United States Environmental Protection Agency
Region III
Office of Analytical Services and Quality Assurance
(410) 573-2600

ORIGINAL (Red)

839 Bestgate Road
Annapolis, MD 21401
FAX: (410) 573-2698
(410) 573-2702

201 Defense Hwy., Suite 200
Annapolis, MD 21401
FAX: (410) 573-2771
(410) 573-2772

DATE : June 15, 1998

SUBJECT: Region III Data QA Review

FROM : Not Responsive Based on Revised Scope [redacted]
Region III ESAT RPO (3ES20)

TO : Pete Gold
Regional Project Manager (3HS33)

Attached is the organic data validation report for the Robert Wooler Company Site (Case #26191; SDG #CTE48) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III ESD.

If you have any questions regarding this review, please call me at (410) 573-2629.

Attachment

cc: Not Responsive Based on Revised Scope [redacted] Weston

WA File: 0398202 TDF: 0601

ORIGINAL
(Red)

Lockheed Martin Services Group
Environmental Services & Technologies Region 3
1419 Forest Drive, Suite 104 Annapolis, MD 21403
Telephone 410-268-7705 Facsimile 410-268-0331

ORIGINAL (Red)

LOCKHEED MARTIN

DATE: June 11, 1998

SUBJECT: Level C1 Organic Data Validation for Case 26191,
SDG: CTE48
Site: Robert Wooler Company

FROM: Not Responsive Based on Revised Scope [redacted]
Organic Data Reviewer

Not Responsive Based on Revised Scope [redacted]
Senior Oversight Chemist

TO: Not Responsive Based on Revised Scope [redacted]
ESAT Regional Project Officer

THROUGH: Not Responsive Based on Revised Scope [redacted]
ESAT Team Manager

OVERVIEW

Case 26191, Sample Delivery Group (SDG) CTE48, consisted of twelve (12) aqueous samples submitted to Recra/Labnet (RECMD), Monroeville, PA, for volatile analyses. The sample set included one (1) trip blank and one (1) field duplicate pair. Samples were analyzed according to Contract Laboratory Program (CLP) Statement of Work (SOW) OLM03.2 through Routine Analysis Services (RAS) program.

SUMMARY

Data were validated according to EPA Level C1 Innovative Approaches for Validation of Organic Data utilizing Computer Aided Data Review and Evaluation (CADRE) program, version 2.3.1. CADRE software utilizes electronic data submitted by the laboratory and evaluates the data according to Region III Modifications to the National Functional Guidelines. Quality Control (QC) measures evaluated by CADRE for this level of review are included in Appendix D. In addition, visual inspection of sample chromatograms and spectra was performed by the reviewer. All samples were successfully analyzed for all target compounds.

MINOR PROBLEM

- The interior cooler chest temperature of 9°C as arrived at the laboratory exceeded the required temperature of 4 °C as stated in the Statement of Work (SOW). Positive results not superseded by "B" or "J" were qualified "L". Quantitation limits were qualified "UL".

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NOTES

- Bromomethane failed precision criteria [Percent Difference (%D)] in volatile continuing calibration performed 5/21/98. No positive results were reported for this compound in field samples. Percent Difference was less than fifty percent (%D < 50%); quantitation limits for bromomethane were not qualified.

- The maximum concentrations of all target compounds found in the analyses of trip and method blanks are listed below. Samples with concentrations of common laboratory contaminants less than ten times (< 10X) highest blank concentration or with concentrations of other contaminants less than five times (< 5X) blank concentration have been qualified "B".

Compound	Concentration (ug/L)
chloromethane	4 J
bromomethane	3 J
methylene chloride*	5 J
acetone*	18

* common laboratory contaminant

- Compounds detected below Contract Required Quantitation Limits (CRQLs) were qualified "J" unless superseded by "B"on the CADRE Qualified Spreadsheet Reports.

All data for Case 26191, SDG CTE48, were reviewed in accordance with the Innovative Approaches to Data Validation, Region III, June 1995, and Region III Modifications to the National Functional Guidelines for Organic Data Review, September 1994.

ATTACHMENTS

1) Appendix A Glossary of Data Qualifier Terms
2) Appendix B CADRE Qualified Spreadsheet Reports
3) Appendix C CADRE Validation Reports
4) Appendix D Support Documentation

DCN: 26191rpt

ORIGINAL
(Red)

Appendix A

Glossary of Data Qualifier Terms

ORIGINAL (Red)

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION

(confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

NO CODE = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION

(can be used for both positive results and sample quantitation limits):

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

Q = No analytical result.

ORIGINAL
(Red)

Appendix B

CADRE Qualified Spreadsheet Reports

ORIGINAL (Red)

TCL QUALIFIED SPREADSHEET

Site: ROBERT WOOLER COMPANY
Laboratory: RECRA ENVIRON

se No: 26191
G No: CTE48

A SAMPLE NUMBER:	CTE58		CTE59					
GIONAL SAMPLE NUMBER:	RWGW11		RWBL01					
MPLE LOCATION:	Duplicate (CTE56)		Trip Blank					
MPLE TYPE:	Water/Low		Water/Low					
TRIX/ANALYSIS:								
ILUTION FACTOR:	1.0		1.0					
ERCENT MOISTURE:								
DA								
hloromethane	3	B	3	B				
romomethane	10	UL	10	UL				
inyl Chloride	10	UL	10	UL				
hloroethane	10	UL	10	UL				
ethylene Chloride	5	B	5	J				
cetone	10	UL	10	UL				
arbon Disulfide	10	UL	10	UL				
,1-Dichloroethene	10	UL	10	UL				
,1-Dichloroethane	10	UL	10	UL				
,2-Dichloroethene (total)	10	UL	10	UL				
hloroform	3	J	10	UL				
,2-Dichloroethane	10	UL	10	UL				
2-Butanone	10	UL	10	UL				
1,1,1-Trichloroethane	10	UL	10	UL				
Carbon Tetrachloride	10	UL	10	UL				
Bromodichloromethane	10	UL	10	UL				
1,2-Dichloropropane	10	UL	10	UL				
cis-1,3-Dichloropropene	10	UL	10	UL				
Trichloroethene	10	UL	10	UL				
Dibromochloromethane	10	UL	10	UL				
1,1,2-Trichloroethane	10	UL	10	UL				
Benzene	10	UL	10	UL				
trans-1,3-Dichloropropene	10	UL	10	UL				
Bromoform	10	UL	10	UL				
4-Methyl-2-Pentanone	10	UL	10	UL				
2-Hexanone	10	UL	10	UL				
Tetrachloroethene	10	UL	10	UL				
1,1,2,2-Tetrachloroethane	10	UL	10	UL				
Toluene	10	UL	10	UL				
Chlorobenzene	10	UL	10	UL				
Ethylbenzene	10	UL	10	UL				
Styrene	10	UL	10	UL				
Xylene (total)	10	UL	10	UL				

ILE NAME: CTE48 DATE: 06/02/98 TIME: 15:07 CADRE 2.3.1

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

TCL QUALIFIED SPREADSHEET

Case No: 26191
SDG No: CTE48

Site: ROBERT WOOLER COMPANY
Laboratory: RECRA ENVIRON

ORIGINAL (Red)

EPA SAMPLE NUMBER:	CTE53		CTE54		CTE55		CTE56		CTE57	
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:	RWGW06		RWGW07		RWGW08		RWGW09		RWGW10	
SAMPLE TYPE:	Routine Sample		Routine Sample		Routine Sample		Duplicate (CTE58)		Routine Sample	
MATRIX/ANALYSIS:	Water/Low		Water/Low		Water/Low		Water/Low		Water/Low	
DILUTION FACTOR:	1.0		1.0		1.0		1.0		1.0	
PERCENT MOISTURE:										
VOA										
Chloromethane	4	B	3	B	3	B	2	B	3	B
Bromomethane	10	UL	10	UL	10	UL	10	UL	10	UL
Vinyl Chloride	10	UL	10	UL	10	UL	10	UL	10	UL
Chloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
Methylene Chloride	4	B	5	B	5	B	4	B	5	B
Acetone	10	UL	10	UL	10	UL	10	UL	10	UL
Carbon Disulfide	10	UL	10	UL	10	UL	10	UL	10	UL
1,1-Dichloroethene	10	UL	10	UL	10	UL	10	UL	10	UL
1,1-Dichloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
1,2-Dichloroethene (total)	10	UL	10	UL	10	UL	10	UL	10	UL
Chloroform	10	UL	10	UL	10	UL	2	J	10	UL
1,2-Dichloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
2-Butanone	10	UL	10	UL	10	UL	10	UL	10	UL
1,1,1-Trichloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
Carbon Tetrachloride	10	UL	10	UL	10	UL	10	UL	10	UL
Br[illegible]hloromethane	10	UL	10	UL	10	UL	10	UL	10	UL
1,[illegible]loropropane	10	UL	10	UL	10	UL	10	UL	10	UL
cis-1,3-Dichloropropene	10	UL	10	UL	10	UL	10	UL	10	UL
Trichloroethene	10	UL	10	UL	10	UL	10	UL	10	UL
Dibromochloromethane	10	UL	10	UL	10	UL	10	UL	10	UL
1,1,2-Trichloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
Benzene	10	UL	10	UL	10	UL	10	UL	10	UL
trans-1,3-Dichloropropene	10	UL	10	UL	10	UL	10	UL	10	UL
Bromoform	10	UL	10	UL	10	UL	10	UL	10	UL
4-Methyl-2-Pentanone	10	UL	10	UL	10	UL	10	UL	10	UL
2-Hexanone	10	UL	10	UL	10	UL	10	UL	10	UL
Tetrachloroethene	10	UL	10	UL	10	UL	10	UL	10	UL
1,1,2,2-Tetrachloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
Toluene	10	UL	10	UL	10	UL	10	UL	10	UL
Chlorobenzene	10	UL	10	UL	10	UL	10	UL	10	UL
Ethylbenzene	10	UL	10	UL	10	UL	10	UL	10	UL
Styrene	10	UL	10	UL	10	UL	10	UL	10	UL
Xylene (total)	10	UL	10	UL	10	UL	10	UL	10	UL

ILE NAME: CTE48 DATE: 06/02/98 TIME: 15:07 CADRE 2.3.1

Wat[illegible]its are reported in ug/L.
So[illegible]s are reported in ug/Kg.

TCL QUALIFIED SPREADSHEET

se No: 26191
G No: CTE48

Site: ROBERT WOOLER COMPANY
Laboratory: RECRA ENVIRON

A SAMPLE NUMBER:	CTE48		CTE49		CTE50		CTE51		CTE52	
GIONAL SAMPLE NUMBER:	RWGW01		RWGW02		RWGW03		RWGW04		RWGW05	
MPLE LOCATION:	Routine Sample		Routine Sample		Routine Sample		Routine Sample		Routine Sample	
MPLE TYPE:	Water/Low		Water/Low		Water/Low		Water/Low		Water/Low	
TRIX/ANALYSIS:	1.0		1.0		1.0		1.0		1.0	
LUTION FACTOR:										
RCENT MOISTURE:										
A										
loromethane	10	UL	3	B	4	B	3	B	3	B
omomethane	10	UL	10	UL	10	UL	10	UL	10	UL
nyl Chloride	10	UL	10	UL	10	UL	10	UL	10	UL
loroethane	10	UL	10	UL	10	UL	10	UL	10	UL
thylene Chloride	4	B	5	B	4	B	4	B	5	B
etone	10	UL	10	UL	10	UL	10	UL	10	UL
rbon Disulfide	10	UL	10	UL	10	UL	10	UL	10	UL
1-Dichloroethene	10	UL	10	UL	10	UL	10	UL	10	UL
1-Dichloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
2-Dichloroethene (total)	10	UL	10	UL	10	UL	10	UL	10	UL
loroform	10	UL	2	J	10	UL	10	UL	10	UL
2-Dichloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
Butanone	10	UL	10	UL	10	UL	10	UL	10	UL
1,1-Trichloroethane	3	J	10	UL	10	UL	10	UL	10	UL
rbon Tetrachloride	10	UL	10	UL	10	UL	10	UL	10	UL
omodichloromethane	10	UL	10	UL	10	UL	10	UL	10	UL
2-Dichloropropane	10	UL	10	UL	10	UL	10	UL	10	UL
is-1,3-Dichloropropene	10	UL	10	UL	10	UL	10	UL	10	UL
richloroethene	21	L	10	UL	10	UL	10	UL	10	UL
ibromochloromethane	10	UL	10	UL	10	UL	10	UL	10	UL
1,2-Trichloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
enzene	10	UL	10	UL	10	UL	10	UL	10	UL
rans-1,3-Dichloropropene	10	UL	10	UL	10	UL	10	UL	10	UL
romoform	10	UL	10	UL	10	UL	10	UL	10	UL
-Methyl-2-Pentanone	10	UL	10	UL	10	UL	10	UL	10	UL
-Hexanone	10	UL	10	UL	10	UL	10	UL	10	UL
etrachloroethene	4	J	10	UL	11	L	10	UL	10	UL
1,2,2-Tetrachloroethane	10	UL	10	UL	10	UL	10	UL	10	UL
oluene	10	UL	10	UL	10	UL	10	UL	10	UL
hlorobenzene	10	UL	10	UL	10	UL	10	UL	10	UL
thylbenzene	10	UL	10	UL	10	UL	10	UL	10	UL
tyrene	10	UL	10	UL	10	UL	10	UL	10	UL
ylene (total)	10	UL	10	UL	10	UL	10	UL	10	UL

LE NAME: CTE48 DATE: 06/02/98 TIME: 15:07 CADRE 2.3.1

ater units are reported in ug/L.
oil units are reported in ug/Kg.

ORIGINAL
(Red)

Appendix C

CADRE Validation Reports

ORIGINAL (Red)

FILE NAME: CTE48 DATE: 06/02/98 TIME: 15:06

CRITERIA FILE: REG3091

DATA

	Original	X	Qualified

QUALIFICATIONS PERFORMED

X	Quantitation Limit		CRDL Standards
	Percent Moisture		ICS
X	Holding Time		LCS
X	Calibrations		Duplicates
X	Matrix Spikes		Furnace AA QC
X	IPC		ICP Serial Dilutions
X	Internal Standards		Sample Results Verification
X	SMC/Surrogates		Laboratory Blanks
	System Performance	X	Field QC
	Sample Cleanup		

PRINT NON-DETECTS

X	Yes		No

PRINT REJECTED RESULTS

X	Yes		No

ORIGINAL (Red)

Quantitation Limit Report

SDG NO: **CTE48**
CASE NO: **26191**

LABORATORY: **RECRA ENVIRON**
AGENCY INPUT FILE: **CTE48.OAS**

CONTRACT REQUIRED SAMPLE QUANTITY

	Water	Low Soil	Med Soil
VOA	5.0 (ML)	5.0 (G)	4.0 (G)

DC-45: The following volatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

CTE48
Methylene Chloride, 1,1,1-Trichloroethane, Tetrachloroethene

CTE49
Chloromethane, Methylene Chloride, Chloroform

CTE50
Chloromethane, Methylene Chloride

CTE50MS
Chloromethane, Methylene Chloride

CTE50MSD
Chloromethane, Methylene Chloride

CTE51
Chloromethane, Methylene Chloride

CTE52
Chloromethane, Methylene Chloride

CTE53
Chloromethane, Methylene Chloride

CTE54
Chloromethane, Methylene Chloride

CTE55
Chloromethane, Methylene Chloride

CTE56
Chloromethane, Methylene Chloride, Chloroform

CTE57
Chloromethane, Methylene Chloride

CTE58
Chloromethane, Methylene Chloride, Chloroform

CTE59
Chloromethane, Methylene Chloride

VBLK21
Chloromethane, Bromomethane, Methylene Chloride

VHBLK14
Chloromethane, Methylene Chloride

ORIGINAL (Red)

Holding Time Report

SDG NO: **CTE48**
CASE NO: **26191**

LABORATORY: **RECRA ENVIRON**
AGENCY INPUT FILE: **CTE48.OAS**

HOLDING TIME CRITERIA

Volatile

Preserved	Primary	Expanded
Water	14	28
Soil	14	28

	---- Aromatic ----		-- Non-aromatic --	
Unpreserved	Primary	Expanded	Primary	Expanded
Water	7	14	14	28
Soil	14	28	14	28

No problems found for this qualification.

ORIGINAL (Red)

Calibration Report

SDG NO: **CTE48**

CASE NO: **26191**

LABORATORY: **RECRA ENVIRON**

AGENCY INPUT FILE: **CTE48.OAS**

CALIBRATION CRITERIA

Volatile

	Primary	Expanded
Minimum RRF	0.05	0.05
Maximum %RSD (initial calibration)	30	50
Maximum %D (continuing calibration)	25	50
Calibration time period	12	

DC-23: The following volatile samples are associated with a continuing calibration percent difference (%D) outside criteria. Hits are qualified "J".

Bromomethane

CTE48, CTE49, CTE50, CTE50MS, CTE50MSD, CTE51
CTE52, CTE53, CTE54, CTE55, CTE56, CTE57
CTE58, CTE59, VBLK21, VHBLK14

ORIGINAL (Red)

Matrix Spike Report

SDG NO: **CTE48**
CASE NO: **26191**

LABORATORY: **RECRA ENVIRON**
AGENCY INPUT FILE: **CTE48.OAS**

MATRIX SPIKE CRITERIA

Volatile

Percent Recovery Limits & RPD

	Water			Soil		
	Lower	Upper	RPD	Lower	Upper	RPD
1,1-Dichloroethene	61.0	145.0	14.0	59.0	172.0	22.0
Trichloroethene	71.0	120.0	14.0	62.0	137.0	24.0
Benzene	76.0	127.0	11.0	66.0	142.0	21.0
Toluene	76.0	125.0	13.0	59.0	139.0	21.0
Chlorobenzene	75.0	130.0	13.0	60.0	133.0	21.0

No problems found for this qualification.

ORIGINAL (Red)

Instrument Performance Check Report

SDG NO: **CTE48**

CASE NO: **26191**

LABORATORY: **RECRA ENVIRON**

AGENCY INPUT FILE: **CTE48.OAS**

The complete primary criteria for BFB are as follows:

Bromofluorobenzene (BFB)

m/z	ION ABUNDANCE CRITERIA (Volatile)
50	8.0 - 40.0% of m/z 95
75	30.0 - 66.0% of m/z 95
95	base peak, 100.0% relative abundance
96	5.0 - 9.0% of m/z 95
173	less than 2.0% of m/z 174
174	50.0 - 120.0% of m/z 95
175	4.0 - 9.0% of m/z 174
176	93.0 - 101.0% of m/z 174
177	5.0 - 9.0% of m/z 176

No problems found for this qualification.

ORIGINAL (Red)

Internal Standards Report

SDG NO: **CTE48**
CASE NO: **26191**

LABORATORY: **RECRA ENVIRON**
AGENCY INPUT FILE: **CTE48.OAS**

INTERNAL STANDARD CRITERIA

Volatile

Retention Time & Area Count Limits

	-- Primary --		- Expanded --	
	Lower	Upper	Lower	Upper
Retention time	- 0.5	+ 0.5	- 0.5	+ 0.5
Area count	/ 2	* 2	/ 5	* 2

No problems found for this qualification.

ORIGINAL (Red)

SMC/Surrogate Report

SDG NO: **CTE48**

CASE NO: **26191**

LABORATORY: **RECRA ENVIRON**

AGENCY INPUT FILE: **CTE48.OAS**

SMC/SURROGATE CRITERIA

Volatile

Percent Recovery Limits

	--- Water ---		---- Soil ---	
	Lower	Upper	Lower	Upper
Toluene-d8	88.0	110.0	84.0	138.0
Bromofluorobenzene	86.0	115.0	59.0	113.0
1,2-Dichloroethane-d4	76.0	114.0	70.0	121.0

No problems found for this qualification.

DC-136: The following volatile samples are affected by contamination in their corresponding trip blank for the indicated analytes. Hits are qualified "B" and non-detects are not qualified.

Methylene Chloride

CTE48, CTE49, CTE50, CTE50MS, CTE50MSD, CTE51
CTE52, CTE53, CTE54, CTE55, CTE56, CTE57
CTE58

DC-367: The following volatile samples are affected by contamination in an associated method blank for the indicated analytes. Hits are qualified "B" and non-detects are not flagged.

Chloromethane

CTE49, CTE50, CTE50MS, CTE50MSD, CTE51, CTE52
CTE53, CTE54, CTE55, CTE56, CTE57, CTE58
CTE59

ORIGINAL
(Red)

Appendix D

Support Documentation

ORIGINAL (Red)

Computer-Aided Data Review and Evaluation (CADRE)

Level C1 - Organic

DATA ASSESSMENT	CADRE	REVIEWER
Action Level Notification		X
Instrument Tune (volatile and semivolatile only)	X	
GC/ECD Performance Check (pesticide only)	X	
Initial Calibration (RRF/CF)	X	
Initial Calibration (%RSD)	X	
Continuing Calibration (RRF) (volatile and semivolatile only)	X	
Continuing Calibration (%D)	X	
Laboratory Blank	X	
MS/MSD (%R, RPD)	X	
Internal Standard Area (volatile and semivolatile only)	X	
Field Blank	X	
Holding Time	X	
Retention Time	X	
Surrogate Recovery	X	
Dilution Factor		X
Pesticide Cleanup Checks (pesticide only)	X	
Mass Spectra (volatile and semivolatile only)		X
Chromatograms		X
Sample Paperwork		X
Raw Data		
Field Duplicate Comparison		
MS/MSD Comparison		
TIC Evaluation (volatile and semivolatile only)		

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

SAS No. (if applicable):

Case No.: 26191

Not Responsive Based on Revised Scope [redacted]

Received by: 5/14/98

1. Matrix (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Field QC
   5. Soil/Sediment
   6. Oil (High only)
   7. Waste (High only)
   8. Other (Specify in Column A)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO3
   3. NaHSO4
   4. H2SO4
   5. Ice only
   6. Other (Specify in Column D)
   N. Not preserved

2. Region No.: 3

Sampling Co.: Weston

Not Responsive Based on Revised Scope [redacted]

3. Purpose*: Lead [X] SF; PRP; ST; FED

Early Action: CLEM; PA; REM; RI; SI; [X] ESI

Long-Term Action: FS; RD; RA; O&M; NPLD

4. Date Shipped: 5/ /98

Carrier: Fed Ex

Airbill Number: 3669974944

5. Ship To: Recra Labnet - Penn, 3000 Tech Center Drive, Monroeville, PA 15146

ATTN: Not Responsive Based on Revised Scope [redacted]

Laboratory Contract Number: 68-D5-0010

Unit Price: 85/.00

7. Transfer to:

Date Received:

Received by:

Contract Number:

Price:

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc.: Low Med High	C Sample Type: Comp./ Grab	D Preservative (from Box 2) Other:	E RAS Analysis: VOA	BNA	Pest/PCB	High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/ Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases: Solids	Water-Miscible Liq.	Water-Immis. Liq.
CTE48	2	LM	G	1	X				3-2195034-036	RWGW01	5/13/98 0925	—	[illegible]			
CTE49	2	L	G	1	X				3-2195037-039	RWGW02	5/13/98 1235	—	[illegible]			
CTE50	2	L	G	1	X				3-2195040-042	RWGW03	5/13/98 0945	—	[illegible]			
CTE51	2	L	G	1	X				3-2195043-045	RWGW04	5/13/98 1400	—	[illegible]			
CTE52	2	L	G	1	X				3-2195046-048	RWGW05	5/13/98 1450	—	[illegible]			
CTE53	2	L	G	1	X				3-2195049-051	RWGW06	5/13/98 11:5	—	[illegible]			
CTE54	2	L	G	1	X				3-2195052-054	RWGW07	5/13/98 1015	—	[illegible]			
CTE55	2	L	G	1	X				3-2195055-057	RWGW08	5/13/98 1037	—	[illegible]			
CTE56	2	L	G	1	X				3-2195058-060	RWGW09	5/13/98 1125	—	[illegible]			
CTE57	2	L	G	1	X				3-2195061-063	RWGW10	5/13/98 1410	—	[illegible]			

Shipment for Case Complete? (Y/N):

Page 1 of 2

Sample(s) to be Used for Laboratory QC: CTE55

Additional Sampler Signatures:

Chain of Custody Seal Number(s):

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Not Responsive Based on Revised Scope [redacted]	5/13/98 1610				
Relinquished by: (Signature)	Date / Time	Received by: (Signature) Not Responsive Based on Revised Scope [redacted]	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time			Date / Time: 5/14/98 0910	Remarks: Is custody seal intact? Y/N/none; 9°C

DISTRIBUTION: Blue - Region Copy; White - Lab Copy for Return to Region; Pin[illegible] Yello[illegible] Copy - [illegible]ab Copy for Return to SMO

EPA Form 91

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-4 REV. 3/93

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256227

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

SAS No. (if applicable):
Case No.: 26191

1. Matrix (Enter in Column A)
1. Surface Water
2. Ground Water
3. Leachate
4. Field QC
5. Soil/Sediment
6. Oil (High only)
7. Waste (High only)
8. Other (Specify in Column A)

2. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. Other (Specify in Column D)
N. Not preserved

2. Region No.: 3
Sampling Co.: Weston
4. Date Shipped: 5/ /98
Carrier: Fed Ex
Sampler (Name): [redacted]
Airbill Number: 366 9974 944
Laboratory Contract Number: 68-D5-0010
Unit Price: 851.00
5. Ship To: Recra-Labnet - Pennsylvania, 3000 Tech Center Drive, Monroeville, PA 15146
ATTN: [redacted]
7. Transfer to:
Date Received:
Received by:
Contract Number:
Price:
Not Responsive Based on Revised Scope by: 5/14/98 0910

3. Purpose*
Lead: [x] SF, [ ] PRP, [ ] ST, [ ] FED
Early Action: [ ] CLEM, [ ] PA, [ ] REM, [ ] RI, [ ] SI, [x] ESI
Long-Term Action: [ ] FS, [ ] RD, [ ] RA, [ ] O&M, [ ] NPLD

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc.: Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 2) Other:	E RAS Analysis VOA	BNA	Pest/PCB	High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases Solids	Water-Miscible Liq.	Water-Immis. Liq.
CTE58	2	LM	G	1	x				3-21950164-066	RUIGW11	5/13/98/1220	—	P			
CTE59	4	L	G	1	x				3-21950167-069	RUIBL01	5/13/98/0900	—	P			
									Temperature Blank							

Shipment for Case Complete? (Y/N):
Page 2 of 2
Sample(s) to be Used for Laboratory QC: CTE55
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[redacted]	5/ /98 1610				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
		[redacted]			
Relinquished by: (Signature)	Date / Time	[redacted]	Date / Time	Remarks: Is custody seal intact? Y/N/none	
			5/14/98 0910	Temp 9°C	

DISTRIBUTION: Blue - Region Copy; White - Lab Copy for Return to Region; Pink - Si[redacted]; Yellow - L[redacted] Copy for Return to SMO

EPA Form 9110-2

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-4 REV. 3/93

000009

PAGE_1_OF_1_ **EPA SAMPLE SHIPPING LOG**

(1) (REQUIRED FOR ALL SAMPLES SENT THROUGH THE CONTRACT LAB PROGRAM)

PROJECT SITE NAME:__Robert Wooler____; EPA PROJECT OFFICER:__Pete Gold____

RAS NO._26191__; DAS NO._____; TASK OR SET NO._____1_____

PROJECT SITE LEADER:_[redacted]; PHONE NO.(609) _461-4003___

PROJECT SAMPLE COORDINATOR:[redacted]; PHONE NO.(609)_461-4003___

QC SAMPLE INFO AND/OR COMMENTS	CONC. (low/ med/ high)	SAMPLE PHASE (aq/ sol)	TYPE OR REQUES org, dio inor, SAS	SAMPLE TRAFFIC REPORT NUMBER	ORGANICS OR INORGANICS: LAB NAME	DATE SHIPPED	DATA RECEIVED (XX OUT ITEMS NOT REQUESTED): VOA	BNA	PES	TCDD		METALS	CN
(2)	(3)	(4)	(5)	(6)	(7)	(8)	<——(9)——>						
	LOW	AQ	ORG	CTE48	RECMD	05//13/98	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE49	RECMD	05//13/99	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE50	RECMD	05//13/100	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE51	RECMD	05//13/101	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE52	RECMD	05//13/102	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE53	RECMD	05//13/103	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE54	RECMD	05//13/104	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE55	RECMD	05//13/105	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE56	RECMD	05//13/106	✓	XX	XX	XX	XX	XX	XX
	LOW	AQ	ORG	CTE57	RECMD	05//13/107	✓	XX	XX	XX	XX	XX	XX
Dup CTE56	LOW	AQ	ORG	CTE58	RECMD	05//13/108	✓	XX	XX	XX	XX	XX	XX
Trip Blank	LOW	AQ	ORG	CTE59	RECMD	05//13/109	✓	XX	XX	XX	XX	XX	XX
							received by [redacted]					5-28-98	
												CTE 48	

MAY 1998 RECEIVED

SAS REQUEST:(DETALIS REQUIRED) LAB NAME	SAS REQUEST (itemize)	DATE SHIPPED	DATA REC'D
(11)	(12)	(13)	

FINAL SAMPLING: YES____X_____; NO_____; FINAL SHIPPING DATE:_05/13/98_____

(14)

ORIGINAL (Red)

ANALYTICAL RESULTS

Case Narrative Notes
Prepared For

The United States Environmental Protection Agency

Prepared By

Recra LabNet Contract # 68D50010
3000 Tech Center Road
Monroeville, PA 15146

METHODOLOGY

The specific methodology employed in obtaining the enclosed analytical result is indicated on the specific data table. The method numbers presented refer to the following U.S. Environmental Protection Agency reference.

* U.S. Environmental Protection Agency 8/94 Organic Statement of Work, OLMO3.2.

COMMENTS

Comments pertain to data on all pages of this report.

It is RECRA Environmental's policy to report positive identifications to a level of approximately ten percent of CRQL.

The Volatile sample pH data has been reported in tabular format and is located directly behind the GC Column Summary portion of the Case Narrative.

The protocol required Alkane summaries are reported in tabular format, listed by retention time in minutes, and are located directly behind the Volatile sample pH data, directly preceding the Fraction Notes portion of the Case Narrative.

GCMS quantitation reports for both samples and standards contained within this sample data package often require manual integration of the areas of the quantitation ion for select constituents. When such manual integration is required, the quantitation report for said constituents are flagged with an "M". The need for manual integration includes, but is not necessarily limited to, the autoquantitation program's failure to integrate peaks of interest or the failure to correctly integrate said peaks due to poor geometry, peak tailing or peak resolution. Manual edits of Form 1 data, if performed, are flagged with an "X" qualifier.

ORIGINAL (Red)

GAS CHROMATOGRAPH COLUMNS

VOLATILES

GC Column: J&W Scientific DB-624
Internal Diameter: 0.53 mm
Length: 75m
Coating: Cyanopropylphenyl Methyl Silicone
Film Thinckness: 3.0 um

GC Column: Restek RTX-502.2
Internal Diameter: 0.32 mm
Length: 60m
Coating: Phenylmethyl Polysiloxane
Film Thickness: 1.8 um

Purge Trap: Supelco: Vocarb 3000
Packing Material: 10cm Carbopack B
6cmm Caboxen 1000
1cm Carboxen 1001

SEMIVOLATILES

GC Column: J&W Scientific DB5
Internal Diameter: 0.25 mm
Length: 30m
Coating: 5% Diphenyl-95% Dimethylpolysiloxane
Film Thickness: 1.0 um

PESITCIDES/PCB's

GC Column: J&W Scientific DB608
Internal Diameter: 0.53 mm
Length: 30m
Coating: Cyanopropylphenyl Methyl Silicone
Film Thickness: 0.83 um

GC Column: J&W Scientific DB1701
Internal Diameter: 0.53 mm
Length: 30m
Coating: 14% Cyanopropylphenyl Methylpolysiloxane
Film Thickness: 1.0 um

GC Column: J&W Scientific DB5
Internal Diameter: 0.53 mm
Length: 30m

GC Columns

Coating: 5% Phenyl-95% Methyl Silicone
Film Thickness: 1.5 um

GC Column: Restek RTX-5
Internal Diameter: 0.53 mm
Length: 30m
Coating: 5% Diphenyl-95% Dimethylpolysiloxane
Film Thickness: 1.5 um

ORIGINAL (Red)

ORIGINAL (Red)

CASE/SDG: 26191/CTE48

CONTRACT NUMBER: 68-D5-0010

SAMPLE INFORMATION: CTE48
CTE49
CTE50
CTE51
CTE52
CTE53
CTE54
CTE55
CTE55MS
CTE55MSD
CTE56
CTE57
CTE58
CTE59

Recra LabNet of Monroeville, Pennsylvania received the above referenced samples from the USEPA on May 14, 1998. The delivery group contains 12 waters for Organic analyses. These analyses were performed according to instructions in the IFB document for this contract.

The samples in this case arrived with several vials broken. CTE51 had one vial broken and CTE58 had two vials broken. There was a sample tag for the trip blank but it was not present on the Traffic report. The coolers arrived with temperatures of 9 degrees Celsius.

(D.V.) ?

The date shipped was not on the chain of custody. There was no Airbill present in the shipment only the airbill sticker. The sample coordinator was notified of these discrepancies and the Laboratory was told to note them in the case narrative.

VOLATILE DATA:

There were no deviations from protocol observed during these analyses.

I certify that this package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions listed above. Release of the data contained in this hardcopy data package and the computer-readable data submitted on diskette has been authorized by the Laboratory Manager, or his designee, as verified by the following signature.

Not Responsive Based on Revised Scope

[redacted]

5-22-98
Date

Program Manager

[redacted]

ORIGINAL (Red)

CASE NO: 26191
SDG NO: CTE48

Sample Listing

LABORATORY: RECRA ENVIRON

EPA SAMPLE NUMBER	REGIONAL SAMPLE NUMBER	VOA						
		MATRIX	LEVEL	SAMPLING DATE	DATE RECEIVED	ANALYSIS		
						DATE	TIME	INSTRUMENT
VBLK21		Water	Low	/ /	/ /	05/21/98	16:57	HPMS-5
CTE48		Water	Low	05/13/98	05/14/98	05/21/98	17:35	HPMS-5
CTE49		Water	Low	05/13/98	05/14/98	05/21/98	18:06	HPMS-5
CTE50		Water	Low	05/13/98	05/14/98	05/21/98	18:38	HPMS-5
CTE51		Water	Low	05/13/98	05/14/98	05/21/98	19:10	HPMS-5
CTE52		Water	Low	05/13/98	05/14/98	05/21/98	19:42	HPMS-5
CTE53		Water	Low	05/13/98	05/14/98	05/21/98	20:13	HPMS-5
CTE54		Water	Low	05/13/98	05/14/98	05/21/98	20:45	HPMS-5
CTE55		Water	Low	05/13/98	05/14/98	05/21/98	21:16	HPMS-5
CTE56		Water	Low	05/13/98	05/14/98	05/21/98	21:48	HPMS-5
CTE57		Water	Low	05/13/98	05/14/98	05/21/98	22:20	HPMS-5
CTE58		Water	Low	05/13/98	05/14/98	05/21/98	22:52	HPMS-5
CTE59		Water	Low	05/13/98	05/14/98	05/21/98	23:23	HPMS-5
CTE50MS		Water	Low	05/13/98	05/14/98	05/21/98	23:55	HPMS-5
CTE50MSD		Water	Low	05/13/98	05/14/98	05/22/98	00:26	HPMS-5
VHBLK14		Water	Low	/ /	/ /	05/22/98	00:58	HPMS-5

FILE NAME: CTE48.SDG DATE: 06/02/98 TIME: 15:04 CADRE 2.3.1

Calibration Listing

CASE NO: 26191
SDG NO: CTE48

LABORATORY: RECRA ENVIRON

FRACTION	INSTRUMENT	TYPE	LAB FILE ID/ GC COLUMN	DATE	TIME	COMPOUND	RRF	%RSD (%D/RPD)
VOA	HPMS-5	INITIAL	E0508001	05/08/98	12:06			
VOA	HPMS-5	CONTINUING	E0521008	05/21/98	16:15	Bromomethane		29.7
Assoc. Sample(s):		VBLK21		05/21/98	16:57			
		CTE48		05/21/98	17:35			
		CTE49		05/21/98	18:06			
		CTE50		05/21/98	18:38			
		CTE51		05/21/98	19:10			
		CTE52		05/21/98	19:42			
		CTE53		05/21/98	20:13			
		CTE54		05/21/98	20:45			
		CTE55		05/21/98	21:16			
		CTE56.		05/21/98	21:48			
		CTE57		05/21/98	22:20			
		CTE58		05/21/98	22:52			
		CTE59		05/21/98	23:23			
		CTE50MS		05/21/98	23:55			
		CTE50MSD		05/22/98	00:26			
		VHBLK14		05/22/98	00:58			

* Only RRF and %RSD (%D/RPD) values which exceed criteria are listed.

Case No: 26191
SDG No: CTE48

TCL QUALIFIED SPREADSHEET

Site: ROBERT WOOLER COMPANY
Laboratory: RECRA ENVIRON

ORIGINAL (Red)

EPA SAMPLE NUMBER:	CTE50MS		CTE50MSD							
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Matrix Spike		Matrix Spike Dup							
MATRIX/ANALYSIS:	Water/Low		Water/Low							
DILUTION FACTOR:	1.0/ 1.0		1.0/ 1.0							
PERCENT MOISTURE:										
VOA										
Chloromethane	4	B	3	B						
Bromomethane	10	U	10	U						
Vinyl Chloride	10	U	10	U						
Chloroethane	10	U	10	U						
Methylene Chloride	5	B	5	B						
Acetone	10	U	10	U						
Carbon Disulfide	10	U	10	U						
1,1-Dichloroethene	55		56							
1,1-Dichloroethane	10	U	10	U						
1,2-Dichloroethene (total)	10	U	10	U						
Chloroform	10	U	10	U						
1,2-Dichloroethane	10	U	10	U						
2-Butanone	10	U	10	U						
1,1,1-Trichloroethane	10	U	10	U						
Carbon Tetrachloride	10	U	10	U						
Bromodichloromethane	10	U	10	U						
,2-Dichloropropane	10	U	10	U						
is-1,3-Dichloropropene	10	U	10	U						
Trichloroethene	52		51							
Dibromochloromethane	10	U	10	U						
1,1,2-Trichloroethane	10	U	10	U						
Benzene	56		57							
trans-1,3-Dichloropropene	10	U	10	U						
Bromoform	10	U	10	U						
4-Methyl-2-Pentanone	10	U	10	U						
2-Hexanone	10	U	10	U						
Tetrachloroethene	10	U	10	U						
1,1,2,2-Tetrachloroethane	10	U	10	U						
Toluene	53		57							
Chlorobenzene	51		54							
Ethylbenzene	10	U	10	U						
Styrene	10	U	10	U						
Xylene (total)	10	U	10	U						

FILE NAME: CTE48 DATE: 06/02/98 TIME: 15:05 CADRE 2.3.1

Water units are reported in ug/L.
Soil units are reported in ug/Kg.

TCL QUALIFIED SPREADSHEET

Case No: 26191
SDG No: CTE48

Site: ROBERT WOOLER COMPANY
Laboratory: RECRA ENVIRON

EPA SAMPLE NUMBER:	VBLK21		VHBLK14							
REGIONAL SAMPLE NUMBER:										
SAMPLE LOCATION:										
SAMPLE TYPE:	Method Blank		Storage Blank							
MATRIX/ANALYSIS:	Water/Low		Water/Low							
DILUTION FACTOR:	1.0/ 1.0		1.0/ 1.0							
PERCENT MOISTURE:										
VOA										
Chloromethane	4	J	4	J						
Bromomethane	3	J	10	U						
Vinyl Chloride	10	U	10	U						
Chloroethane	10	U	10	U						
Methylene Chloride	3	J	4	J						
Acetone	10	U	18							
Carbon Disulfide	10	U	10	U						
1,1-Dichloroethene	10	U	10	U						
1,1-Dichloroethane	10	U	10	U						
1,2-Dichloroethene (total)	10	U	10	U						
Chloroform	10	U	10	U						
1,2-Dichloroethane	10	U	10	U						
2-Butanone	10	U	10	U						
1,1,1-Trichloroethane	10	U	10	U						
Carbon Tetrachloride	10	U	10	U						
Bromodichloromethane	10	U	10	U						
1,2-Dichloropropane	10	U	10	U						
cis-1,3-Dichloropropene	10	U	10	U						
Trichloroethene	10	U	10	U						
Dibromochloromethane	10	U	10	U						
1,1,2-Trichloroethane	10	U	10	U						
Benzene	10	U	10	U						
trans-1,3-Dichloropropene	10	U	10	U						
Bromoform	10	U	10	U						
4-Methyl-2-Pentanone	10	U	10	U						
2-Hexanone	10	U	10	U						
Tetrachloroethene	10	U	10	U						
1,1,2,2-Tetrachloroethane	10	U	10	U						
Toluene	10	U	10	U						
Chlorobenzene	10	U	10	U						
Ethylbenzene	10	U	10	U						
Styrene	10	U	10	U						
Xylene (total)	10	U	10	U						

FILE NAME: CTE48 DATE: 06/02/98 TIME: 15:06 CADRE 2.3.1

Water units are reported in ug/L.
Soil units are reported in ug/Kg.