY
- [ ] 24-HOUR
- [ ] IMMEDIATE ATTENTION

PROJECT NAME: LACDAC
PROJECT ADDRESS: 8541 E. Slauson Ave, Pico Rivera, CA
PROJECT NUMBER: 019317.01
SAMPLER NAME AND SIGNATURE: Steve Clements
REPORTS TO BE SENT TO: Ken Lister

SAMPLE I.D. NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX	SAMPLE PRESERVATIVE(S)	CONTAINER SIZE / TYPE	DATE / TIME COLLECTED	FIELD TEMP.	FIELD pH	FIELD EC	SPECIAL PROGRAM REQUIREMENTS OR EPA - SOP & QAM REF	ANALYSES REQUIRED: Styrene	LAB ONLY: SAMPLE CONDITION UPON RECEIPT
1738	BACP-1	Air	—	2 1L 3" SS Tube	6/6/96					X	

SPECIAL INSTRUCTIONS / COMMENTS:
* This sample is for the Los Angeles County Dept. of Agricultural Commissioner. Contact Richard Wightman (818) 459-3572.

RELINQUISHED BY: (Signature)	DATE:	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE:	RECEIVED BY: (Signature)
COMPANY: SCS	TIME:	COMPANY:	COMPANY:	TIME:	COMPANY:

Quanterra Incorporated
1721 South Grand Avenue
Santa Ana, California 92705

714 258-8610 Telephone
714 258-0921 Fax

June 19, 1996

SCS ENGINEERS
3711 LONG BEACH BLVD, NINTH FLOOR
LONG BEACH, CA 90807
ATTN: MR. STEVE CLEMENTS

LIMS NO.: 119149-0001/0001
DATE SAMPLED: 7-JUN-1996
DATE SAMPLE REC'D: 7-JUN-1996
PROJECT: LACDAC/0193171.01

Enclosed with this letter is the report containing the analytical results for the project specified above.

The Narrative section included in the following attachment provides a detailed description of all events that occurred during sample processing, analysis, and data review as applicable to the samples and analytical methods requested.

Report data sheets contain a list of the requested constituents measured in each test, the analytical results, and the standard reporting limits (RLs). Reporting limits are adjusted to reflect any dilution or dry weight correction, when applicable. Solid and waste matrix samples are reported on [a dry weight/ an "as received"] basis for this report. Also provided in this report are the LIMS Report Key and the terms and abbreviations commonly used in our reports.

Preliminary data were provided on June 17, 1996 at 5:50 P.M. except ICP metals which were provided at 6:33 P.M. to Steve Clements.

The report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions regarding the data provided in this report, please call Sabina Sudoko at (714) 258-8610. Release of this report has been authorized by the Lab Director or the designee as demonstrated by the following signature.

Sincerely,

Sabina R. Sudoko
Project Manager

cc: Project File

Quanterra Environmental Services

LIMS REPORT KEY

Section	Description
Cover letter	Signature page, report narrative as applicable.
Sample Description Information	Tabulated cross-reference between the Lab ID and Cli ID, including matrix, date and time sampled and the d received for all samples in the project.
Sample Analysis Results Sheets	Lists sample results, test components, reporting limits dates prepared and analyzed and any data qualifiers. Pages are organized by test.
QC Lot Assignment Report	Cross-reference between lab IDs and applicable QC batches (DCS, LCS, SCS, Blank, MS/SD, DU)
Duplicate Control Sample Report	Percent recovery and RPD results, with acceptance lin for the laboratory Duplicate Control Samples for each are tabulated in this report. These are measures of accuracy and precision for each test.
Laboratory Control Sample Report	Percent recovery results for a single Laboratory Contro Sample (if applicable) are tabulated in this report, with applicable acceptance limits for each test.
Matrix Spike/Matrix Spike Duplicate Report	Percent recovery and RPD results for matrix-specific Q samples and acceptance limits, where applicable. This report can be used to assess matrix effects on an anal
Single Control Sample Report	A tabulation of the surrogate recoveries for the blank f organic analyses.
Method Blank Report	A summary of the results of the analysis of the method blank for each test.

List of Abbreviations and Terms

DCS	Duplicate Control Sample	MSD	Matrix Spike Duplicate
DU	Sample Duplicate	QC Run	Preparation batch
EB	Equipment Blank	QC Category	LIMS QC Category
FB	Field Blank	QC Lot	DCS batch
FD	Field Duplicate	ND	Not Detected at the reporting limit expresse
IDL	Instrument Detection Limit	QC Matrix	Matrix of the laboratory control sample (s)
LCS	Laboratory Control Sample	RL	Reporting Limit
MB	Method Blank	QC	Quality Control
MDL	Method Detection Limit	SA	Sample
MS	Matrix Spike	SD	See MSD
RPD	Relative Percent Difference	TB	Trip Blank
ppm (parts-per-million)	mg/L or mg/kg	ppb (parts-per-billion)	µg/L or µg/kg
QUAL	Qualifier flag	DIL	Dilution Factor

Refer to the Quanterra Incorporated Quality Assurance Management Plan for detailed explanations of terms summarized above.

Quanterra Environmental Services

TABLE OF CONTENTS

LIMS # 119149

Cover Letter 1

LIMS Report Key 2

Table of Contents 3

Narrative 4

Chain-of-Custody Records and Sample Description Information

Analytical Results Summary (LIMS Report)

A. LIMS Datasheets
B. QC Summaries

Quanterra Environmental Services

CASE NARRATIVE

LIMS # 119149

I. CONDITION UPON RECEIPT

Cooler was received intact. The temperature of the cooler was 3.2°C.

Sample containers were received intact. Proper preservation of applicable samples (excluding VOA samples) was verified upon receipt and documented on the Sample Control worksheet. Sample container label did agree with the COC as to sample ID, collection date/time, requested tests and/or preservatives.

Samples were received in time to meet the method holding time specifications.

II. ORGANIC ANALYSES (BY METHOD: SW8080)

HOLDING TIME
All samples were prepared and analyzed within the method-specified holding time requirements.

METHOD BLANK
All method blanks met method-specific QC criteria.

MS/MSD/LCS/DCS AND RPDs
All spike recovery and RPD data met method-specific QC criteria.

SURROGATE RECOVERIES
All surrogate spike recoveries in samples and in QC samples met method-specific QC criteria.

CALIBRATIONS
All calibrations and calibration verifications met method-specific QC criteria.

III. METALS (BY METHOD: SW6010; SW7000 Series)

HOLDING TIME
All samples were prepared and analyzed within the method-specified holding time requirements.

METHOD BLANK
All method blank data met method-specific QC criteria except for the zinc in the SW6010 analysis. Analyte zinc (SW6010) was detected in the method blank 14 JUN 96-A at 2.2 mg/kg which exceeded the RL of 2.0 mg/kg. All sample results for this analyte are qualified using a "B." However, the analyte level in the sample was greater than 20 times the blank level.

MS/MSD/LCS/DCS AND RPDs
Matrix spike/matrix spike duplicate spike recoveries were outside the acceptance limits for mercury (SW7471) and lead (SW6010). However, the acceptable LCS analysis data indicated that the analytical system was operating within control and this condition is most likely due to matrix interference.

CALIBRATIONS
All calibrations and calibration verifications met method-specific QC criteria.

Quanterra
Environmental Services

SAMPLE DESCRIPTION INFORMATION
for
SCS Engineers

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
119149-0001-SA	1736, 1737	SOIL	07 JUN 96		07 JUN 96

Quanterra
Environmental Services

METALS

Client Name: SCS Engineers
Client ID: 1736, 1737
LAB ID: 119149-0001-SA
Matrix: SOIL
Authorized: 07 JUN 96

Sampled: 07 JUN 96
Prepared: See Below

Received: 07 .
Analyzed: See

Parameter	Result	Qual	DIL	RL	Units	Method	Prep Date	An I
Mercury	ND		1.0	0.040	mg/kg	SW7471	13 JUN 96	1
Arsenic	21.2		1.0	10.0	mg/kg	SW6010	14 JUN 96	1
Cadmium	ND		1.0	0.50	mg/kg	SW6010	14 JUN 96	1
Copper	8.6		1.0	2.0	mg/kg	SW6010	14 JUN 96	1
Lead	ND		1.0	10.0	mg/kg	SW6010	14 JUN 96	1
Thallium	ND		1.0	50.0	mg/kg	SW6010	14 JUN 96	1
Zinc	76.4	B	1.0	2.0	mg/kg	SW6010	14 JUN 96	1

B = Compound is also detected in the blank.
ND = Not Detected

Quanterra Environmental Services

Organochlorine Pesticides and Polychlorinated Biphenyls
Method 8080

Client Name: SCS Engineers
Client ID: 1736, 1737
LAB ID: 119149-0001-SA
Matrix: SOIL — Sampled: 07 JUN 96 — Received: 07 JUN 96
Authorized: 07 JUN 96 — Prepared: 11 JUN 96 — Analyzed: 13 JUN 96
Instrument: GC/ECD-P3A — Dilution: 1.0

Parameter	Result	Qualifier	RL	Units
alpha-BHC	ND		1.7	ug/kg
beta-BHC	ND		1.7	ug/kg
delta-BHC	ND		1.7	ug/kg
gamma-BHC (Lindane)	ND		1.7	ug/kg
Aldrin	ND		1.7	ug/kg
Heptachlor	ND		1.7	ug/kg
Heptachlor epoxide	ND		1.7	ug/kg
Endosulfan I	ND		1.7	ug/kg
Dieldrin	ND		3.3	ug/kg
4,4'-DDE	ND		3.3	ug/kg
Endrin	ND		3.3	ug/kg
Endosulfan II	ND		3.3	ug/kg
4,4'-DDD	ND		3.3	ug/kg
Endosulfan sulfate	ND		3.3	ug/kg
4,4'-DDT	ND		3.3	ug/kg
Methoxychlor	ND		14	ug/kg
Endrin aldehyde	ND		3.3	ug/kg
alpha-Chlordane	ND		1.7	ug/kg
gamma-Chlordane	ND		1.7	ug/kg
Toxaphene	ND		70	ug/kg
Aroclor 1016	ND		33	ug/kg
Aroclor 1221	ND		33	ug/kg
Aroclor 1232	ND		33	ug/kg
Aroclor 1242	ND		33	ug/kg
Aroclor 1248	ND		33	ug/kg
Aroclor 1254	ND		33	ug/kg
Aroclor 1260	ND		33	ug/kg

Surrogate	Recovery		Acceptable Range
2,4,5,6-Tetrachloro-m-xylene	100	%	60 - 150
Decachlorobiphenyl	110	%	60 - 150

ND = Not Detected

Quanterra
Environmental Services

QC LOT ASSIGNMENT REPORT - MS QC
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK/LCS)	MS QC Run N (SA,MS,SD,D
119149-0001-SA	SOLID	HG-CVAA-S		13 JUN 96-JX	13 JUN 96-J
119149-0001-SA	SOLID	ICP-S		14 JUN 96-AX	14 JUN 96-A

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE REPORT
Metals Analysis and Preparation
Project: 119149

Category: HG-CVAA-S Mercury by CVAA
Matrix: SOLID
Date Analyzed: 14 JUN 96
QC Run: 13 JUN 96-JX
Concentration Units: mg/kg

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
Mercury	0.833	0.787	94	80-120

Category: ICP-S ICP Metals
Matrix: SOLID
Date Analyzed: 15 JUN 96
QC Run: 14 JUN 96-AX
Concentration Units: mg/kg

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
Arsenic	200	198	99	75-110
Cadmium	5.00	5.08	102	80-115
Copper	25.0	25.8	103	85-115
Lead	50.0	50.2	100	80-110
Thallium	200	200	100	80-110
Zinc	50.0	54.1	108	80-115

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra
Environmental Services

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC REPORT
Metals Analysis and Preparation
Project: 119149

Category: HG-CVAA-S Mercury by CVAA
Matrix: SOLID
Sample: 119149-0001
MS Run: 13 JUN 96-JA
Units mg/kg Units Qualifier: Wet wt.

Analyte	Sample Result	Concentration MS Result	Concentration MSD Result	Amount Spiked MS/MSD	%Recovery MS	%Recovery MSD	%RPD	Accep Li Recov
Mercury	ND	0.218 n	0.182	0.167	131	109	18	80-12

Category: ICP-S ICP Metals
Matrix: SOLID
Sample: 118354-0021
MS Run: 14 JUN 96-AA
Units: mg/kg

Analyte	Sample Result	Concentration MS Result	Concentration MSD Result	Amount Spiked MS/MSD	%Recovery MS	%Recovery MSD	%RPD	Accept Lim Recov.
Arsenic	ND	198	200	200	99	100	1.0	75-110
Cadmium	ND	5.09	5.03	5.00	102	101	1.3	80-115
Copper	13.9	39.6	39.4	25.0	103	102	0.5	85-115
Lead	ND	55.9 n	55.0	50.0	112	110	1.6	80-110
Thallium	ND	199	196	200	99	98	1.4	80-110
Zinc	72.7	124	123	50.0	103	101	2.5	80-115

n = Spiked analyte out of matrix spike acceptance limits; refer to lab control sample resu
ND = Not Detected

Calculations are performed before rounding to avoid round-off errors in calculated results

Quanterra
Environmental Services

METHOD BLANK REPORT
Metals Analysis and Preparation
Project: 119149

Test: HG-CVAA-S Method 7471 - Mercury, Cold Vapor AA
Matrix: SOLID
QC Run: 13 JUN 96-JX Date Analyzed: 14 JUN 9

Analyte	Result	Units	Reporting Limit
Mercury	ND	mg/kg	0.040

Test: ICP-S Method 6010 - ICP Metals (Total)
Matrix: SOLID
QC Run: 14 JUN 96-AX Date Analyzed: 15 JUN 9

Analyte	Result	Units	Reporting Limit
Arsenic	ND	mg/kg	10.0
Cadmium	ND	mg/kg	0.50
Copper	ND	mg/kg	2.0
Lead	ND	mg/kg	10.0
Thallium	ND	mg/kg	50.0
Zinc	2.2	mg/kg	2.0

ND = Not Detected

Quanterra
Environmental Services

QC LOT ASSIGNMENT REPORT - MS QC
Semivolatile Organics by GC

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK/LCS)	MS QC Run N (SA,MS,SD,I
119149-0001-SA	SOLID	8080-S		11 JUN 96-BX	11 JUN 96-E

Quanterra
Environmental Services

LABORATORY CONTROL SAMPLE REPORT
Semivolatile Organics by GC
Project: 119149

Category: 8080-S Pesticides
Matrix: SOLID
QC Run: 11 JUN 96-BX
Concentration Units: ug/kg

Date Analyzed: 13 JUN 96

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) LCS	Accuracy(%) Limits
gamma-BHC (Lindane)	33.3	31.2	94	25-166
Heptachlor	33.3	31.7	95	37-132
Aldrin	33.3	38.2	115	40-126
Dieldrin	33.3	33.6	101	50-126
Endrin	33.3	33.4	100	35-126
4,4'-DDT	33.3	33.5	101	42-113

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra
Environmental Services

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC REPORT
Semivolatile Organics by GC
Project: 119149

Category: 8080-S Pesticides
Matrix: SOLID
Sample: 119187-0001
MS Run: 11 JUN 96-BA
Units ug/kg Units Qualifier: Wet wt.

Analyte	Sample Result	Concentration MS Result	Concentration MSD Result	Amount Spiked MS/MSD	%Recovery MS	%Recovery MSD	%RPD	Accep Li: Recov
gamma-BHC (Lindane)	ND	33.0	33.8	33.3	99	101	2.1	12-16
Heptachlor	ND	31.8	31.7	33.3	95	95	0.3	26-13
Aldrin	ND	38.4	38.3	33.3	115	115	0.4	28-13
Dieldrin	ND	33.6	33.5	33.3	101	101	0.2	38-13
Endrin	ND	35.1	35.5	33.3	105	107	1.1	44-13
4,4'-DDT	ND	35.8	35.1	33.3	107	105	2.0	20-13

ND = Not Detected

Calculations are performed before rounding to avoid round-off errors in calculated results

Quanterra
Environmental Services

SINGLE CONTROL SAMPLE REPORT
Semivolatile Organics by GC
Project: 119149

Category: 8080-S Pesticides
Matrix: SOLID
QC Run: 11 JUN 96-BX
Concentration Units: ug/kg

Date Analyzed: 12 JUN 96

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) SCS	Accuracy(%) Limits
2,4,5,6-Tetrachloro-m-xylene	6.67	6.40	96	60-150
Decachlorobiphenyl	6.67	7.19	108	60-150

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra
Environmental Services

METHOD BLANK REPORT
Semivolatile Organics by GC
Project: 119149

Test: 8080-S
Matrix: SOLID
QC Run: 11 JUN 96-BX

Method 8080 - TCL Organochlorine Pesticides/PCBs

Date Analyzed: 12 J

Analyte	Result	Units	Reporting Limit
alpha-BHC	ND	ug/kg	1.7
beta-BHC	ND	ug/kg	1.7
delta-BHC	ND	ug/kg	1.7
gamma-BHC (Lindane)	ND	ug/kg	1.7
Aldrin	ND	ug/kg	1.7
Heptachlor	ND	ug/kg	1.7
Heptachlor epoxide	ND	ug/kg	1.7
Endosulfan I	ND	ug/kg	1.7
Dieldrin	ND	ug/kg	3.3
4,4'-DDE	ND	ug/kg	3.3
Endrin	ND	ug/kg	3.3
Endosulfan II	ND	ug/kg	3.3
4,4'-DDD	ND	ug/kg	3.3
Endosulfan sulfate	ND	ug/kg	3.3
4,4'-DDT	ND	ug/kg	3.3
Methoxychlor	ND	ug/kg	14
Endrin aldehyde	ND	ug/kg	3.3
alpha-Chlordane	ND	ug/kg	1.7
gamma-Chlordane	ND	ug/kg	1.7
Toxaphene	ND	ug/kg	70
Aroclor 1016	ND	ug/kg	33
Aroclor 1221	ND	ug/kg	33
Aroclor 1232	ND	ug/kg	33
Aroclor 1242	ND	ug/kg	33
Aroclor 1248	ND	ug/kg	33
Aroclor 1254	ND	ug/kg	33
Aroclor 1260	ND	ug/kg	33

ND = Not Detected

CHAIN OF CUSTODY RECORD REQUEST FOR ANALYSIS

(119149)

COMPANY NAME: SCS Engineers
ADDRESS: 3711 Long Beach Blvd. 7th Fl. LB, CA
PHONE NUMBER: (310) 426-9544
FAX: (310) 427-8005
PROJECT NAME: LACDAC
PROJECT ADDRESS: 8811 E. Slauson Ave. Pico Rivera
PROJECT NUMBER: 01931.71.01
SAMPLER NAME AND SIGNATURE: Steve Clements
REPORTS TO BE SENT TO: Ken Lister

CARRIER:
SHIPMENT DATE:
SHIPPING NUMBER:
NUMBER OF SAMPLES: 3
PAGE 1 OF 1

TURNAROUND TIME REQUIRED:
- [x] NORMAL
- [ ] 5-DAY
- [ ] 3-DAY
- [ ] 24-HOUR
- [ ] IMMEDIATE ATTENTION

SAMPLE I.D. NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX	SAMPLE PRESERVATIVE(S)	CONTAINER SIZE / TYPE	DATE / TIME COLLECTED	FIELD TEMP.	FIELD pH	FIELD EC	SPECIAL PROGRAM REQUIREMENTS OR EPA - SOP & QAM REF	8080	Arsenic	Cadmium	Copper	Lead	Mercury	Thallium	Zinc			SAMPLE CONDITION UPON RECEIPT
1736	BACP-1	Soil	—	2"L x 3" SS Tube	6/7/96					X	X	X	X	X	X	X	X			
1737																				

ANALYSES REQUIRED

LAB ONLY

SPECIAL INSTRUCTIONS / COMMENTS:

*2 2½" x 3" SS Tube

RELINQUISHED BY: (Signature)	DATE:	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE:	RECEIVED BY: (Signature)
COMPANY: SCS	TIME: 1:15 pm	COMPANY: Express it	COMPANY: Express it	TIME: 1350	COMPANY: QES.S.A K. FREITAG

ANALYTICAL REPORT

PROJECT NO. 0193171.01

LACDAC

Lot #: G9E220184

Steve Clements

SCS Engineers

QUANTERRA INCORPORATED

Nilo Ligi
Project Manager

July 19, 1999

Quanterra Incorporated
880 Riverside Parkway
West Sacramento, California 95605

916 373-5600 Telephone
916 372-1059 Fax

July 21, 1999

QUANTERRA INCORPORATED PROJECT NUMBER: G9E220184
PO/CONTRACT: TBD

Steve Clements
SCS Engineers
3711 Long Beach Boulevard
Ninth Floor
Long Beach, CA 90807

Dear Mr. Clements,

This report contains the analytical results for the twenty-three samples received under chain of custody by Quanterra Incorporated on May 22, 1999. These samples are associated with your LACDAC project.

The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916)374-4427

Sincerely,

Nilo Ligh
Project Manager

Quanterra

TABLE OF CONTENTS

QUANTERRA INCORPORATED PROJECT NUMBER G9E220184

Case Narrative

Quanterra's Quality Assurance Program

Sample Description Information

Chain of Custody Documentation

Chlorinated Pesticides – Method 8081A (Low)
Sample(s): 3 - 22
- Sample Data Sheets
- Method Blank Reports
- Laboratory QC Reports

Chlorinated Pesticides – Method 8081A (Medium)
Sample(s): 23
- Sample Data Sheets
- Method Blank Reports
- Laboratory QC Reports

Organophosphorus Pesticides – Method 8141A
Sample(s): 3 - 23
- Sample Data Sheets
- Method Blank Reports
- Laboratory QC Reports

Chlorinated Herbicides – Method 8151A
Sample(s): 1 - 6
- Sample Data Sheets
- Method Blank Reports
- Laboratory QC Reports

Selected Metals - Various Methods
Sample(s): 3 - 23
- Sample Data Sheets
- Method Blank Reports
- Laboratory QC Reports

Quanterra

CASE NARRATIVE

QUANTERRA INCORPORATED PROJECT NUMBER G9E220184

Sample receipt

Samples were received at 13 deg.C.

Method 8081

The sample selected for the batch MSSD required a 50X dilution due to high analyte levels. Hence, all spike analytes were diluted out. All spike analytes were recovered in control in the LCS indicating acceptable method performance.

There were no other anomalies associated with this project.

Quanterra

Quanterra - Western Region

Quality Control Definitions

QC Parameter	Definition
QC Batch	A set of up to 20 field samples plus associated laboratory QC samples that are similar in composition (matrix) and that are processed within the same time period with the same reagent and standard lots.
Duplicate Control Sample (DCS)	Consist of a pair of LCSs analyzed within the same QC batch to monitor precision and accuracy independent of sample matrix effects. This QC is performed only if required by client or when insufficient sample is available to perform MS/MSD.
Duplicate Sample (DU)	A second aliquot of an environmental sample, taken from the same sample container when possible, that is processed independently with the first sample aliquot. The results are used to assess the effect of the sample matrix on the precision of the analytical process. The precision estimated using this sample is not necessarily representative of the precision for other samples in the batch.
Laboratory Control Sample (LCS)	A volume of reagent water for aqueous samples or a contaminant-free solid matrix (Ottawa sand) for soil and sediment samples which is spiked with known amounts of representative target analytes and required surrogates. An LCS is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects.
Matrix Spike and Matrix Spike Duplicate (MS/MSD)	A field sample fortified with known quantities of target analytes that are also added to the LCS. Matrix spike duplicate is a second matrix spike sample. MSs/MSDs are carried through the entire analytical process and are used to determine sample matrix effect on accuracy of the measurement system. The accuracy and precision estimated using MS/MSD is only representative of the precision of the sample that was spiked.
Method Blank (MB)	A sample composed of all the reagents (in the same quantities) in reagent water carried through the entire analytical process. The method blank is used to monitor the level of contamination introduced during sample preparation steps.
Surrogate Spike	Organic constituents not expected to be detected in environmental media and are added to every sample and QC at a known concentration. Surrogates are used to determine the efficiency of the sample preparation and the analytical process.

Source: Quanterra® Quality Control Program, Policy QA-003, Rev. 0, 8/19/96.

Quanterra

SAMPLE SUMMARY

G9E220184

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE
CW5H4	003	BH8-6-15	05/20/9
CW5H5	004	BH8-6-20	05/20/9
CW5H6	005	BH8-6-25	05/20/9
CW5H7	006	BH8-6-30	05/20/9
CW5H8	007	BH8-6-35	05/20/9
CW5H9	008	BH8-6-40	05/20/9
CW5HA	009	BH8-6-45	05/20/9
CW5HC	010	BH8-6-47	05/20/9
CW5HD	011	BH8-6-48	05/20/9
CW5HE	012	BH9-6-5	05/20/9
CW5HF	013	BH9-6-10	05/20/9
CW5HG	014	BH9-6-15	05/20/9
CW5HH	015	BH9-6-20	05/20/9
CW5HJ	016	BH9-6-25	05/20/9
CW5HL	017	BH9-6-30	05/20/99
CW5HM	018	BH9-6-35	05/20/99
CW5HN	019	BH9-6-40	05/20/99
CW5HP	020	BH9-6-45	05/20/99
CW5HQ	021	BH9-6-47	05/20/99
CW5HR	022	BH10-6-5	05/20/99
CW5HT	023	BH11-6-5	05/20/99

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SCS ENGINEERS Environmental Consultants

3711 Long Beach Boulevard, 9th Floor
Long Beach, California 90807-3315
Phone: (562) 426-9544 Fax: (562) 427-0805

TOTAL NUMBER OF SAMPLES: 23

PAGE 1 OF 2

TURNAROUND TIME REQUIRED: ✓ 5-Day ___ 3-Day ___ Immediate ___ Other

PROJECT NUMBER: 01931.71.01

PROJECT MANAGER: Steve Clements

PROJECT NAME: LACDAC

P.O. #:

PROJECT LOCATION: 8841 E. Slauson Ave. Pico Rivera, CA

SAMPLER NAME AND SIGNATURE: Steve Clements

ANALYSES REQUESTED

I.D. NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX	DATE/TIME COLLECTED	CONTAINER SIZE/TYPE	SAMPLE PRESERVATIVE(S)	SPECIAL INSTRUCTIONS/COMMENTS	EPA 8080 (No PCBs)	EPA 8140	EPA 8150	Metals *		Archive				LAB USE ONL
05701 05702	BH8-6-5	Soil	5-20-99	2"x6" Stainless steel Sample Tube (x2)								X				
05703 05704	BH8-6-10											X				
05705 05706	BH8-6-15						X	X	X	X						
05707 05708	BH8-6-20						X	X	X	X						
05709 05710	BH8-6-25						X	X	X	X						
05711 05712	BH8-6-30						X	X	X	X						
05713 05714	BH8-6-35						X	X	X	X						
05715 05716	BH8-6-40						X	X	X	X						
05717 05718	BH8-6-45						X	X	X	X						
05719 05720	BH8-6-47						X	X	X	X						
05721 05722	BH8-6-48						[illegible]	[illegible]	[illegible]	[illegible]		X				
05723 05724	BH9-6-5										[illegible]	X				
05725 05726	BH9-6-10						X	X	X	X						
05727 05728	BH9-6-15						X	X	X	X						
05729 05730	BH9-6-20						X	X	X	X						

NOTES:

* Metals = As, Cd, Cu, Pb, Hg, Tl, Zn Also Ni & Li

SAMPLE CONDITION UPON RECEIPT: Good 05-22-99

RELINQUISHED BY:	DATE:	RELINQUISHED BY:	DATE:	RELINQUISHED BY:	DATE:
[signature]	5/21/99	Received By: [signature]	5-22-99		
COMPANY: SCS	TIME: 11:30 am	COMPANY: [illegible]	TIME: 1300	COMPANY:	TIME:

CHAIN OF CUSTODY RECORD

SCS ENGINEERS Environmental Consultants

3711 Long Beach Boulevard, 9th Floor
Long Beach, California 90807-3315
Phone: (562) 426-9544 Fax: (562) 427-0805

TOTAL NUMBER OF SAMPLES: 23 (4 Leontamin's)

PAGE 2 OF 2

TURNAROUND TIME REQUIRED: ✓ 5-Day ___ 3-Day ___ Immediate ___ Other

PROJECT NUMBER: 0193171.01

PROJECT MANAGER: Steve Clements

PROJECT NAME: LACDAC

P.O. #:

PROJECT LOCATION: 8841 E. Slauson Ave., Pico Rivera, CA

SAMPLER NAME AND SIGNATURE: Steve Clements

I.D. NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX	DATE/TIME COLLECTED	CONTAINER SIZE/TYPE	SAMPLE PRESERVATIVE(S)	SPECIAL INSTRUCTIONS/COMMENTS	ANALYSES REQUESTED: EPA 8080 (No PCBs)	EPA 8140	EPA 8150	Metals *						LAB USE ONLY
05731 05732	BH9-6-25	Soil	5/20/99	2"x6" stainless-			X	X	X	X						
05733 05734	BH9-6-30			steel Tube			X	X	X	X						
05735 05736	BH9-6-35			(x2)			X	X	X	X						
05737 05738	BH9-6-40						X	X	X	X						
05739 05740	BH9-6-45						X	X	X	X						
05741 05742	BH9-6-47						X	X	X	X						
05743 05744	BH10-6-5						X	X	X	X						
05745 05746	BH11-6-5						X	X	X	X						

NOTES:

* Metals = As, Cd, Cu, Pb, Hg, Tl, Zn

Attn: Nilo Ligi

SAMPLE CONDITION UPON RECEIPT: Good 05-22-99

RELINQUISHED BY: DATE: 5/20/99 RECEIVED BY: RELINQUISHED BY: DATE: RELINQUISHED BY: DATE:

Quanterra

Chlorinated Pesticides Method 8081 (Low)

Quanterra

SCS ENGINEERS

Client Sample ID: BH8-6-15

GC Semivolatiles

Lot-Sample #...: G9E220184-003 **Work Order #...:** CW5H4102 **Matrix.....:** SOLID
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/09/99
Prep Batch #...: 9144194
Dilution Factor: 50 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	85	ug/kg
gamma-BHC (Lindane)	ND	85	ug/kg
Heptachlor	ND	85	ug/kg
Aldrin	ND	85	ug/kg
beta-BHC	ND	85	ug/kg
delta-BHC	ND	85	ug/kg
Heptachlor epoxide	ND	85	ug/kg
Endosulfan I	ND	85	ug/kg
gamma-Chlordane	**200**	**85**	**ug/kg**
alpha-Chlordane	**190**	**85**	**ug/kg**
4,4'-DDE	ND	170	ug/kg
Dieldrin	**390**	**170**	**ug/kg**
Endrin	ND	170	ug/kg
4,4'-DDD	ND G	200	ug/kg
Endosulfan II	ND	170	ug/kg
4,4'-DDT	**2900 Q**	**170**	**ug/kg**
Endrin aldehyde	ND	170	ug/kg
Methoxychlor	ND	850	ug/kg
Endosulfan sulfate	ND	170	ug/kg
Endrin ketone	ND	170	ug/kg
Toxaphene	ND	3400	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 SRD	(73 - 135)
Tetrachloro-m-xylene	0.0 SRD	(55 - 117)

NOTE(S):

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

Quanterra

SCS ENGINEERS

Client Sample ID: BH8-6-20

GC Semivolatiles

Lot-Sample #...: G9E220184-004 **Work Order #...:** CW5H5102 **Matrix.....:** SOLID
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/09/99
Prep Batch #...: 9144194
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	**4.0**	**1.7**	**ug/kg**
alpha-Chlordane	**2.0**	**1.7**	**ug/kg**
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	**16**	**3.4**	**ug/kg**
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	**7.8**	**3.4**	**ug/kg**
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	82	(73 - 135)
Tetrachloro-m-xylene	72	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH8-6-25

GC Semivolatiles

Lot-Sample #...:	G9E220184-005	**Work Order #...:**	CW5H6102	**Matrix.....:**	SOLID
Date Sampled...:	05/20/99	**Date Received..:**	05/22/99		
Prep Date.....:	05/24/99	**Analysis Date..:**	06/09/99		
Prep Batch #...:	9144194				
Dilution Factor:	1	**Method.....:**	SW846 8081A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	**1.7**	**1.7**	**ug/kg**
alpha-Chlordane	**2.0**	**1.7**	**ug/kg**
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	**5.2**	**3.4**	**ug/kg**
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	ND	3.4	ug/kg
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	78	(73 - 135)
Tetrachloro-m-xylene	64	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH8-6-30

GC Semivolatiles

Lot-Sample #...: G9E220184-006 **Work Order #...:** CW5H7102 **Matrix.....:** SOLII
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/09/99
Prep Batch #...: 9144194
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	ND	1.7	ug/kg
alpha-Chlordane	ND	1.7	ug/kg
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	ND	3.4	ug/kg
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	ND	3.4	ug/kg
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	91	(73 - 135)
Tetrachloro-m-xylene	75	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH8-6-35

GC Semivolatiles

Lot-Sample #...: G9E220184-007 **Work Order #...:** CW5H8102 **Matrix.....:** SOLID
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/09/99
Prep Batch #...: 9144194
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	ND	1.7	ug/kg
alpha-Chlordane	ND	1.7	ug/kg
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	ND	3.4	ug/kg
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	ND	3.4	ug/kg
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	81	(73 - 135)
Tetrachloro-m-xylene	71	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH8-6-40

GC Semivolatiles

Lot-Sample #...: G9E220184-008 **Work Order #...:** CW5H9102 **Matrix.....:** SOLID
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/09/99
Prep Batch #...: 9144194
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	ND	1.7	ug/kg
alpha-Chlordane	ND	1.7	ug/kg
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	ND	3.4	ug/kg
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	ND	3.4	ug/kg
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	89	(73 - 135)
Tetrachloro-m-xylene	76	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH8-6-45

GC Semivolatiles

Lot-Sample #...:	G9E220184-009	**Work Order #...:**	CW5HA102	**Matrix.....:**	SOLID
Date Sampled...:	05/20/99	**Date Received..:**	05/22/99		
Prep Date.....:	05/24/99	**Analysis Date..:**	06/01/99		
Prep Batch #...:	9144194				
Dilution Factor:	1	**Method.....:**	SW846 8081A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	ND	1.7	ug/kg
alpha-Chlordane	ND	1.7	ug/kg
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	ND	3.4	ug/kg
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	ND	3.4	ug/kg
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	93	(73 - 135)
Tetrachloro-m-xylene	79	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH8-6-47

GC Semivolatiles

Lot-Sample #...: G9E220184-010 **Work Order #...:** CW5HC102 **Matrix.....:** SOLI
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/01/99
Prep Batch #...: 9144194
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	ND	1.7	ug/kg
alpha-Chlordane	ND	1.7	ug/kg
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	ND	3.4	ug/kg
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	**12**	**3.4**	**ug/kg**
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	100	(73 - 135)
Tetrachloro-m-xylene	85	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH8-6-48

GC Semivolatiles

Lot-Sample #...: G9E220184-011 **Work Order #...:** CW5HD102 **Matrix.....:** SOLID
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/01/99
Prep Batch #...: 9144194
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	ND	1.7	ug/kg
alpha-Chlordane	ND	1.7	ug/kg
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	ND	3.4	ug/kg
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	ND	3.4	ug/kg
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	105	(73 - 135)
Tetrachloro-m-xylene	85	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH9-6-5

GC Semivolatiles

Lot-Sample #...:	G9E220184-012	**Work Order #...:**	CW5HE102	**Matrix.....:**	SOLID
Date Sampled...:	05/20/99	**Date Received..:**	05/22/99		
Prep Date.....:	05/24/99	**Analysis Date..:**	06/01/99		
Prep Batch #...:	9144194				
Dilution Factor:	1	**Method.....:**	SW846 8081A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	**13**	**1.7**	**ug/kg**
alpha-Chlordane	**18**	**1.7**	**ug/kg**
4,4'-DDE	**4.6**	**3.4**	**ug/kg**
Dieldrin	ND	3.4	ug/kg
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND G	7.0	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	**15**	**3.4**	**ug/kg**
Endrin aldehyde	ND G	6.5	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	119	(73 - 135)
Tetrachloro-m-xylene	71	(55 - 117)

NOTE(S):

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

Quanterra

SCS ENGINEERS

Client Sample ID: BH9-6-10

GC Semivolatiles

Lot-Sample #...: G9E220184-013 **Work Order #...:** CW5HF102 **Matrix.....:** SOLID
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/01/99
Prep Batch #...: 9144194
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	**6.3**	**1.7**	**ug/kg**
alpha-Chlordane	**7.2**	**1.7**	**ug/kg**
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	**9.2**	**3.4**	**ug/kg**
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	ND	3.4	ug/kg
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	103	(73 - 135)
Tetrachloro-m-xylene	76	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH9-6-15

GC Semivolatiles

Lot-Sample #...: G9E220184-014 **Work Order #...:** CW5HG102 **Matrix.....:** SOLI
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/09/99
Prep Batch #...: 9144194
Dilution Factor: 5000 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	8500	ug/kg
gamma-BHC (Lindane)	ND	8500	ug/kg
Heptachlor	ND	8500	ug/kg
Aldrin	ND	8500	ug/kg
beta-BHC	ND	8500	ug/kg
delta-BHC	ND	8500	ug/kg
Heptachlor epoxide	ND	8500	ug/kg
Endosulfan I	ND	8500	ug/kg
gamma-Chlordane	ND	8500	ug/kg
alpha-Chlordane	ND	8500	ug/kg
4,4'-DDE	ND	17000	ug/kg
Dieldrin	ND	17000	ug/kg
Endrin	ND	17000	ug/kg
4,4'-DDD	ND	17000	ug/kg
Endosulfan II	ND	17000	ug/kg
4,4'-DDT	**97000 Q**	**17000**	**ug/kg**
Endrin aldehyde	ND	17000	ug/kg
Methoxychlor	ND	85000	ug/kg
Endosulfan sulfate	ND	17000	ug/kg
Endrin ketone	ND	17000	ug/kg
Toxaphene	ND	340000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 SRD	(73 - 135)
Tetrachloro-m-xylene	0.0 SRD	(55 - 117)

NOTE(S):

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

Quanterra

SCS ENGINEERS

Client Sample ID: BH9-6-20

GC Semivolatiles

Lot-Sample #...: G9E220184-015 **Work Order #...:** CW5HH102 **Matrix.....:** SOLID
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/09/99
Prep Batch #...: 9144194
Dilution Factor: 10 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	17	ug/kg
gamma-BHC (Lindane)	ND	17	ug/kg
Heptachlor	ND	17	ug/kg
Aldrin	ND	17	ug/kg
beta-BHC	ND	17	ug/kg
delta-BHC	ND	17	ug/kg
Heptachlor epoxide	ND	17	ug/kg
Endosulfan I	ND	17	ug/kg
gamma-Chlordane	**53**	**17**	**ug/kg**
alpha-Chlordane	**50**	**17**	**ug/kg**
4,4'-DDE	ND	34	ug/kg
Dieldrin	**58**	**34**	**ug/kg**
Endrin	ND	34	ug/kg
4,4'-DDD	ND	34	ug/kg
Endosulfan II	ND	34	ug/kg
4,4'-DDT	**200 Q**	**34**	**ug/kg**
Endrin aldehyde	ND	34	ug/kg
Methoxychlor	ND	170	ug/kg
Endosulfan sulfate	ND	34	ug/kg
Endrin ketone	ND	34	ug/kg
Toxaphene	ND	670	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 SRD	(73 - 135)
Tetrachloro-m-xylene	0.0 SRD	(55 - 117)

NOTE(S):

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

Quanterra

SCS ENGINEERS

Client Sample ID: BH9-6-25

GC Semivolatiles

Lot-Sample #...: G9E220184-016 **Work Order #...:** CW5HJ102 **Matrix.....:** SOLI
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/07/99
Prep Batch #...: 9144194
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	**2.3**	**1.7**	**ug/kg**
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	**7.2**	**1.7**	**ug/kg**
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	ND	1.7	ug/kg
alpha-Chlordane	ND	1.7	ug/kg
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	ND	3.4	ug/kg
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	ND	3.4	ug/kg
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	80	(73 - 135)
Tetrachloro-m-xylene	70	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH9-6-30

GC Semivolatiles

Lot-Sample #...: G9E220184-017 **Work Order #...:** CW5HL102 **Matrix.....:** SOLID
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/07/99
Prep Batch #...: 9144194
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	ND	1.7	ug/kg
alpha-Chlordane	ND	1.7	ug/kg
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	ND	3.4	ug/kg
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	ND	3.4	ug/kg
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	84	(73 - 135)
Tetrachloro-m-xylene	72	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH9-6-35

GC Semivolatiles

Lot-Sample #...: G9E220184-018 **Work Order #...:** CW5HM102 **Matrix.....:** SOLI
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/07/99
Prep Batch #...: 9144194
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	ND	1.7	ug/kg
alpha-Chlordane	ND	1.7	ug/kg
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	ND	3.4	ug/kg
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	ND	3.4	ug/kg
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	80	(73 - 135)
Tetrachloro-m-xylene	71	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH9-6-40

GC Semivolatiles

Lot-Sample #...:	G9E220184-019	Work Order #...:	CW5HN102	Matrix.....:	SOLID
Date Sampled...:	05/20/99	Date Received..:	05/22/99		
Prep Date.....:	05/24/99	Analysis Date..:	06/07/99		
Prep Batch #...:	9144194				
Dilution Factor:	1	Method.....:	SW846 8081A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	ND	1.7	ug/kg
alpha-Chlordane	ND	1.7	ug/kg
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	ND	3.4	ug/kg
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	ND	3.4	ug/kg
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	94	(73 - 135)
Tetrachloro-m-xylene	78	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH9-6-45

GC Semivolatiles

Lot-Sample #...: G9E220184-020 **Work Order #...:** CW5HP102 **Matrix.....:** SOLI
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/07/99
Prep Batch #...: 9144194
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	ND	1.7	ug/kg
alpha-Chlordane	ND	1.7	ug/kg
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	ND	3.4	ug/kg
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	ND	3.4	ug/kg
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	97	(73 - 135)
Tetrachloro-m-xylene	82	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH9-6-47

GC Semivolatiles

Lot-Sample #...: G9E220184-021 **Work Order #...:** CW5HQ102 **Matrix.....:** SOLID
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/07/99
Prep Batch #...: 9144194
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	ND	1.7	ug/kg
alpha-Chlordane	ND	1.7	ug/kg
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	ND	3.4	ug/kg
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	ND	3.4	ug/kg
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	91	(73 - 135)
Tetrachloro-m-xylene	77	(55 - 117)

Quanterra

SCS ENGINEERS

Client Sample ID: BH10-6-5

GC Semivolatiles

Lot-Sample #...:	G9E220184-022	**Work Order #...:**	CW5HR102	**Matrix.....:**	SOL
Date Sampled...:	05/20/99	**Date Received..:**	05/22/99		
Prep Date.....:	05/24/99	**Analysis Date..:**	06/07/99		
Prep Batch #...:	9144194				
Dilution Factor:	1	**Method.....:**	SW846 8081A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	**2.0**	**1.7**	**ug/kg**
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	**2.4**	**1.7**	**ug/kg**
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	**24**	**1.7**	**ug/kg**
alpha-Chlordane	**24**	**1.7**	**ug/kg**
4,4'-DDE	**15**	**3.4**	**ug/kg**
Dieldrin	**4.8**	**3.4**	**ug/kg**
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND G	13	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	**29**	**3.4**	**ug/kg**
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	85	(73 - 135)
Tetrachloro-m-xylene	74	(55 - 117)

NOTE(S):

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

Quanterra

QC DATA ASSOCIATION SUMMARY

G9E220184

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
003	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
004	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
005	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
006	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
007	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
008	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
009	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	

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Quanterra

QC DATA ASSOCIATION SUMMARY

G9E220184

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
010	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
011	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
012	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
013	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
014	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
015	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
016	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	

(Continued on next page)

Quanterra

QC DATA ASSOCIATION SUMMARY

G9E220184

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
017	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144112	9144010
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
018	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
019	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9148117	9148016
020	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144112	9144010
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9148117	9148016
021	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144112	9144010
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9148117	9148016
022	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144112	9144010
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9148117	9148016
023	SOLID	SW846 7471A		9152400	9152197
	SOLID	SW846 8141A		9144112	9144010
	SOLID	SW846 8081A		9144202	9144132
	SOLID	SW846 6010B		9147294	9147125
	SOLID	SW846 8151A		9148117	9148016

Quanterra

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: G9E220184 **Work Order #...:** CW66X101 **Matrix.....:** SOLII
MB Lot-Sample #: G9E240000-194

Prep Date.....: 05/24/99
Analysis Date..: 06/01/99 **Prep Batch #...:** 9144194
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Aldrin	ND	1.7	ug/kg	SW846 8081A
beta-BHC	ND	1.7	ug/kg	SW846 8081A
delta-BHC	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	1.7	ug/kg	SW846 8081A
Endosulfan I	ND	1.7	ug/kg	SW846 8081A
gamma-Chlordane	ND	1.7	ug/kg	SW846 8081A
alpha-Chlordane	ND	1.7	ug/kg	SW846 8081A
4,4'-DDE	ND	3.4	ug/kg	SW846 8081A
Dieldrin	ND	3.4	ug/kg	SW846 8081A
Endrin	ND	3.4	ug/kg	SW846 8081A
4,4'-DDD	ND	3.4	ug/kg	SW846 8081A
Endosulfan II	ND	3.4	ug/kg	SW846 8081A
4,4'-DDT	ND	3.4	ug/kg	SW846 8081A
Endrin aldehyde	ND	3.4	ug/kg	SW846 8081A
Methoxychlor	ND	17	ug/kg	SW846 8081A
Endosulfan sulfate	ND	3.4	ug/kg	SW846 8081A
Endrin ketone	ND	3.4	ug/kg	SW846 8081A
Toxaphene	ND	67	ug/kg	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	95	(73 - 135)
Tetrachloro-m-xylene	84	(55 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: G9E220184 Work Order #...: CW66X102 Matrix.....: SOLID
LCS Lot-Sample#: G9E240000-194
Prep Date.....: 05/24/99 Analysis Date..: 06/01/99
Prep Batch #...: 9144194
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aldrin	**16.7**	**14.2**	**ug/kg**	**85**	**SW846 8081A**
gamma-BHC (Lindane)	**16.7**	**12.9**	**ug/kg**	**77**	**SW846 8081A**
4,4'-DDT	**33.3**	**32.7**	**ug/kg**	**98**	**SW846 8081A**
Dieldrin	**33.3**	**31.9**	**ug/kg**	**96**	**SW846 8081A**
Endrin	**33.3**	**35.5**	**ug/kg**	**107**	**SW846 8081A**
Heptachlor	**16.7**	**13.9**	**ug/kg**	**83**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	106	(73 - 135)
Tetrachloro-m-xylene	88	(55 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: G9E220184 **Work Order #...:** CW66X102 **Matrix.....:** SOLII
LCS Lot-Sample#: G9E240000-194
Prep Date.....: 05/24/99 **Analysis Date..:** 06/01/99
Prep Batch #...: 9144194
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aldrin	**85**	**(70 - 112)**	**SW846 8081A**
gamma-BHC (Lindane)	**77**	**(49 - 115)**	**SW846 8081A**
4,4'-DDT	**98**	**(62 - 143)**	**SW846 8081A**
Dieldrin	**96**	**(74 - 133)**	**SW846 8081A**
Endrin	**107**	**(76 - 144)**	**SW846 8081A**
Heptachlor	**83**	**(62 - 132)**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	106	(73 - 135)
Tetrachloro-m-xylene	88	(55 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: G9E220184
MS Lot-Sample #: G9E220184-003
Date Sampled...: 05/20/99
Prep Date.....: 05/24/99
Prep Batch #...: 9144194
Dilution Factor: 50

Work Order #...: CW5H410F-MS
CW5H410G-MSD
Date Received..: 05/22/99
Analysis Date..: 06/09/99

Matrix.....: SOLID

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
gamma-BHC (Lindane)	**ND**	**16.7**		**ug/kg**	**0.0**		**SW846 8081A**
	ND	**16.7**		**ug/kg**	**0.0**	**0.0**	**SW846 8081A**
Heptachlor	**ND**	**16.7**		**ug/kg**	**0.0**		**SW846 8081A**
	ND	**16.7**		**ug/kg**	**0.0**	**0.0**	**SW846 8081A**
Aldrin	**ND**	**16.7**		**ug/kg**	**0.0**		**SW846 8081A**
	ND	**16.7**		**ug/kg**	**0.0**	**0.0**	**SW846 8081A**
Dieldrin	**390**	**33.3**		**ug/kg**	**0.0**		**SW846 8081A**
	390	**33.3**		**ug/kg**	**0.0**	**0.0**	**SW846 8081A**
Endrin	**ND**	**33.3**		**ug/kg**	**0.0**		**SW846 8081A**
	ND	**33.3**		**ug/kg**	**0.0**	**0.0**	**SW846 8081A**
4,4'-DDT	**2900**	**33.3**		**ug/kg**	**0.0**		**SW846 8081A**
	2900	**33.3**		**ug/kg**	**0.0**	**0.0**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 SRD	(73 - 135)
	0.0 SRD	(73 - 135)
Tetrachloro-m-xylene	0.0 SRD	(55 - 117)
	0.0 SRD	(55 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

Quanterra

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: G9E220184 **Work Order #...:** CW5H410F-MS **Matrix.....:** SOLII
MS Lot-Sample #: G9E220184-003 CW5H410G-MSD
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/09/99
Prep Batch #...: 9144194
Dilution Factor: 50

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
gamma-BHC (Lindane)	**0.0**	**(49 - 115)**			**SW846 8081A**
	0.0	**(49 - 115)**	**0.0**	**(0-35)**	**SW846 8081A**
Heptachlor	**0.0**	**(62 - 132)**			**SW846 8081A**
	0.0	**(62 - 132)**	**0.0**	**(0-35)**	**SW846 8081A**
Aldrin	**0.0**	**(70 - 112)**			**SW846 8081A**
	0.0	**(70 - 112)**	**0.0**	**(0-35)**	**SW846 8081A**
Dieldrin	**0.0**	**(74 - 133)**			**SW846 8081A**
	0.0	**(74 - 133)**	**0.0**	**(0-35)**	**SW846 8081A**
Endrin	**0.0**	**(76 - 144)**			**SW846 8081A**
	0.0	**(76 - 144)**	**0.0**	**(0-35)**	**SW846 8081A**
4,4'-DDT	**0.0**	**(62 - 143)**			**SW846 8081A**
	0.0	**(62 - 143)**	**0.0**	**(0-35)**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	0.0 SRD	(73 - 135)
	0.0 SRD	(73 - 135)
Tetrachloro-m-xylene	0.0 SRD	(55 - 117)
	0.0 SRD	(55 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

Quanterra

Chlorinated Pesticides Method 8081 (Medium)

Quanterra

SCS ENGINEERS

Client Sample ID: BH11-6-5

GC Semivolatiles

Lot-Sample #...: G9E220184-023 **Work Order #...:** CW5HT102 **Matrix.....:** SOLID
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/01/99
Prep Batch #...: 9144202
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
alpha-BHC	ND	1.7	ug/kg
gamma-BHC (Lindane)	ND	1.7	ug/kg
Heptachlor	ND	1.7	ug/kg
Aldrin	ND	1.7	ug/kg
beta-BHC	ND	1.7	ug/kg
delta-BHC	ND	1.7	ug/kg
Heptachlor epoxide	ND	1.7	ug/kg
Endosulfan I	ND	1.7	ug/kg
gamma-Chlordane	ND	1.7	ug/kg
alpha-Chlordane	ND	1.7	ug/kg
4,4'-DDE	ND	3.4	ug/kg
Dieldrin	ND	3.4	ug/kg
Endrin	ND	3.4	ug/kg
4,4'-DDD	ND	3.4	ug/kg
Endosulfan II	ND	3.4	ug/kg
4,4'-DDT	ND	3.4	ug/kg
Endrin aldehyde	ND	3.4	ug/kg
Methoxychlor	ND	17	ug/kg
Endosulfan sulfate	ND	3.4	ug/kg
Endrin ketone	ND	3.4	ug/kg
Toxaphene	ND	67	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	106	(73 - 135)
Tetrachloro-m-xylene	88	(55 - 117)

Quanterra

QC DATA ASSOCIATION SUMMARY

G9E220184

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
003	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
004	SOLID	SW846 7471A		9152403	9152200
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008	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
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	SOLID	SW846 8151A		9147297	
009	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	

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Quanterra

QC DATA ASSOCIATION SUMMARY

G9E220184

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
010	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
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	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
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	SOLID	SW846 8141A		9144111	9144009
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	SOLID	SW846 8151A		9147297	
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	SOLID	SW846 8141A		9144111	9144009
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015	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
016	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	

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Quanterra

QC DATA ASSOCIATION SUMMARY

G9E220184

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
017	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144112	9144010
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
018	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9147297	
019	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144111	9144009
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9148117	9148016
020	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144112	9144010
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9148117	9148016
021	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144112	9144010
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9148117	9148016
022	SOLID	SW846 7471A		9152403	9152200
	SOLID	SW846 8141A		9144112	9144010
	SOLID	SW846 8081A		9144194	9144130
	SOLID	SW846 6010B		9145264	9145096
	SOLID	SW846 8151A		9148117	9148016
023	SOLID	SW846 7471A		9152400	9152197
	SOLID	SW846 8141A		9144112	9144010
	SOLID	SW846 8081A		9144202	9144132
	SOLID	SW846 6010B		9147294	9147125
	SOLID	SW846 8151A		9148117	9148016

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METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: G9E220184 **Work Order #...:** CW67E101 **Matrix.....:** SOLID
MB Lot-Sample #: G9E240000-202

Prep Date.....: 05/24/99
Analysis Date..: 06/01/99 **Prep Batch #...:** 9144202
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Aldrin	ND	1.7	ug/kg	SW846 8081A
beta-BHC	ND	1.7	ug/kg	SW846 8081A
delta-BHC	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	1.7	ug/kg	SW846 8081A
Endosulfan I	ND	1.7	ug/kg	SW846 8081A
gamma-Chlordane	ND	1.7	ug/kg	SW846 8081A
alpha-Chlordane	ND	1.7	ug/kg	SW846 8081A
4,4'-DDE	ND	3.4	ug/kg	SW846 8081A
Dieldrin	ND	3.4	ug/kg	SW846 8081A
Endrin	ND	3.4	ug/kg	SW846 8081A
4,4'-DDD	ND	3.4	ug/kg	SW846 8081A
Endosulfan II	ND	3.4	ug/kg	SW846 8081A
4,4'-DDT	ND	3.4	ug/kg	SW846 8081A
Endrin aldehyde	ND	3.4	ug/kg	SW846 8081A
Methoxychlor	ND	17	ug/kg	SW846 8081A
Endosulfan sulfate	ND	3.4	ug/kg	SW846 8081A
Endrin ketone	ND	3.4	ug/kg	SW846 8081A
Toxaphene	ND	67	ug/kg	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	102	(73 - 135)
Tetrachloro-m-xylene	87	(55 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: G9E220184 **Work Order #...:** CW67E102 **Matrix.....:** SOLI
LCS Lot-Sample#: G9E240000-202
Prep Date.....: 05/24/99 **Analysis Date..:** 06/01/99
Prep Batch #...: 9144202
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHO
Aldrin	**16.7**	**14.2**	**ug/kg**	**85**	**SW846**
gamma-BHC (Lindane)	**16.7**	**12.8**	**ug/kg**	**77**	**SW846**
4,4'-DDT	**33.3**	**30.8**	**ug/kg**	**93**	**SW846**
Dieldrin	**33.3**	**30.6**	**ug/kg**	**92**	**SW846**
Endrin	**33.3**	**33.9**	**ug/kg**	**102**	**SW846**
Heptachlor	**16.7**	**13.6**	**ug/kg**	**81**	**SW846**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	102	(73 - 135)
Tetrachloro-m-xylene	88	(55 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: G9E220184 **Work Order #...:** CW67E102 **Matrix.....:** SOLID
LCS Lot-Sample#: G9E240000-202
Prep Date.....: 05/24/99 **Analysis Date..:** 06/01/99
Prep Batch #...: 9144202
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aldrin	**85**	**(70 - 112)**	**SW846 8081A**
gamma-BHC (Lindane)	**77**	**(49 - 115)**	**SW846 8081A**
4,4'-DDT	**93**	**(62 - 143)**	**SW846 8081A**
Dieldrin	**92**	**(74 - 133)**	**SW846 8081A**
Endrin	**102**	**(76 - 144)**	**SW846 8081A**
Heptachlor	**81**	**(62 - 132)**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	102	(73 - 135)
Tetrachloro-m-xylene	88	(55 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: G9E220184 Work Order #...: CW5HT10D-MS Matrix.....: SOLII
MS Lot-Sample #: G9E220184-023 CW5HT10E-MSD
Date Sampled...: 05/20/99 Date Received..: 05/22/99
Prep Date.....: 05/24/99 Analysis Date..: 06/01/99
Prep Batch #...: 9144202
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
gamma-BHC (Lindane)	ND	16.7	12.0	ug/kg	72		SW846 8081A
	ND	16.7	12.6	ug/kg	75	4.8	SW846 8081A
Heptachlor	ND	16.7	12.9	ug/kg	77		SW846 8081A
	ND	16.7	13.5	ug/kg	81	4.6	SW846 8081A
Aldrin	ND	16.7	13.4	ug/kg	80		SW846 8081A
	ND	16.7	14.1	ug/kg	84	5.5	SW846 8081A
Dieldrin	ND	33.3	29.8	ug/kg	89		SW846 8081A
	ND	33.3	30.6	ug/kg	92	2.8	SW846 8081A
Endrin	ND	33.3	32.4	ug/kg	97		SW846 8081A
	ND	33.3	34.0	ug/kg	102	4.7	SW846 8081A
4,4'-DDT	ND	33.3	33.9	ug/kg	102		SW846 8081A
	ND	33.3	31.0	ug/kg	93	9.1	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	98	(73 - 135)
	102	(73 - 135)
Tetrachloro-m-xylene	83	(55 - 117)
	86	(55 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: G9E220184 **Work Order #...:** CW5HT10D-MS **Matrix.....:** SOLID
MS Lot-Sample #: G9E220184-023 CW5HT10E-MSD
Date Sampled...: 05/20/99 **Date Received..:** 05/22/99
Prep Date.....: 05/24/99 **Analysis Date..:** 06/01/99
Prep Batch #...: 9144202
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
gamma-BHC (Lindane)	**72**	**(49 - 115)**			**SW846 8081A**
	75	**(49 - 115)**	**4.8**	**(0-35)**	**SW846 8081A**
Heptachlor	**77**	**(62 - 132)**			**SW846 8081A**
	81	**(62 - 132)**	**4.6**	**(0-35)**	**SW846 8081A**
Aldrin	**80**	**(70 - 112)**			**SW846 8081A**
	84	**(70 - 112)**	**5.5**	**(0-35)**	**SW846 8081A**
Dieldrin	**89**	**(74 - 133)**			**SW846 8081A**
	92	**(74 - 133)**	**2.8**	**(0-35)**	**SW846 8081A**
Endrin	**97**	**(76 - 144)**			**SW846 8081A**
	102	**(76 - 144)**	**4.7**	**(0-35)**	**SW846 8081A**
4,4'-DDT	**102**	**(62 - 143)**			**SW846 8081A**
	93	**(62 - 143)**	**9.1**	**(0-35)**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	98	(73 - 135)
	102	(73 - 135)
Tetrachloro-m-xylene	83	(55 - 117)
	86	(55 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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Organophosphorus Pesticides – Method 8141