SEVERN TRENT LABORATORIES
ANALYTICAL REPORT

JOB NUMBER: 222184

Prepared For:

SCS Engineers, Inc.
10401 Holmes Road
Suite 400
Kansas City, MO 64131

Project: Hardesty Federal Center Project

Attention: David Brewer

Date: 12/15/2003

_____ _____

Signature Date

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This Report Contains (_____) Pages

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S A M P L E I N F O R M A T I O N

Date: 12/15/2003

Job Number.: 222184
Customer...: SCS Engineers, Inc.
Attn.....: David Brewer

Project Number.....: 20002955
Customer Project ID....: HARDESTY FEDERAL CENTER
Project Description....: Hardesty Federal Center Project

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
222184-1	SOUTH TRANS.-1206	Oil	11/10/2003	08:30	11/11/2003	09:00
222184-2	CENTER TRANS.-1205	Oil	11/10/2003	08:40	11/11/2003	09:00
222184-3	NORTH TRANS.-1204	Oil	11/10/2003	08:50	11/11/2003	09:00

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LABORATORY TEST RESULTS

Job Number: 222184

Date:12/15/2003

CUSTOMER: SCS Engineers, Inc. PROJECT: HARDESTY FEDERAL CEN ATTN: David Brewer

Customer Sample ID: SOUTH TRANS.-1206
Date Sampled.....: 11/10/2003
Time Sampled.....: 08:30
Sample Matrix.....: Oil

Laboratory Sample ID: 222184-1
Date Received.....: 11/11/2003
Time Received.....: 09:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8082	PCB Analysis											
	Aroclor 1016, Oil	390	U		190	390	1.00000	ug/Kg	101866		11/16/03 0359	mgk
	Aroclor 1221, Oil	390	U		190	390	1.00000	ug/Kg	101866		11/16/03 0359	mgk
	Aroclor 1232, Oil	390	U		190	390	1.00000	ug/Kg	101866		11/16/03 0359	mgk
	Aroclor 1242, Oil	390	U		190	390	1.00000	ug/Kg	101866		11/16/03 0359	mgk
	Aroclor 1248, Oil	390	U		190	390	1.00000	ug/Kg	101866		11/16/03 0359	mgk
	Aroclor 1254, Oil	390	U		190	390	1.00000	ug/Kg	101866		11/16/03 0359	mgk
	Aroclor 1260, Oil	470			190	390	1.00000	ug/Kg	101866		11/16/03 0359	mgk

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 222184

Date:12/15/2003

CUSTOMER: SCS Engineers, Inc. PROJECT: HARDESTY FEDERAL CEN ATTN: David Brewer

Customer Sample ID: CENTER TRANS.-1205
Date Sampled.....: 11/10/2003
Time Sampled.....: 08:40
Sample Matrix.....: Oil

Laboratory Sample ID: 222184-2
Date Received.....: 11/11/2003
Time Received.....: 09:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8082	PCB Analysis											
	Aroclor 1016, Oil	450	U		220	450	1.00000	ug/Kg	101866		11/16/03 0715	mgk
	Aroclor 1221, Oil	450	U		220	450	1.00000	ug/Kg	101866		11/16/03 0715	mgk
	Aroclor 1232, Oil	450	U		220	450	1.00000	ug/Kg	101866		11/16/03 0715	mgk
	Aroclor 1242, Oil	450	U		220	450	1.00000	ug/Kg	101866		11/16/03 0715	mgk
	Aroclor 1248, Oil	450	U		220	450	1.00000	ug/Kg	101866		11/16/03 0715	mgk
	Aroclor 1254, Oil	450	U		220	450	1.00000	ug/Kg	101866		11/16/03 0715	mgk
	Aroclor 1260, Oil	3100			220	450	1.00000	ug/Kg	101866		11/16/03 0715	mgk

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 222184

Date:12/15/2003

CUSTOMER: SCS Engineers, Inc. PROJECT: HARDESTY FEDERAL CEN ATTN: David Brewer

Customer Sample ID: NORTH TRANS.-1204
Date Sampled.....: 11/10/2003
Time Sampled.....: 08:50
Sample Matrix.....: Oil

Laboratory Sample ID: 222184-3
Date Received.....: 11/11/2003
Time Received.....: 09:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8082	PCB Analysis											
	Aroclor 1016, Oil	450	U		220	450	1.00000	ug/Kg	101866		11/16/03 0821	mgk
	Aroclor 1221, Oil	450	U		220	450	1.00000	ug/Kg	101866		11/16/03 0821	mgk
	Aroclor 1232, Oil	450	U		220	450	1.00000	ug/Kg	101866		11/16/03 0821	mgk
	Aroclor 1242, Oil	450	U		220	450	1.00000	ug/Kg	101866		11/16/03 0821	mgk
	Aroclor 1248, Oil	450	U		220	450	1.00000	ug/Kg	101866		11/16/03 0821	mgk
	Aroclor 1254, Oil	450	U		220	450	1.00000	ug/Kg	101866		11/16/03 0821	mgk
	Aroclor 1260, Oil	3100			220	450	1.00000	ug/Kg	101866		11/16/03 0821	mgk

* In Description = Dry Wgt.

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L A B O R A T O R Y C H R O N I C L E

Job Number: 222184 Date: 12/15/2003

CUSTOMER: SCS Engineers, Inc. PROJECT: HARDESTY FEDERAL CEN ATTN: David Brewer

Lab ID: 222184-1 Client ID: SOUTH TRANS.-1206 Date Recvd: 11/11/2003 Sample Date: 11/10/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
3580A	Extraction Waste Dilution (PCBs)	1	101294		11/11/2003	1445	
8082	PCB Analysis	1	101866	101294	11/16/2003	0359	1.00000

Lab ID: 222184-2 Client ID: CENTER TRANS.-1205 Date Recvd: 11/11/2003 Sample Date: 11/10/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
3580A	Extraction Waste Dilution (PCBs)	1	101294		11/11/2003	1445	
8082	PCB Analysis	1	101866	101294	11/16/2003	0715	1.00000

Lab ID: 222184-3 Client ID: NORTH TRANS.-1204 Date Recvd: 11/11/2003 Sample Date: 11/10/2003

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED		DILUTION
3580A	Extraction Waste Dilution (PCBs)	1	101294		11/11/2003	1445	
8082	PCB Analysis	1	101866	101294	11/16/2003	0821	1.00000

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S U R R O G A T E R E C O V E R I E S R E P O R T

Job Number.: 222184 Report Date.: 12/15/2003

CUSTOMER: SCS Engineers, Inc. PROJECT: HARDESTY FEDERAL CENTER ATTN: David Brewer

Method.....: PCB Analysis Test Matrix...: Oil Prep Batch..: 101294
Method Code...: 8082 Batch(s).....: 101866

Lab ID	DT	Sample ID	Date	DCB	TCX
LCS			11/16/2003	91	113
MB			11/16/2003	80	91
222184- 1		SOUTH TRANS.-1206	11/16/2003	71	35
222184- 1	MS	SOUTH TRANS.-1206	11/16/2003	73	34
222184- 1	MSD	SOUTH TRANS.-1206	11/16/2003	74	39
222184- 2		CENTER TRANS.-1205	11/16/2003	71	40
222184- 3		NORTH TRANS.-1204	11/16/2003	72	36

Test	Test Description	Limits
DCB	Decachlorobiphenyl (surr)	51 - 125
TCX	Tetrachloro-m-xylene (surr)	20 - 173

QUALITY CONTROL RESULTS

Job Number.: 222184

Report Date.: 12/15/2003

CUSTOMER: SCS Engineers, Inc. PROJECT: HARDESTY FEDERAL CENTER ATTN: David Brewer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	O03GPLPCBB	101294-002		11/16/2003	0326

Test Method.....: 8082
Method Description.: PCB Analysis

Equipment Code....: INST0708
Batch.....: 101866

Analyst...: mgk

Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value		QC Calc.	*	Limits	F
Aroclor 1016, Oil	ug/Kg	5087.500		5001.000	500.000	U	102	%	71-109	
Aroclor 1260, Oil	ug/Kg	4524.900		5010.000	500.000	U	90	%	71-111	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 222184 Report Date.: 12/15/2003

CUSTOMER: SCS Engineers, Inc. PROJECT: HARDESTY FEDERAL CENTER ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank		101294-001		11/16/2003	0254

Test Method.....: 8082 Equipment Code....: INST0708 Analyst...: mgk
Method Description.: PCB Analysis Batch.....: 101866

Parameter/Test Description	Units	QC Result		QC Result	True Value	Orig. Value	QC Calc.	*	Limits	F
Aroclor 1016, Oil	ug/Kg	500.000	U							
Aroclor 1221, Oil	ug/Kg	500.000	U							
Aroclor 1232, Oil	ug/Kg	500.000	U							
Aroclor 1242, Oil	ug/Kg	500.000	U							
Aroclor 1248, Oil	ug/Kg	500.000	U							
Aroclor 1254, Oil	ug/Kg	500.000	U							
Aroclor 1260, Oil	ug/Kg	500.000	U							

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 222184 Report Date.: 12/15/2003

CUSTOMER: SCS Engineers, Inc. PROJECT: HARDESTY FEDERAL CENTER ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	O03GPLPCBB	222184-1		11/16/2003	0505

Test Method.....: 8082 Equipment Code....: INST0708 Analyst...: mgk
Method Description.: PCB Analysis Batch.....: 101866

Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value		QC Calc.	*	Limits	F
Aroclor 1016, Oil	ug/Kg	3224.843		4485.000	448.450	U	72	%	71-109	
Aroclor 1260, Oil	ug/Kg	3906.547		4493.000	469.308		76	%	71-111	

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 222184 Report Date.: 12/15/2003

CUSTOMER: SCS Engineers, Inc. PROJECT: HARDESTY FEDERAL CENTER ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
MSD	Matrix Spike Duplicate	O03GPLPCBB	222184-1		11/16/2003 0610

Test Method.....: 8082 Equipment Code....: INST0708 Analyst...: mgk
Method Description.: PCB Analysis Batch.....: 101866

Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	*	Limits	F
Aroclor 1016, Oil	ug/Kg	3861.636	3224.843	4217.000	421.600 U	92	%	71-109	
						24	R	30	
Aroclor 1260, Oil	ug/Kg	3537.521	3906.547	4224.000	469.308	73	%	71-111	
						4	R	30	

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
5) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report)

Inorganic Qualifiers (Q-Column)

U	Analyte was not detected at or above the stated limit.
<	Not detected at or above the reporting limit.
J	Result is less than the RL, but greater than or equal to the method detection limit.
B	Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL.
S	Result was determined by the Method of Standard Additions.
F	AFCEE: Result is less than the RL, but greater than or equal to the method detection limit.

Inorganic Flags (Flag Column)

^	ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits.
*	LCS, LCD, MD: Batch QC exceeds the upper or lower control limits.
+	MSA correlation coefficient is less than 0.995.
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
E	SD: Serial dilution exceeds the control limits.
H	MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a negative instrument reading lower than the absolute value of the reporting limit.
N	MS, MSD: Spike recovery exceeds the upper or lower control limits.
W	AS(GFAA) Post-digestion spike was outside 85-115% control limits.

Organic Qualifiers (Q - Column)

U	Analyte was not detected at or above the stated limit.
ND	Compound not detected.
J	Result is an estimated value below the reporting limit or a tentatively identified compound (TIC).
Q	Result was qualitatively confirmed, but not quantified.
C	Pesticide identification was confirmed by GC/MS.
Y	The chromatographic response resembles a typical fuel pattern.
Z	The chromatographic response does not resemble a typical fuel pattern.
E	Result exceeded calibration range, secondary dilution required.
F	AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC)

Organic Flags (Flags Column)

B	MB: Batch QC is greater than reporting limit.
*	LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits.
^	EB1, EB2, EB3, MLE: Batch QC is greater than reporting Limit
A	Concentration exceeds the instrument calibration range
a	Concentration is below the method Reporting Limit (RL)
B	Compound was found in the blank and sample.
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D.
H	Alternate peak selection upon analytical review
I	Indicates the presence of an interfence, recovery is not calculated.
M	Manually integrated compound.
P	The lower of the two values is reported when the % difference between the results of two GC columns is

greater than 25%.

Abbreviations

AS	Post Digestion Spike (GFAA Samples - See Note 1 below)
Batch	Designation given to identify a specific extraction, digestion, preparation set, or analysis set
CAP	Capillary Column CCB Continuing Calibration Blank
CCV	Continuing Calibration Verification
CF	Confirmation analysis of original
C1	Confirmation analysis of A1 or D1
C2	Confirmation analysis of A2 or D2
C3	Confirmation analysis of A3 or D3
CRA	Low Level Standard Check - GFAA; Mercury
CRI	Low Level Standard Check - ICP
CV	Calilbration Verification Standard
Dil Fac	Dilution Factor - Secondary dilution analysis
D1	Dilution 1
D2	Dilution 2
D3	Dilution 3
DLFac	Detection Limit Factor
DSH	Distilled Standard - High Level
DSL	Distilled Standard - Low Level
DSM	Distilled Standard - Medium Level
EB1	Extraction Blank 1
EB2	Extraction Blank 2
EB3	DI Blank
ELC	Method Extracted LCS
ELD	Method Extracted LCD
ICAL	Initial calibration
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
ISA	Interference Check Sample A - ICAP
ISB	Interference Check Sample B - ICAP
Job No.	The first six digits of the sample ID which refers to a specific client, project and sample group
	Lab ID An 8 number unique laboratory identification
LCD	Laboratory Control Standard Duplicate
LCS	Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest
MB	Method Blank or (PB) Preparation Blank
MD	Method Duplicate
MDL	Method Detection Limit
MLE	Medium Level Extraction Blank
MRL	Method Reporting Limit Standard
MSA	Method of Standard Additions
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not Detected
PREPF	Preparation factor used by the Laboratory's Information Management System (LIMS)
PDS	Post Digestion Spike (ICAP)
RA	Re-analysis of original
A1	Re-analysis of D1
A2	Re-analysis of D2
A3	Re-analysis of D3
RD	Re-extraction of dilution
RE	Re-extraction of original
RC	Re-extraction Confirmation
RL	Reporting Limit
RPD	Relative Percent Difference of duplicate (unrounded) analyses
RRF	Relative Response Factor
RT	Retention Time

RTW	Retention Time Window Sample ID A 9 digit number unique for each sample, the first six digits are referred as the job number
SCB	Seeded Control Blank
SD	Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL)
UCB	Unseeded Control Blank
SSV	Second Source Verification Standard
SLCS	Solid Laboratory Control Standard(LCS)
PHC	pH Calibration Check LCSP pH Laboratory Control Sample
LCDP	pH Laboratory Control Sample Duplicate
MDPH	pH Sample Duplicate
MDFP	Flashpoint Sample Duplicate
LCFP	Flashpoint LCS
G1	Gelex Check Standard Range 0-1
G2	Gelex Check Standard Range 1-10
G3	Gelex Check Standard Range 10-100
G4	Gelex Check Standard Range 100-1000

Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA)

Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.